המכון הלאומי לחקר שרותי הבריאות ומדיניות הבריאות (ע"ר)
THE ISRAEL NATIONAL INSTITUTE FOR HEALTH POLICY RESEARCH

The 5TH International Jerusalem Conference on Health Policy

ICC Jerusalem Convention Center | June 3-5, 2013

HEALTH POLICY IN TIMES OF AUSTERITY

Provider Perspectives, Quality Assurance & Public Acceptance

PROGRAM & BOOK OF ABSTRACTS

CHAIR: Prof. Avi Israeli (IL) & Prof. Alan M. Garber (USA)

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Dear Colleagues,

It is with great pleasure and honor that we welcome you to the 5th Jerusalem International Conference on Health Policy.

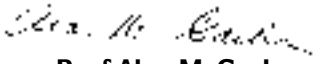
This conference takes place at a time when societies and governments are still reeling from the aftereffects of the financial crisis that led to widespread recession and exposed underlying weaknesses in the world economic system.

Since we began planning this conference, the consequences of lagging economic growth and austerity have been significant and, in some cases dire. Policy makers are searching for new solutions, losing confidence in both conventional Keynesian and monetarist policies. Health systems have not been spared. But, beyond the need to consider ways of dealing with austerity, health systems can also play a leading role in contributing to social vitality and development of new modes of policy, regulation and management that can cope with new realities.
The conference was planned to confront the following key challenges:
1. Patterns of Health Care Under Austerity
2. Institutional Governance Strategies
3. Sustaining Quality and Performance
4. Financial and Economic Strategies

We have received an outstanding, broad, creative outpouring of abstracts, that, while stimulated by these questions, take us also in new directions, bringing new ideas to the table. And we have assembled leading experts in management and governance, health economics, health policy and regulation, population health, and quality and performance measurement to address the conference on these issues in our plenary sessions.

The thematic sessions, reflecting the nature of the abstracts received will, we hope, delve more deeply into these challenging but fascinating problems, and we expect to emerge with new ideas for the future based on the solid contributions of all the participants.

We wish you all a successful conference and pleasant stay in Jerusalem.



Prof Avi Israeli **Prof Alan M. Garber**

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Scientific & Organizing Committee

Chair:

Prof. Avi Israeli,	Ministry of Health & The Hebrew University of Jerusalem – Hadassah, Israel

Chair:

Prof. Alan M. Garber,	Harvard University, USA
Prof. Alik Aviram,	The Israel National Institute for Health Policy Research, Israel
Prof. Haim Bitterman,	Clalit Health Services, Israel
Prof. Chaim Doron,	The Israel National Institute for Health Policy Research, Israel
Prof. Josep Figueras,	European Observatory & WHO European Centre, Belgium
Prof. Kobi Glazer,	Tel Aviv University & Boston University, Israel
Prof. Dan Greenberg,	Ben-Gurion University of the Negev, Israel
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Prof. Orly Manor,	The Hebrew University of Jerusalem – Hadassah, Israel
Prof. Martin McKee,	University of London, UK
Prof. Shlomo Mor-Yosef,	The Israel National Institute for Health Policy Research, (Israel) & National Insurance Institute, Israel
Prof. Joseph Pliskin,	Ben-Gurion University of the Negev, Israel
Prof. Avi Porath,	Maccabi Healthcare Services, Israel
Prof. Richard Saltmam,	Emory University, USA
Prof. Richard M. Scheffler,	University of California, Berkeley, USA

ePoster Committee

Chair:

Dr. Yehuda Neumark,	The Hebrew University of Jerusalem, Israel
Prof. Tamy Shohat,	Israel Center for Disease Control, Israel
Prof. Varda Soskolne,	Bar-Ilan University, Israel

General Information

VENUE

ICC Jerusalem Convention Center
Adjacent to the Crowne Plaza Hotel
Telephone (02) 6558558

REGISTRATION / HOSPITALITY DESKS

The Registration / Hospitality Desks will be located at the ICC Jerusalem Convention Center and the Crowne Plaza Hotel, and will be open to coincide with sessions on each day of the Conference.

Opening Hours Crowne Plaza Hotel
Sunday: 12:00–19:00

Opening Hours ICC Jerusalem Convention Center
Monday: 8:00–18:00
Tuesday: 9:00–18:00
Wednesday: 9:00–17:00

ePosters
ePosters will be on display in the ePoster area throughout the three days conference.

Exhibition hours are:
Monday: 9:00–18:00
Tuesday: 9:00–18:00
Wednesday: 9:00–14:00

Awards for Outstanding ePosters will be given at the Closing session on Wednesday, June 5th, between 14:00–16:30.

CONFERENCE BADGE

Upon registration, you will receive your conference kit, which will include your conference badge.

You are requested to wear your conference badge at all sessions and social events.

In addition, you will receive entry passes to the conference lunches.

LANGUAGE

English is the official language of the conference.

CLOTHING

Dress is informal for all occasions.

OPTIONAL SIGHTSEEING TOURS

There are a large variety of sightseeing tours available. For further information and reservations, please contact the Hospitality / Registration Desk.

SOCIAL EVENTS

Welcome Reception: Sunday, June 2nd 2013, 20:00 – 22:00.

Departure for the Reception will be from the lobby of The Crowne Plaza Hotel at 19:30.

The 5th International Jerusalem Conference On Health Policy

ICC Jerusalem Convention Center, June 3-5, 2013

HEALTH POLICY IN TIMES OF AUSTERITY

Provider Perspectives, Quality Assurance & Public Acceptance

Sunday, June 2, 2013

20:00 **Welcome Remarks: Richard B. Saltman (USA)**

Has Austerity Moved the Goalposts?

Monday, June 3, 2013

09:00-11:00 **Opening Session**

Chair: **Avi Israeli (IL) & Alan M. Garber (USA)**

Greetings: Shlomo Mor-Yosef (IL)

Nir Barkat, Mayor of Jerusalem (IL)

MK Yael German, Minister of Health (IL)

Alan M. Garber (USA): *The American Quest to Control Health Expenditure Growth*

Sherry Glied (USA): *Health Policy Reform in an Era of Austerity – Lessons From Washington, DC*

Ronni Gamzu (IL): *What is the Next "Arrow" in the Quiver: 50 Years of Uncertainty and Medical-Care Economics*

11:00-11:30 ***Coffee Break – ePoster Exhibit***

11:30-13:30 **Plenary Session – Group A: Patterns of Health Care Under Austerity**

Chair: **Dan Greenberg (IL)**

David Stuckler (UK): *The Body Economic: Why Austerity Kills*

Martin McKee (UK): *How have European Health Systems Responded to the Financial Crisis*

Stephen C. Schoenbaum (USA): *Achieving an Efficient Health Care System; Focus on Patients and Workforce*

Gary L. Freed (USA): *Impact of the "Ageing of America" on Pediatric Health Care*

13:30-14:30 ***Lunch Break***

14:30-16:00 **Parallel Session 1**

16:00-16:30 ***Coffee Break – ePoster Exhibit***

14:30–16:00 Parallel Session 1

Group A – **Oren Hall 1** Patterns of Health Care Under Austerity	Group B – **Oren Hall 2** Institutional Governance Strategies
Public Health: Vaccination Policy	**Dealing with Complex Patient**
Chair: Salman Zarka	**Chair: Avi Porath**
1. Baruch Velan (IL) VACCINATION IN TIMES OF AUSTERITY	**1. Richard B. Saltman (USA)** PUBLIC HOSPITAL GOVERNANCE IN EUROPE: REVIEWING INNOVATIVE STRATEGIES
2. Anat Amit Aharon (IL) REASONS WHY PARENTS DO NOT COMPLY WITH RECOMMENDED PEDIATRIC VACCINES	**2. Ran D. Balicer (IL)** TACKLING THE FINANCIAL AND ORGANIZATIONAL CHALLENGES OF AN AGING MULTI-MORBID POPULATION: THE NATIONAL PERSPECTIVE
3. Lisa Rubin (IL) LINKING CHILD PAYMENT SUBSIDIES TO IMMUNIZATIONS – AN EXPERIMENT IN PUBLIC POLICY	**3. Sara Rosenbaum (USA)** HOW HEALTH REFORM EFFORTS IN THE U.S. HISTORICALLY HAVE DEALT WITH CHILDREN AND ADULTS WITH DISABILITIES
4. Natalie Gavrielov-Yusim (IL) THE OUTCOMES OF VARICELLA VACCINE ADOPTION IN THE POPULATION UNDER PRIVATE PURCHASE POLICY	**4. Ephraim Shapiro (IL)** COMMUNITY HEALTH WORKERS AND CHRONIC DISEASE PREVENTION AND CONTROL: EFFECTIVE AS WELL AS LESS COSTLY?
5. Preeti Kumar (India) IMPROVING GOVERNANCE AND INSTITUTIONAL STRUCTURES TO REDUCE INEQUALITY IN IMMUNIZATION IN INDIA	**5. Chandra Cohen (IL)** HIGH-RISK CASE IDENTIFICATION FOR COMPREHENSIVE COMPLEX CARE MANAGEMENT
6. Hadar Arditi-Babchuk (IL) SOCIO-DEMOGRAPHIC MEASURES AND THE UPTAKE OF INFLUENZA VACCINATION IN ADULTS 50 YEARS AND OLDER IN ISRAEL	**6. Abla Adawi (IL)** IMPROVING ACCESS TO CARDIAC REHABILITATION POST MI: CHALLENGES AND ENCOURAGING RESULTS

14:30-16:00 Parallel Session 1

Group C - **Oren Hall 3** **Sustaining Quality and Performance**	Group D - **Oren Hall 4** **Financial and Economic Strategies**
Choosing Wisely: Re-Evaluating Routine Tests and Procedures	**Risk and Health Insurance**
Chair: Orly Manor	**Chair: Ehud Kokia & Moshe Bar Siman Tov**
1. Ora Paltiel (IL) MAKING "WISE" CHOICES: WHY AND HOW	**1. Shlomo Mor-Yosef (IL)** INEQUALITY IN PRIVATE HEALTH EXPENDITURE IN ISRAEL: TRENDS IN THE PAST DECADE AND THE CASE OF EXEMPTION FROM CO-PAYMENT
2. Amnon Lahad (IL) WHERE WE SHOULD NOT PUT OUR TIME AND MONEY IN PRIMARY CARE	**2. Alberto Holly (Switzerland)** HEALTH AND HEALTH CARE DEMAND EFFECTS OF DOUBLE COVERAGE
3. Gil Siegal (IL) A LEGAL PERSPECTIVE ON WISDOM, CHOICES & REVEALED PREFERENCES	**3. Amir Shmueli (IL)** ON THE CALCULATION OF THE ISRAELI RISK ADJUSTMENT RATES
4. Carolyn M. Clancy (USA) DISCUSSANT	**4. Richard C. van Kleef (Netherlands)** HOW CAN REGULATORS MEASURE RISK SELECTION IN COMPETITIVE HEALTH INSURANCE MARKETS?
5. Bruce E. Landon (USA) THE VALUE OF LOW VALUE LISTS: MOVING FROM LISTS TO IMPLEMENTABLE STRATEGIES	**5. Shuli Brammli-Greenberg (IL)** USING WAITING TIMES AS A TOOL FOR RATIONING CARE IN A MANAGEMENT CARE SETTING: IS IT A GOOD IDEA, AND IF SO, FOR WHOM?
6. Fiona Sim (UK) EVIDENCE-BASED PRIORITISING AND RATIONING	**6. Ruth Waitzberg (IL)** LESSONS FROM THE PENETRATION OF LONG-TERM CARE INSURANCE

16:30-18:00 Parallel Session 2

Group A - **Oren Hall 1** Patterns of Health Care Under Austerity	Group B - **Oren Hall 2** Institutional Governance Strategies
Preventive Medicine and Health Behavior	**Health IT**
Chair: Itamar Grotto & Joseph S. Pliskin	**Chair: Nachman Ash & Yuval Weiss**
1. Itamar Grotto (IL) USING THE NATIONAL KAP SURVEY TO INFORM DECISION-MAKING FOR THE NATIONAL PROGRAM TO PROMOTE ACTIVE, HEALTHY LIVING	**1. Jonathan C. Javitt (USA)** WIRELESS MEDICAL DEVICES ARE THE FUTURE OF HEALTH IT
2. Paula Feder-Bubis (IL) "CHANCES AND CHOICES": THE SOCIAL CONTEXT OF INDIVIDUAL PARTICIPATION IN COLORECTAL CANCER SCREENING	**2. Michael Halberthal (IL)** BUSINESS INTELLIGENCE SYSTEM FOR ONLINE MANAGING OF HOSPITAL OVER-OCCUPANCY
3. Doron Pollachek (IL) POLITICAL COMMITMENT TO HEALTH: POLICY INDICATORS FOR HEALTHY AND LIVEABLE CITIES	**3. Sari Dotan-Greenberg (IL)** "POLICY BASED DEMOGRAPHY, MORBIDITY AND GEOGRAPHY"- A PROPOSAL FOR MAPPING SYSTEM (GIS) AS A PLANNING TOOL AND DECISION SUPPORT. CLALIT HEALTH SERVICES EXPERIENCE
4. Arnon Afek (IL) PLANNING A MULTI-YEAR NATIONAL PROGRAM FOR CHILD-SAFETY - ADAPTING A DESIGNATED MODEL IN COMPARISON TO PARELLEL PROGRAMS IN THE WORLD	**4. Katriel Reichman (IL)** INSTITUTIONAL CONSIDERATIONS: THE MISSING LINK IN MAXIMIZING PAYOFF FROM HEALTH INFORMATION EXCHANGE, A COMPARATIVE ANALYSIS OF THE US AND ISRAEL
5. Arnon D. Cohen (IL) FOUR YEAR FOLLOW UP ON ADULT PNEUMOCOCCAL VACCINATION RATES SINCE THE INTRODUCTION OF NEW VACCINATION PROGRAM IN CLALIT HEALTH SERVICES	**5. Gabriel Catan (IL)** TOWARDS AN eHEALTH POLICY: A DESCRIPTIVE AND ANALYTICAL STUDY OF THE UTILIZATION OF INFORMATION & COMMUNICATION TECHNOLOGY (ICT) IN THE ISRAELI COMMUNITY HEALTHCARE DELIVERY SYSTEM
6. Ronen Arbel (IL) MAXIMIZING HEALTH OUTCOMES UNDER BUDGET CONSTRAINTS: THE CASE OF USING STATINS FOR PRIMARY PREVENTION OF ADVERSE CARDIOVASCULAR EVENTS	**6. Moriah Ellen (IL)** PUSHING USEFUL SCIENCE TO HEALTH SYSTEM MANAGERS AND POLICYMAKERS

16:30-18:00 Parallel Session 2

Group C - **Oren Hall 3** Sustaining Quality and Performance	Group D - **Oren Hall 4** Financial and Economic Strategies
Quality Issues in Community Health Care: From Building Infrastructure to Assessing Outcomes	**Incentives**
Chair: Shifra Shvarts & Itzhak Zaidise	**Chair: Gur Ofer & Ari Shamiss**
1. Gary L. Freed (USA) CHALLENGES IN THE DEVELOPMENT OF PEDIATRIC QUALITY MEASURES	**1. Arnold M. Epstein (USA)** WHAT HAVE WE LEARNED ABOUT HOSPITAL PAY FOR PERFORMANCE: LESSONS FROM MEDICARE'S P4P HOSPITAL QUALITY INCENTIVE DEMONSTRATION (HQID)
2. Nadav Davidovitch (IL) QUALITY MEASURES DEVELOPMENT FOR INFANTS AND TODDLERS PREVENTIVE HEALTH SERVICES	**2. Pedro Pita Barros (Portugal)** UP-CODING IN A NHS
3. Patricia Odero & Lucy Musyoka (Kenya) IMPLEMENTING SUSTAINABLE QUALITY IMPROVEMENT IN A RESOURCE CONSTRAINED SETTING	**3. Vladimir Lazarevik (Macedonia)** PAY-FOR-PERFORMANCE IN MACEDONIA: BETWEEN A GOOD TITLE AND A BAD REFORM
4. Sara Singer (USA) MALPRACTICE RISK IN AMBULATORY PRACTICES: EVALUATION BY STAFF AND ADMINISTRATORS IN THE PROMISES STUDY	**4. Yaniv Sherer (IL)** IMPLEMENTATION OF DRG REIMBURSEMENT SYSTEM FOR CHF DIAGNOSIS IN INTERNAL MEDICINE DEPARTMENTS IN ISRAEL; CLINICAL, FINANCIAL AND OPERATIONAL CONSEQUENCES
5. Dena H. Jaffe (IL) PRIMARY PREVENTION OF CARDIOMETABOLIC DISEASE – IS EVERYBODY RECEIVING QUALITY CARE?	**5. Michael Rozenfeld (IL)** REIMBURSEMENT CONDITIONED BY TIME OF HIP FRACTURE SURGERY CAN DECREASE LONG-TERM MORTALITY OF ELDERLY PATIENTS
6. Margalit Goldfracht (IL) WIN, WIN OUTCOMES: THE CONTRIBUTION OF CLINICAL QUALITY IMPROVEMENT PROGRAMS BASED ON ORGANIZATIONAL CULTURE TO COST CONTAINENMENT IN HEALTH CARE	**6. Ziona Haklai (IL)** HOSPITAL EXPENDITURE SERVICES IN ISRAEL COMPARED WITH THE OECD - IN TERM OF PURCHASING POWER PARITIES (PPP)
7. Ronit Calderon-Margalit (IL) BUILDING AN INFRASTRUCTURE TO ASSESS THE IMPACT OF QUALITY INDICATORS ON HEALTH OUTCOMES IN ISRAEL: METHODOLOGICAL ISSUES AND PRELIMINARY RESULTS	

ePoster Exhibit

ePosters will be presented at designated times during all coffee breaks.

Detailed schedule will be posted at the exhibition.

All abstracts are in the Program & Book of Abstracts.

Tuesday, June 4, 2013

09:00-11:00 **Plenary Session - Group B: Institutional Governance Strategies**

Chair: Haim Bitterman & Avi Porath (IL)

Josep Figueras (Belgium): *Financial Crisis & Austerity: The Health Governance Response Reflections on (Good) Governance*

Mark R. Chassin (USA): *Improving Improvement in Health Care*

Charles Boult (USA): *Caring for Older Persons with Multiple Chronic Conditions*

11:00-11:30 ***Coffee Break - ePoster Exhibit***

11:30-13:30 **Plenary Session - Group D: Financial and Economic Strategies**

Chair: Kobi Glazer (IL)

Stuart Altman (USA): *The Next Big Challenge for US Healthcare System: Slowing The Growth in Spending*

Pedro Pita Barros (Portugal): *Economic Measures in the Health Sector in a Country Under a Financial Assistance Programme*

Richard M. Scheffler (USA): *A New Vision for California's Healthcare System: Integrative Care with Aligned Financial Incentives*

13:30-14:30 ***Lunch Break***

14:30-16:00 **Parallel Session 3**

16:00-16:30 ***Coffee Break - ePoster Exhibit***

16:30-18:00 **Parallel Session 4**

18:15 ***Tour & Dinner***

14:30–16:00 Parallel Session 3

Group A – **Oren Hall 1** **Patterns of Health Care Under Austerity**	Group B – **Oren Hall 2** **Institutional Governance Strategies**
Health Policy in Times of Austerity	**Human Resources**
Chair: Tuvia Horev & Ofra Kalter Leibovich	**Chair: Orit Jacobson & Benny Davidson**
1. Ursula Småland Goth (Norway) CHALLENGES OF AN EQUITABLE HEALTH POLICY IN A PLURALISTIC SOCIETY – HEALTH POLICY IN TIMES OF AUSTERITY	**1. Oren Wacht (IL)** TURNOVER AND JOB SATISFACTION AMONG PARAMEDICS IN ISRAEL
2. Bruce Rosen (IL) CAN ISRAEL CONTINUE THE RECENT SURGE IN MAJOR HEALTH CARE REFORMS IF THE ECONOMY STOPS GROWING?	**2. Caryn Scheinberg Andrews (IL)** A SOLUTION TO THE PHYSICIAN SHORTAGE IN ISRAEL: INTEGRATION OF IMMIGRATING MID-LEVEL MEDICAL PROVIDERS
3. Richard B. Saltman (USA) RE-STRUCTURING RESPONSIBILITIES OF STATE, SOCIETY AND INDIVIDUAL FOR AN ERA OF PROLONGED AUSTERITY IN HEALTH SYSTEMS	**3. Michael Wangenheim (IL)** PHYSICIAN HOSPITAL STAFFING MODEL
4. Rene I. Jahiel (USA) AUSTERITY FOR WHOM? ADDRESSING CONTRIBUTIONS OF TOBACCO, PHARMACEUTICAL AND HEALTH INSURANCE INDUSTRIES TO HEALTH CARE COSTS	**4. Sigal Tikva Shafran (IL)** UNDERSTANDING HOW TO COPE WITH VIOLENCE IN THE HOSPITAL SETTING DURING AND ERA OF AUSTERITY
5. Thorbjörn Larsson (Sweden) BUILDING GOVERNANCE CAPACITY IN AUSTERITY'S SHADOW: STRATEGIES AND OUTCOMES FROM THE SWEDISH FORUM FOR HEALTH POLICY	**5. Bruria Adini (IL)** CONSIDERING HOSPITALS' CONGESTION IN REGULATION OF CASUALTIES DURING TIMES OF AUSTERITY
6. Sabina Nuti (Italy) INTEGRATED REGIONAL AND LOCAL GOVERNANCE TOOLS TO CHANGE MANAGEMENT IN HEALTHCARE: THE EVOLUTION OF ITALIAN EXPERIENCE	**6. Tom Axelrod (IL)** IS ACCESSIBILITY TO PUBLIC SERVICES DAMAGED IN HOSPITALS WITH PRIVATE SERVICES? THE JERUSALEM EXPERIENCE

14:30-16:00 Parallel Session 3

Group C - Oren Hall 3
Sustaining Quality and Performance

Learning from The World and Addressing Social Factors

Chair: Karen Wolk Feinstein & Leonid Eidelman

1. **Karen Wolk Feinstein (USA)**
   CONTAINING COSTS BY INCREASING QUALITY: APPLYING LEAN ACROSS THE WORLD

2 **Gabi Bin Nun (IL)**
   ADJUSTING THE NATIONAL HEALTH EXPENDITURE IN OECD COUNTRIES TO THE DIFFERENT AGES DISTRIBUTION

3. **Ulrica von Thiele Schwarz (Sweden)**
   ONE ORGANIZATION, SEVERAL COMPETING OBJECTIVES? BUILDING ORGANIZATIONAL ALIGNMENT THROUGHT INTEGRATION OF OCCUPATIONAL HEALTH AND SAFETY, EFFICIENCY AND QUALITY IMPROVEMENT

4. **Tzahit Simon-Tuval (IL)**
   DETERMINANTS OF NON-ADHERENCE TO MEDICATIONS AMONG CHRONIC PATIENTS IN MACCABI HEALTHCARE SERVICES

5. **Keren Dopelt (IL)**
   REDUCING HEALTH INEQUITIES: THE ROLE OF MEDICAL EDUCATION

Group D - Oren Hall 4
Financial and Economic Strategies

Resource Allocation

Chair: Jonathan Halevy

1. **Jacques Silber (IL)**
   BECOMING POOR AND THE CUTBACK IN THE DEMAND FOR HEALTH SERVICES IN ISRAEL.

2. **Rachel Nissanholtz-Gannot (IL)**
   THE CHANGING ROLE OF COMMUNITY NURSING: MANAGERIAL PERSPECTIVES IN NURSING AND MEDICINE

3. **Dina Maskileyson (IL)**
   THE IMPACT OF HEALTHCARE SYSTEM TYPE ON THE WEALTH-HEALTH GRADIENT: A COMPARATIVE STUDY OF OLDER POPULATIONS IN SIX COUNTRIES

4. **Efrat Shadmi (IL)**
   EQUITABLE RESOURCE ALLOCATION AND PERFORMANCE MEASEUREMENT: THE CASE FOR A COMPREHENSIVE RISK ADJUSTMENT MEASURE

5. **Dan Greenberg (IL)**
   IS LONGER SURVIVAL MORE VALUABLE THAN BETTER QUALITY OF LIFE? ISRAELI PHYSICIANS' ATTITUDES TOWARD THE RELATIVE VALUE OF INNOVATIVE INTERVENTIONS IN CANCER AND CONGESTIVE HEART FAILURE CARE

6. **Dalia Kesner (IL)**
   CHARACTERISTICS AND CLINICAL AND COST EFFECTIVENESS ASSESSMENT OF A COMMUNITY AMBULATORY SURGERY CENTER, COMPARED WITH A PUBLIC HOSPITAL

16:30–18:00 Parallel Session 4

Group A – Oren Hall 1
Patterns of Health Care Under Austerity

Disparities and Health Insurance

Chair: Yair Birnbaum & Shira Greenberg

1. **Alan Weil (USA)**
   AVERTING THE FEDERALISM CLIFF: REDESIGNING THE FEDERAL–STATE RELATIONSHIP IN THE CONTEXT OF THE AFFORDABLE CARE ACT
2. **Nehama Goldberger (IL)**
   DISPARITIES IN AMENABLE MORTALITY IN ISRAEL
3. **Shana Lavarreda (USA)**
   UNINSURED CHILDREN IN IMMIGRANT FAMILIES: LEFT BEHIND BY HEALTH CARE REFORM IN THE UNITED STATES?
4. **Nora Gottlieb (IL)**
   POLICY DECISIONS CONCERNING MIGRANT WORKERS' HEALTH ENTITLEMENTS – A COMPARATIVE ANALYSIS OF GERMANY AND ISRAEL

Group B – Oren Hall 2
Institutional Governance Strategies

Patient Centered Care

Chair: Asher Elhayany & Orly Toren

1. **Matan Cohen (IL)**
   FAMILY PHYSICIANS FACILITATED DELEGATION OF POWER OF ATTORNEY: MISSED OPPORTUNITIES FOR END OF LIFE COST CONTAINMENT
2. **Ronen Rozenblum (USA)**
   THE PATIENT SATISFACTION CHASM: FRONTLINE CLINICIANS' ATTITUDES TOWARDS HOSPITAL MANAGEMENT STRATEGIES AND ACTIVITIES FOR IMPROVING PATIENT SATISFACTION DURING HOSPITALIZATION
3. **Richard L. Kravitz (USA)**
   ENGAGING PATIENTS TO IMPROVE DEPRESSION CARE QUALITY IN DIVERSE PRIMARY CARE SETTINGS: RCT OF COMPUTER–BASED TARGETED AND TAILORED MESSAGING
4. **Nancy Zionts (USA)**
   IMPROVING OVERALL HEALTH AND REDUCING COSTS BY INTEGRATING BEHAVIORAL HEALTH INTERVENTION SERVICES INTO PRIMARY CARE
5. **Varda Soskolne (IL)**
   PREDICTORS OF UTILIZATION OF DENTAL HEALTH SERVICES AMONG ELDERS IN ISRAEL IN COMPARISON TO EUROPEAN COUNTRIES
6. **Michael L. Millenson (USA)**
   DRIVING PATIENT–CENTERED CARE IN ISRAEL BY MEASURING THE PATIENT EXPERIENCE: LESSONS FROM THE UNITED STATES

16:30-18:00 Parallel Session 4

Group C - Oren Hall 3
Sustaining Quality and Performance

Improving Hospital Quality Care: Pediatrics to Geriatrics

Chair: Massad Barhoum & Eran Halpern

1. Efrat Bron-Harlev (IL)
THE CHALLENGE OF IMPROVING QUALITY BY THE ACCREDITATION PROCESS IN A PEDIATRIC TERTIARY CARE MEDICAL CENTER

2. Ahmed Haj Yahya (IL)
ANALYSIS FOR IMPROVING THE QUALITY PROCESS OF PATIENT SAFETY HANDOFF FROM PEDIATRIC CARDIAC SURGERY TO PEDIATRIC CARDIAC ICU

3. Joel S. Weissman (USA)
WHEN BAD THINGS HAPPEN: STRATEGIES HOSPITALS CAN USE TO IMPROVE QUALITY RATINGS WHEN PATIENTS EXPERIENCE ADVERSE EVENTS

4. Jacob Dreiher (IL)
AUDITING SELF-REPORTED QUALITY INDICATORS: LESSONS LEARNED

5. Ahuva Weiss-Meilik (IL)
THE EFFECT OF PAY FOR PERFORMANCE (P4P) ON QUALITY OF CARE IN CARDIAC SURGERY

6. Jacob Gindin (IL)
UNIQUE TOOLS (QUALITY INDICATORS (QIS)) FOR EVALUATION AND QUALITY IMPROVEMENT IN LONG TERM CARE FACILITIES (LTCF) – IMPLEMENTATION OF AN INTERNATIONAL SYSTEM

Group D - Oren Hall 4
Financial and Economic Strategies

Resource Allocation (B)

Chair: Yitzhak Berlowitz & Gabi Bin Nun

1. Fiona Sim (UK)
ANALYSIS OF THE CURRENT MAJOR HEALTH SYSTEM REFORMS BEING IMPLEMENTED IN ENGLAND, AGAINST A BACKDROP OF UNPRECEDENTED ECONOMIC AUSTERITY

2. Dana Fishbain (IL)
THE EFFECT OF THE NEW COLLECTIVE BARGAINING AGREEMENT IN ATTRACTING YOUNG PHYSICIANS TO THE PERIPHERY

3. Steven B. Cohen (USA)
TRENDS IN THE CONCENTRATION AND THE PERSISTENCE OF HEALTH CARE EXPENDITURES IN THE UNITED STATES

4. Giora Kaplan (IL)
THE PARADOX IN TIMES OF AUSTERITY: A GROWTH IN NATIONAL HEALTH EXPENDITURES THROUGH ADDITIONAL HEALTH INSURANCE

5. Arnon Afek (IL)
CONTROLLING HEALTH CARE EXPENDITURE IN ISRAEL

Wednesday, June 5, 2013

09:00–11:00 **Plenary Session – Group C: Sustaining Quality and Performance**

Chair: **Gabriel I. Barbash (IL)**

Carolyn M. Clancy (USA): *Sustaining Quality and Performance in Times of Austerity*

Orly Manor (IL): *The Israel National Program for Quality Indicators in Community Healthcare (QICH) – Structure, Process and Outcome*

Lisa Simpson (USA): *Policy Levers to Increase Quality and Value and How "Patient-Centeredness" is Changing Quality and Value Research*

11:00–11:30 ***Coffee Break – ePoster Exhibit***

11:30–13:00 **Parallel Session 5**

11:30–13:00 Parallel Session 5

Group A – Oren Hall 1
Patterns of Health Care Under Austerity

The Impact of Research

Chair: Tamy Shohat & Jack Habib

1. **Rivka Hazan Hazoref (IL)**
   FROM STRATEGY TO IMPLEMENTATION: LEVERAGING OF NURSING RESEARCH FOR IMPROVED CLINICAL RESULTS IN THE ORGANIZATION
2. **Benny Leshem (IL)**
   BIO-MEDICAL RESEARCH IN TIMES OF AUSTERITY
3. **Jenny Dortal (IL)**
   REDUCING REHOSPITALIZATION RATES: ONGOING MONITORING AND ITS IMPACT ON INTERVENTIONS CARRIED OUT IN A LARGE ISRAELI HMO
4. **David Rier (IL)**
   EVIDENCE-BASED POLICY? THE WEIGHT OF SCIENTIFIC EVIDENCE ON ISRAELI TOBACCO-CONTROL POLICY
5. **Maya Siman-Tov (IL)**
   THE CONTRIBUTIONOF OF THE ISRAELI HEALTH CARE SYSTEMTOTHE SURVIVAL OF MOTOR VEHICLE CRASH VICTIMS
6. **Lisa Simpson (USA)**
   ROLE OF HSR IN EVALUATING AND IMPROVING HEALTH POLICY AND THE FUTURE OF QUALITY AND VALUE RESEARCH: PATIENT CENTERED OUTCOMES, CER AND QI

Group B – Oren Hall 2
Institutional Governance Strategies

Planning of Health Care Resources

Chair: Boaz Lev

1. **Jochanan Benbassat (IL)**
   REDUCING THE DURATION OF UNDERGRADUATE MEDICAL EDUCATION: BENEFITS AND LIMITATIONS
2. **Orly Toren (IL)**
   AN INVESTIGATION OF THE PROFESSIONAL BOUNDARIES BETWEEN PHYSICIANS AND NURSES: NEONATOLOGY – A CASE STUDY
3. **Léon Granat (IL)**
   A COMMUNITY PHARMACY AS A PRIMARY HEALTHCARE CENTER WITH AN INTERNATIONAL STANDARD – ISO 9001:2008 IN ISRAEL
4. **Kajsa Westling (Sweden)**
   THE FUTURE PLAN FOR HEALTHCARE IN STOCKHOLM COUNTY COUNCIL
5. **Sylvie Parrini-Alemanno (France)**
   DEVICE EVALUATION AND RESTRUCTURING MANAGERIAL. AND PROFESSIONAL PRACTICES IN SOCIO-MEDICAL ESTABLISHMENT IN FRANCE

11:30-13:00 Parallel Session 5

Group C - **Oren Hall 3** **Sustaining Quality and Performance**	Group D - **Oren Hall 4** **Financial and Economic Strategies**
Hospital Readmissions: Identifying Risk Factors and Building Preventing Strategies	**Treatment's Efficiency**
Chair: Ran D. Balicer	**Chair: Amir Shmuel & Nicky Liberman**
1. Bernard Friedman (USA) HOSPITAL READMISSIONS AND EMERGENCY REVISITS IN THE U.S.: DATA, TOOLS AND FINDINGS FROM THE HEALTHCARE COST AND UTILIZATION PROJECT (HCUP)	**1. Liora Bowers (USA)** PALLIATIVE CARE PROVISION & THE CASE OF SABAR CLINICS: MUCH MORE TO THE STORY THAN MERELY COST-SAVINGS
2. Claudia A. Steiner (USA) HOSPITAL READMISSIONS AND EMERGENCY REVISITS IN THE U.S.: DATA, TOOLS AND FINDINGS FROM THE HEALTHCARE COST AND UTILIZATION PROJECT (HCUP)	**2. Laura Farbman (IL)** COST-BENEFIT OF INFECTION CONTROL INTERVENTIONS TARGETING METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS IN HOSPITALS
3. Yoav Yehezkelli (IL) COMMUNITY WARD: ENHANCED TREATMENT SERVICE IN THE COMMUNITY AS A SOLUTION TO TRANSITION CARE FAILURES AND HIGH RE-ADMISSION RATE	**3. Svetlana Daichman (IL)** USING THE DELPHI METHOD FOR SELECTING MEDICAL TECHNOLOGIES UNDER BUDGET CONSTRAINTS: A FEASIBILITY STUDY
4. Ethel-Sherry Gordon (IL) READMISSIONS TO INTERNAL MEDICINE DEPARTMENTS	**4. Ofir Ben-Assuli (IL)** THE IMPACT OF EHR SYSTEMS ON REDUCING AVOIDABLE ASMISSIONS FOR MAIN DIFFERENTIAL DIAGNOSES
5. Joel S. Weissman (USA) CASE STUDIES TO BETTER UNDERSTAND READMISSIONS IN MINORITY SERVING HOSPITALS	**5. Gary Ginsberg (IL)** SCREENING TO PREVENT EARLY-ONSET OF NEONATAL GROUP B STREPTOCOCCAL DISEASE: A COST-UTILITY ANALYSIS
6. Ran D. Balicer (IL) FROM BENCH TO BEDSIDE: USING PREDICTIVE ALGORYTHMS AND PATIENT REPORTED MEASURES TO TARGET READMISSION REDUCTION AT CLALIT	**6. Gilad Sorek (USA)** EFFICIENT PRIVATE-PREVENTION AND PROGRESS IN CURING-TECHNOLOGY

13:00–14:00 ***Lunch Break***

14:00–16:30 **Closing Session**

ePoster Awards

Chair: Avi Israeli (IL) & Alan M. Garber (USA)

Dan Ariely (USA): *Now and Later: The Problem of Self Control*

Jeremy M. Levin (IL): *The Pharmaceutical Industry in Times of Austerity – While Remaining Focused on the Needs of Patients and Healthcare Providers*

Mordechai Shani (IL): *Where Shall We Be Two Decades From Now*

Bruce Rosen (IL): *Lessons to Take Home*

BIOGRAPHIES

Invited Speakers & Chairpersons

Arnon Afek

Arnon Afek, MD, MHA, is a graduate in Medicine from the Hadassah and the Hebrew University School of Medicine and in Health administration cum lauda from the Ben Gurion University. He completed residency in Anatomical Pathology at the Sheba Medical Center, and fellowship in Medical Administration under the CEO's of the Sheba Medical Center, and of the Israeli Ministry of Health.

Prof. Afek joined the Ministry of Health as Director of Medical Affairs, in charge of the Medical professions, Medical standards and regulation of the Israeli health care system.

His previous positions include: Deputy Director of the Sheba General hospital, Head of Emergency services at Sheba Medical Center and head of Occupational Medicine & Medical Classification Branch, Head of the Department of Medical Administration, and Chairman of Residency Program at the IDF Medical Corps.

He is a professor of Pathology at the Tel Aviv University Sackler Faculty of Medicine where he teaches both pathology and Medical Administration and lectures on Medical Administration at Bar Ilan University. Prof. Afek is also the Director, New York/American MD Program, Sackler Faculty of Medicine, Tel Aviv University.

Prof Afek's research fields are: Pathogenesis of Atherosclerosis, Cardiovascular risk factor in young adults Art and History of Medicine. He has more than 100 publications in medical literature including NEJM, JAMA and Circulation. He was invited as guest speaker and participated in numerous medical conferences. His many awards include the Kellerman Award and the Goldberg Award, both for research in Cardiology, the national Quality Improvement prize and award for Excellency in Military Medicine.

Stuart Altman

Dr. Stuart Altman, Ph.D., Sol C. Chaikin Professor of National Health Policy at The Heller School for Social Policy and Management, Brandeis University, is an economist with approximately five decades of experience working closely with issues of federal and state health policy within government, the private sector, and academia. He has demonstrated leadership in health care through service on numerous government advisory boards on both the federal and state levels, including service as the Deputy Assistant Secretary for Planning and Evaluation/Health at the U.S. Department of Health Education and Welfare (HEW) from 1971 to 1976; as Chairman of the Prospective Payment Assessment Commission (ProPac) from 1984 to 1996; and in 1997 as an appointed member of the National Bipartisan Commission on the Future of Medicare. In total, Dr. Altman acted as advisor to five U.S. presidential administrations. In November 2012, Governor Deval Patrick appointed Dr. Altman to chair the board of the Health Policy Commission as part of Massachusetts' implementation of a health care cost containment law passed earlier that year. Dr. Altman is also a member of the International Health Care Advisory Board to the Smokler Center for Health Policy Research at the Myers-JDC-Brookdale Institute.

Dr. Altman has also been recognized as a leader in the health care field by *Health Affairs* and by *Modern Healthcare*, which named him in 2006 among the 30 most influential people in health policy over the previous 30 years, and which from 2003 to 2011 named him one of the top 100 most powerful people in health care. He has served on the Board of Directors of several for-profit and not-for-profit companies, and he is a member of The Institute of Medicine and chairs the Health Industry Forum at Brandeis University. He is a published author of numerous books and journal articles, the most recent, *Power, Politics and Universal Health Care: The Inside Story of a Century-Long Battle* (2011). In addition to teaching at Brandeis, Dr. Altman has taught at Brown University and at the Graduate School of Public Policy at the University of California at Berkeley. He served as Dean of the Heller School from 1977 to 1993 and from 2005 to 2008. He also served as interim President of Brandeis University from 1990 to 1991.

Dan Ariely

Despite our intentions, why do we so often fail to act in our own best interest? Why do we promise to skip the chocolate cake, only to find ourselves drooling our way into temptation when the dessert tray rolls around? Why do we overvalue things that we've worked to put together? What are the forces that influence our behavior?

Dan Ariely, James B. Duke Professor of Psychology & Behavioral Economics at Duke University, is dedicated to answering these questions and others in order to help people live more sensible – if not rational – lives.

His interests span a wide range of behaviors, and his sometimes unusual experiments are consistently interesting, amusing and informative, demonstrating profound ideas that fly in the face of common wisdom. In addition to appointments at the Fuqua School of Business, the Center for Cognitive Neuroscience, the Department of Economics, and the School of Medicine at Duke University, Dan is also a founding member of the Center for Advanced Hindsight, and the author of the New York Times bestsellers Predictably Irrational, The Upside of Irrationality, and The Honest Truth About Dishonesty.

Nachman Ash

Deputy Director General, Health Informatics, Ministry of Health, Israel

Dr. Nachman Ash was born in Israel in 1961. He is a physician, board certified in Internal Medicine and a graduate of the MS program of MIT – Harvard in Medical Informatics (2001) and the MA program in political science from Haifa University and the National Defense University (2005).

Dr. Ash is a retired Brigadier-General who had a long career as a military physician. In his last position he served as the Surgeon General, in which he led the Medical Corps for four years. Dr. Ash is the Deputy Director General for Health Informatics in the Ministry of Health since 2012 and a senior lecturer at Ariel University.

Alexander (Alik) Aviram

MD Hebrew University – 1961.
Specialist in Internal Medicine, Nephrology and Medical Management.
Formerly head, Department of Nephrology and of Rokach ("Hadassah") Hospital, T.A.

Associate Director – General of Hadassh Medical Organization, Jerusalem.
Director – General of Assuta hospital, T.A.
Medical Director, Maccabi health Services.
Currently Scientific Director, The Israel National Institute for Health Services and Health Policy Research.

Ran D. Balicer

Ran D. Balicer, MD, Ph.D, MPH, a public health physician and researcher, serves as Founding Director of the Clalit Research Institute and Director of Health Policy Planning, Chief physician office, at Clalit – Israel's largest healthcare organization. In these roles, he is responsible for strategic planning and development of novel organization-wide interventions for improving healthcare quality, reducing disparities, and introducing novel data-driven tools into practice to increase care effectiveness.

Prof. Balicer has been affiliated as faculty with the Ben-Gurion University since 2004, involved in research and teaching in the Epidemiology Department, and serves today as Associate Professor and Track Director in the faculty' MPH program. He authored books, book chapters and over 100 peer-reviewed publications looking at various aspects of public health, quality improvement, and preventive medicine. In recent years, Prof. Balicer's research is focused on the study of extensive clinical databases in care provision and policymaking, as well as in applying and assessing innovative models of care aimed at increasing the effectiveness of non-communicable diseases care. In parallel, he is involved with the study of emerging infectious diseases prevention and control, through modeling and real-life big data.

Prof. Balicer serves as an Adviser to the Israeli Ministry of Health and as Member of the National Advisory Committee on Immunizations Practices and Infectious Diseases. He also serves as President-Elect of the International Society of Pharmaco-epidemiology and Outcome Research (ISPOR), as Secretary of the Israeli Public Health Physician Association, and as Executive Board Member of the Israeli Society for Quality in Healthcare.

Gabriel I. Barbash

Dr. Gabriel Barbash, MD, MPH, has been the Director General of the Tel Aviv Sourasky Medical Center since 1993. He served as the Director General of the Ministry of Health from 1996 to 1999. .

From 1998 to 2001, Dr. Barbash served as the Chairman of the Israeli National Transplant Center and reorganized the system of organ harvesting in Israel, doubling the number of organ transplantations nationwide.

Dr. Barbash was Israel's national coordinator and principal investigator for numerous multi-center, international cardiology studies in which each department of cardiology in Israel took part. He has published more than 80 original papers, mainly in the fields of diagnosis, risk assessment, and treatment of acute myocardial infarction. In 2001, Dr. Barbash was appointed Professor of Epidemiology and Preventive Medicine in the Sackler School of Medicine, Tel Aviv University.

Dr. Barbash is a graduate of the Hadassah Medical School of the Hebrew University, Jerusalem, and is board certified in Internal Medicine, Medical Management and Occupational Medicine. He also holds a master's degree in Public Health (MPH), specializing in Health Policy and Management, from the School of Public Health at Harvard University. Dr. Barbash is a visiting professor in the Mailman School of Public health at Columbia University, New York, where with the US Ministry of Health Agency for Health Research Quality (AHRQ) he researches the diffusion of medical technologies.

Masad Barhoum

1979–1985 – Medical studies (MD) at the Faculty of Medicine, Technion, Haifa, Israel

Administrative Positions Held:
2007– Director, Western Galilee Hospital, Nahariya
1999–2006 – Director, Holy Family (Italian) Hospital, Nazareth

At Western Galilee Hospital (5) years, I have thus far established the following services:
Cardiac electrophysiology
Pediatric cardiology
MRI
An additional surgery department specializing in hepatic and pancreatic surgery
An additional orthopedics department specializing in spine surgery
Chest (thoracic) surgery
Hepatology clinic
IVF unit due to open in May 2013
Neurosurgery department and neurosurgery intensive care unit opened in March 2013.

The following projects have been completed/initiated:
30-bed general and pulmonary ICU – completed (opened 6/2009)
New Emergency Department, protected against conventional and non-conventional weapons (opened April 2012)
New Rehabilitation Department (opened December, 2012)
Plans for renovating and expanding the Oncology Unit – began in January 2013.
The new Women's Health Center is presently under construction
The 6th Internal Medicine department opened in January 2013.

In the next 5 years, my goal is for Western Galilee Hospital to become the leading Level1 surgical hospital in northern Israel.

And in the next 10 years, I plan to establish Western Galilee Hospital as a referral hospital for all disciplines.

Pedro Pita Barros

Pedro Pita Barros, PhD in Economics, is a Professor of Economics at Universidade Nova de Lisboa, Portugal, where he teaches industrial organization and health economics. He is also a research fellow at the Centre for Economic Policy Research (London).

Pedro Pita Barros' research focuses on issues on health economics and on regulation and competition policy. His work has covered different topics including: health expenditure determinants, waiting lists, bargaining in health care, competition policy in Portugal and in the European Union, among others.

His research has appeared in many academic journals (such as *The Journal of Health Economics and Health Economics*). Pedro Pita Barros has also contributed to several books, and has two books on health economics (written in Portuguese).

He has served as Member of the Board of the Portuguese Energy Regulator (2005/2006) and on the Governmental Commission for the Financial Sustainability of the National Health Service (2006/2007). Pedro Pita Barros was also President of the Portuguese Association for Health Economics, and serves on the editorial boards of several academic journals in the field of Health Economics. Over time he has acted as consultant for both private and public entities, in Portugal and at the European level, in the areas of health economics, competition policy and economic regulation.

Honours:
"Grande-Oficial da Ordem do Infante D. Henrique", awarded by the President of the Republic of Portugal, June 2005.

Gabi Bin Nun

Prof. Gabi Bin Nun worked at the Ministry of Health for 30 years. His last position in the Ministry was the Deputy Director General for Health Economics and Health Insurance.

Gabi was one of the architects and designers of the Israel's National Health Insurance Law (1995) and since then has played a central role in its implementation and evaluation.

Since 2008 Gabi is an Associate Professor in the Department of Health Systems Management at the Faculty of Management at Ben-Gurion University of the Negev in Israel.

His research focus is in the field of health policy, health economics and health care systems.

He has published books and many articles in these fields.

Yair Birnbaum

Dr. Yair Birnbaum is currently the Medical Director at Maccabi Healthcare Services.

Prior to this position he was the Associate Director General of HMO and Head of Medical Services at the Hadassah Medical Organization, Jerusalem.

He completed his medical degree at the Hadassah-Hebrew University School of Medicine and a residency in Pediatrics at the Shaare Zedek Medical Center. He also received and MA degree in Public Administration from Harvard University in 1999 and completed a residency in Medical Management.

From 2001 up to the end of 2007, Dr. Birnbaum served as Associate Director General of HMO and as Director of the Hadassah Ein-Kerem Medical Center.

Prior to his joining HMO, he served as Deputy Director General of Shaare Zedek Medical Center and Associate Medical Director of Maccabi Health Care Services.

In addition to medical training Dr. Birnbaum is also an ordained Orthodox Rabbi who wrote his thesis on "The Status of the Physician in Jewish Sources".

Haim Bitterman

Prof. Haim Bitterman M.D., Chief Physician, Clalit Health Services. The Ruth and Bruce Rappaport Faculty of Medicine, Technion – Israel Institute of Technology, Haifa. Israel.

Education and training: 1972: M.D. Hadassah and Hebrew University Medical School, Jerusalem. 1973: Internship: Soroka Medical Center. 1977–1982: Residency in Internal Medicine, Carmel Medical Center. Haifa, Israel. (Board certified since 1982). 1985–1987: Research fellowship in Cardiovascular Physiology. Department of Physiology, Thomas Jefferson Medical College. Philadelphia, USA. 2001: Visiting Professorship. Department of Cardiovascular Medicine. Stanford University, Palo Alto, CA, USA.

Appointments: 1989: Director, Department of Internal Medicine, Carmel Medical Center, Haifa. 1990: Senior Lecturer of Medicine. Faculty of Medicine, Technion, Haifa. 1997: Associate Professor of Medicine. Faculty of Medicine, Technion, Haifa: 2009: Professor of Medicine. Faculty of Medicine, Technion, Haifa. 1999–2004: Vice Dean, Faculty of Medicine, Technion, Haifa. 2000–: European Federation of Internal Medicine (EFIM) – member of the administrative council. 2001– 2005: Chairman, Israel Society of Hyperbaric and Diving Physiology and Medicine. 2003–2010: Chairman of Medicine, Carmel Medical Center, Haifa. 2004–2010: Head of the Board of Internal Medicine, Israel Medical Association. 2005–2011: President of the Israel Association of Internal Medicine. 2009–: Clalit Health Services, Israel – Chief Physician.

Research Interests: Pathophysiology of ischemia and shock. The inflammatory response to ischemia, trauma and infection. The use of hyperoxia in ischemia/shock.

Charles Boult

Charles Boult, MD, MPH, MBA, is the director of the Healthcare Systems Improvement program of the Patient-Centered Outcomes Research Institute (PCORI). Dr. Boult came to PCORI from the Johns Hopkins University, where he was a Professor of Health Policy and Management at the Bloomberg School of Public Health and he held joint appointments on the faculties of the Schools of Medicine and Nursing. He has been a teacher, a researcher and a board-certified physician in Family Medicine and Geriatrics.

Dr. Boult has extensive experience in developing, testing, evaluating, and diffusing new models of health care for older persons with chronic conditions. He has published two books and more than 80 articles in biomedical scientific journals. From 2000-2005, he edited the "Models and Systems of Geriatric Care" section of the Journal of the American Geriatrics Society, and he has reviewed manuscripts for 20 scientific journals and served as a grant reviewer on study sections of the NIA and AHRQ. During 2009-2011, Dr. Boult served as a "Health and Aging Policy Fellow" and a Senior Advisor for Geriatrics and Long-Term Care at the Centers for Medicare & Medicaid Services (CMS).

Mark R. Chassin

Mark R. Chassin, M.D., F.A.C.P., M.P.P., M.P.H., is president of The Joint Commission. In this role, he oversees the activities of the nation's leading accrediting body in health care. Joint Commission accreditation and certification is recognized worldwide as a symbol of quality that reflects an organization's commitment to quality improvement and to meeting state-of-the-art performance standards. Dr. Chassin is also president of the Joint Commission Center for Transforming Healthcare. Established in 2009 under Dr. Chassin's leadership, the Center works with the nation's leading hospitals and health systems to address health care's most critical safety and quality problems such as health care-associated infection (HAI), hand-off communications, wrong site surgery, surgical site infections, and preventing avoidable heart failure hospitalizations. The Center is developing solutions through the application of the same Robust Process Improvement™ (RPI) methods and tools that other industries rely on to improve quality, safety, and efficiency. In keeping with its objective to transform health care into a high reliability industry, The Joint Commission shares these proven effective solutions with the more than 20,000 health care organizations and programs it accredits and certifies. Dr. Chassin is also a member of the International Health Care Advisory Board to the Smokler Center for Health Policy Research at the Myers-JDC-Brookdale Institute.

Previously, Dr. Chassin was the Guggenheim Professor of Health Policy; founding Chairman of the Department of Health Policy at the Mount Sinai School of Medicine, New York; and Executive Vice President for Excellence in Patient Care at The Mount Sinai Medical Center. Dr. Chassin also served as Commissioner of the New York State Department of Health. He is a board-certified internist and practiced emergency medicine for 12 years, and is a member of the Institute of Medicine of the National Academy of Sciences.

Dr. Chassin received his undergraduate and medical degrees from Harvard University. He holds a master's degree in public policy from Kennedy School of Government at Harvard, and a master's degree in public health from UCLA.

Carolyn M. Clancy

Carolyn M. Clancy, M.D., was appointed Director of the Agency for Healthcare Research and Quality (AHRQ) on February 5, 2003, and reappointed on October 9, 2009. Prior to her appointment, Dr. Clancy was Director of AHRQ's Center for Outcomes and Effectiveness Research. Dr. Clancy, a general internist and health services researcher, is a graduate of Boston College and the University of Massachusetts Medical School. Following clinical training in internal medicine, Dr. Clancy was a Henry J. Kaiser Family Foundation Fellow at the University of Pennsylvania. Before joining AHRQ in 1990, she was also an assistant professor in the Department of Internal Medicine at the Medical College of Virginia.

Dr. Clancy holds an academic appointment at the George Washington University School of Medicine (Clinical Associate Professor, Department of Medicine) and serves as Senior Associate Editor for the journal *Health Services Research*. She serves on multiple editorial boards, including *Annals of Internal Medicine, Annals of Family Medicine, American Journal of Medical Quality, and Medical Care Research and Review*.

Dr. Clancy is a member of the Institute of Medicine and was elected a Master of the American College of Physicians in 2004. In 2009, she was awarded the William B. Graham Prize for Health Services Research.

Dr. Clancy's major research interests include improving health care quality and patient safety and reducing disparities in care associated with patients' race, ethnicity, gender, income, and education. As Director of AHRQ, she launched the first annual report to Congress on health care disparities and health care quality.

Steven B. Cohen

Steven B. Cohen, Ph.D., is Director, Center for Financing, Access and Cost Trends at the Agency for Healthcare Research and Quality (AHRQ).

Dr. Cohen directs a staff of approximately 50 highly trained and skilled economists, statisticians, social scientists, clinicians and support staff conducting intramural and supporting extramural research on behalf of the Agency. He also directs activities necessary to conduct and support a wide range of studies related to the cost and financing of health care services. Studies include analyses of health care use and expenditures by individuals and families for personal health care services, the sources of payment for health care, the availability and cost of health insurance, and health status, outcomes and satisfaction.

Dr. Cohen also leads the Center's administration of surveys and development of large primary data sets, including the Medical Expenditure Panel Survey (MEPS), to support health care policy and behavioral research and analyses. Dr. Cohen has authored over 100 journal articles and publications in the areas of biostatistics, survey research methodology, estimation, survey design and health services research. He is co-author of the text, *Methodological Issues for Health Care Surveys*. He has also served as an Associate Professor in the Department of Health Policy and Management at the Johns Hopkins University and the Department of Health Services Administration at the George Washington University. He received his Ph.D. and M.S. in Biostatistics from the University of North Carolina and his B.A. in Mathematics and History, CUNY. He is also a Fellow of the American Statistical Association and an Elected Member of the International Statistical Association.

Chaim Doron

Prof. Chaim Doron M.D, School of Medicine, Buenos Aires University (1952), and Public Health School, London School of Tropical Medicine and Hygiene, University of London (1961).
Specialist in Public Health and Health Management.

Medical Director of Kupat Holim Clalit, Negev Region (1961–1968);
Director, the Negev Central Hospital, Beer Sheva, (1967–1968);
Head of the Medical Division, Kupat Holim Clalit, Central Office, Tel Aviv (1968–1976);
Deputy Chairman, Kupat Holim Clalit, (1973–1976);
Chairman and Director General, Kupat Holim Clalit (1976– 1988);
Head, School of Health Professions, Sackler School of Medicine Tel Aviv University (1990–1997).
Chairman, Board of Trustees, The Israel National Institute for Health Policy and Health Services Research; Member of the Health Council, Ministry of Health;
Member of the Executive Committee, Shaarey Zedek Medical Center. Published articles, chapters in books, dissertations, and presentations in international conferences.
Co-Author of the book: "Medicine in the Community" published by the Ben Gurion University in the Negev; by Chaim Doron and Shifra Shwartz.

Arnold M. Epstein

Arnold Epstein, MD, MA is the John H. Foster Professor and Chair of the Department of Health Policy and Management at Harvard University School of Public Health. He is a practicing internist in the Department of Medicine (Division of General Medicine) at the Brigham and Women's Hospital.

Professor Epstein's research interests focus on quality of care and access to care for disadvantaged populations. Recently, his efforts have focused on public reporting of quality performance data and Medicaid policies. He was vice chair of the Institute of Medicine Committee on Developing a National Report on Health Care Quality. He also served as chairman of the board of AcademyHealth. He was Co-chair of the Performance Measurement Coordinating Council of the Joint Commission on Accreditation of Healthcare Organizations, the National Committee on Quality Assurance, and the American Medical Association. He worked in the White House for two years during the first term of the Clinton administration, and he currently serves on the Board of Governors of the Patient Centered Outcomes Research Institute (PCORI) established by the Affordable Care Act.

Dr Epstein has been elected to the Society for Clinical Investigation and the Association of American Physicians. He is Associate Editor of the New England Journal of Medicine and a member of the Institute of Medicine. He received a BA from the University of Rochester, a masters degree in political science from Harvard University, a BMS from Dartmouth Medical School and an MD from Duke University

Josep Figueras

Josep Figueras, MD, MPH, PhD (econ) Spanish, is the Director of the European Observatory on Health Systems and Policies and head of the WHO European Centre on Health Policy in Brussels. In addition to WHO, he has served other major multilateral organizations such as the European Commission and the World Bank. He is a member of several advisory and editorial boards and has served as advisor in more than forty countries within the European region and beyond.

He is member of APHEA board of accreditation; honorary fellow of the UK faculty of public health medicine, has twice been awarded the EHMA prize, and in 2006 received the Andrija Stampar Medal. He was head of the MSc in Health Services Management at the London School of Hygiene & Tropical Medicine and he is currently visiting professor at Imperial College, London. His research focuses on comparative health system and policy analysis and is editor of the European Observatory series published by Open University Press. He has published several volumes in this field, the last two: Health systems, health and wealth: assessing the case for investing in health systems (2012) and Health professional mobility and health systems (2011).

Gary L. Freed

Gary L. Freed MD, MPH is the Percy and Mary Murphy Professor of Pediatrics in the School of Medicine and Professor of Health Management and Policy in the School of Public Health at the University of Michigan.

He is Director of the Division of General Pediatrics and Director of the Children's Health Evaluation and Research (CHEAR) Unit. Dr. Freed has over 20 years of experience in children's health services research and has been the principal investigator of numerous federal, state and foundation-funded grants, and the first NIH-funded pediatric health services research fellowship program. He has published over 200 peer-reviewed articles on child health policy and health economics, immunizations, physician behavior, the medical workforce and interspecialty variation in the provision of preventive services to children. Dr. Freed is the Chair of the Health Policy Advisory Committee of the Smokler Center at the Myers-JDC-Brookdale Institute.

He is a past Chair of the Department of Health and Human Services National Vaccine Advisory Committee. He is a frequent consultant to state and federal agencies as well as the Institute of Medicine of the National Academy of Sciences and the World Health Organization. He is a member of the American Board of Pediatrics and a Fellow of the American Academy of Pediatrics. In July 2013 he will become the Director of the Australian Health Workforce Institute at the University of Melbourne.

Bernard Friedman

Bernard Friedman, Ph.D., is an economist who specializes in research on health care costs and utilization of expensive services. At the Agency for Healthcare Research and Quality (AHRQ), he has analyzed the responses of hospitals to changes in Medicare and regulatory programs, the supply of expensive hospital-based services such as organ transplants, hip replacement surgery, and intensive care services to adults and infants. His current research addresses preventable hospital admissions, readmissions, the impacts of patient safety events, hospital care use and cost in Medicare Advantage plans vs. Fee-for-Service, and other applications of the Healthcare Cost and Utilization Project (HCUP) databases.

Dr. Friedman's work in health economics has been published in many recognized books and peer-reviewed journals such as *Review of Economics and Statistics, Medical Care, Health Services Research*, Inquiry, *Health Care Financing Review, American Journal of Managed Care* and *Health Affairs*.

Dr. Friedman holds a doctorate in economics from Massachusetts Institute of Technology. He was formerly a faculty member of Brown University and Northwestern University and served as vice president at the Hospital Research and Educational Trust of the American Hospital Association.

Alan M. Garber

Alan M. Garber, MD, PhD is Provost of Harvard University and the Mallinckrodt Professor of Health Care Policy at Harvard Medical School, a Professor of Economics in the Faculty of Arts and Sciences, Professor of Public Policy in the Harvard Kennedy School of Government, and Professor in the Department of Health Policy and Management in the Harvard School of Public Health. Before becoming the Provost at Harvard, Dr. Garber was the Henry J. Kaiser Jr. Professor and a Professor of Medicine, as well as a Professor of Economics, Health Research and Policy, and Economics in the Graduate School of Business (by courtesy) at Stanford University.

From 1997 to 2011, he was Director of the Center for Primary Care and Outcomes Research in the Stanford University School of Medicine and Director of the Center for Health Policy at Stanford, and from 1986 to 2011 he served as a Staff Physician at the Department of Veterans Affairs Palo Alto Health Care System.

Dr. Garber is an Elected Member of American College of Physicians, the Association of American Physicians, and the Institute of Medicine of the National Academy of Sciences, and an Elected Fellow of the Royal College of Physicians. He currently serves as Associate Editor for the Journal of Health Economics. He is a member of the Board on Science, Technology, and Economic Policy of the National Academies, and formerly served as a member of the Panel of Health Advisers for the Congressional Budget Office.

Dr. Garber graduated summa cum laude from Harvard College with an AB in Economics in 1976. He earned an AM in Economics in 1977 and a PhD in Economics in 1982, both from Harvard University. In 1983, he received his MD from Stanford University School of Medicine.

Ronni Gamzu

Prof. Ronni Gamzu is the Director General of Ministry of Health.

He completed his medical degree at the Tel-Aviv University School of Medicine and a residency in Gynecology at the Tel-Aviv Medical Center. He also received PhD, MBA and Law degree from Tel-Aviv University in 1997 – 2008 and completed a residency in Medical Management.

From 2002 up to the end of 2007, Prof. Gamzu served as Associate Director General for health economics in the Tel-Aviv Medical Center.

From 2008 – 2010 Prof. Gamzu served as the Director of the General Hospital in Tel-Aviv Medical Center

Kobi Glazer

Jacob Glazer received his Ph.D in Economics from the Kellogg School of Management at Northwestern University, in 1986.

He is currently a professor of economics at the Faculty of Management, Tel Aviv University, Israel and the Department of Economics, Boston University, USA. He is the Chair of the Master of Health Administration (MHA) program and the Academic Director of the Executive MBA programs at Tel Aviv University. In addition, he serves as the Head of the Kovens Institute for Health Systems' Management and is the incumbent of the Issachar Haimovich Chair for Strategic Management at Tel Aviv University.

Glazer's main areas of research are health economics, industrial organization and game theory. He has served as a consultant to many research projects funded, among others, by the NIH, NIA and the VA, in the US and to various organizations in Israel such as the Israeli Medical Association, the Israeli Ministry of Health and the Maccabi Healthcare Services.

He is currently an Associate Editor of the Journal of Health Economics.

Sherry Glied

Sherry Glied is Professor of Health Policy and Management at Columbia University's Mailman School of Public Health. She was Chair of the department from 1998–2009 and has been on faculty since 1989. On June 22, 2010, Glied was confirmed by the U.S. Senate as Assistant Secretary for Planning and Evaluation at the Department of Health and Human Services, and served in that capacity from July 2010 through August 2012. She had previously served as Senior Economist for health care and labor market policy on the President's Council of Economic Advisers in 1992–1993, under Presidents Bush and Clinton, and participated in the Clinton Health Care Task Force. She has been elected to the Institute of Medicine of the National Academy of Sciences, the National Academy of Social Insurance, and the Board of AcademyHealth and has been a member of the Congressional Budget Office's Panel of Health Advisers. Since 2006, she has been a member of the Advisory Board of the Brookdale Institute.

Glied's principal areas of research are in health policy reform and mental health care policy. Her book on health care reform, Chronic Condition, was published by Harvard University Press in January 1998. Her book with Richard Frank, Better But Not Well: Mental Health Policy in the U.S. since 1950, was published by The Johns Hopkins University Press in 2006. She is co-editor with Peter C. Smith, of The Oxford Handbook of Health Economics, which was published by the Oxford University Press in 2011.

Glied holds a B.A. in economics from Yale University, an M.A. in economics from the University of Toronto, and a Ph.D. in economics from Harvard University.

Dan Greenberg

Dan Greenberg, Ph.D. is an Associate Professor and Chairman of the Department of Health Systems Management at the Faculty of Health Sciences and the Guilford-Glazer Faculty of Business and Management at Ben-Gurion University of the Negev in Israel, where he teaches on comparative healthcare systems, health technology assessment, and economic evaluation of technologies in healthcare. Since 2008, he is also affiliated with the Center for the Evaluation of Value and Risk in Health (CEVR) at The Institute for Clinical Research and Health Policy Studies at Tufts Medical Center, Boston, MA, and is an adjunct faculty at the Tufts University School of Medicine.

After receiving his doctorate degree from Ben-Gurion University of the Negev in 2001, Dr. Greenberg completed a 3-year post-doctoral research fellowship at the Harvard Clinical Research Institute & Cardiovascular Division, Beth Israel Deaconess Medical Center, and Harvard Medical School, initially as a Fulbright Scholar. He was also a Visiting Scientist at the Department of Health Policy and Management at the Harvard School of Public Health. His research focuses on economic evaluation of healthcare technologies, health technology policy, medical decision-making and outcomes research. He has conducted economic evaluations for various medical interventions and contributed to the literature on the willingness to pay for cardiovascular interventions, diffusion of innovations, and the use of economic evaluations for coverage and reimbursement decisions at the national level. Dr. Greenberg authored or co-authored over 60 papers and book chapters and published his work in leading medical and health policy journals, such as the British Medical Journal, Annals of Internal Medicine, Journal of the National Cancer Institute, Health Affairs, and Value in Health.

Dan is a co-founder of the Israeli Society for Pharmacoeconomics and Outcomes Research (ISPOR-Israel Regional Chapter) and its current president. He is currently co-editor of Value in Health, co-editor in chief of Value in Health Regional Issues and member of the editorial board of Applied Health Economics and Health Policy.

Itamar Grotto

Prof. Itamar Grotto is the director of the Public Health Services in the Israeli Ministry of Health. He is operating all preventive services and health promotion programs operated by the Israeli Ministry of Health.

Prof. Grotto is affiliated with the Public Health Department of Ben-Gurion University in Israel. His main research activities are in the fields of infectious diseases epidemiology and health behaviors among adolescents and young adults, as well as public health policy development.

Jack Habib

Professor Jack Habib received his Ph.D. in Economics from Harvard University and is professor emeritus of economics and social work at the Hebrew University of Jerusalem. He is currently the Director of the Myers-JDC-Brookdale Institute, which is the leading center for applied social research serving Israel and the Jewish world. It seeks to improve the effectiveness of social services and policies by developing and disseminating knowledge of social needs as well as of the effectiveness of policies and programs intended to meet those needs.

He has served on many Israeli national commissions established to improve various aspects of the social service system and has participated in numerous international professional exchange programs, collaborative research projects and multi-national conferences.

In recent years he has been involved in initiatives to introduce ongoing outcome measurement systems in organizations and to strategize information needs.

He works closely with the Jewish Federations of North America and with organizations and Foundations around the world with respect to their programming in Israel and the social service system in their own communities. He is a past President of the World Council of Jewish Communal Services.

Prof. Habib writes and lectures extensively on economics and social developments in Israel. He is the author of numerous books and articles in the field of social welfare in Israel and internationally.

Tuvia Horev

Dr. Horev, PhD, MPH, DMD is Senior Deputy Director General for Strategic and Economic Planning in the Ministry of Health, Israel. Dr. Horev received his D.M.D. and M.P.H. from the Hebrew University – Hadassah in Jerusalem, and his Ph.D degree from the Department of Health Policy and Management in Ben-Gurion University of the Negev, Bee'r-Sheba. Dr. Horev served in several commanding duties in the IDF (the Israeli Defense Forces), among them – Chief Dental Officer of the IDF (1992-1995). Between 1995 and 2006 he served both as senior advisor on Health Administration to the General Manager of Kupat Holim Meuhedet (one of 4 Israeli's sick funds) and Head of Health and LTC insurance section at this Sick Fund. In this position he has had the opportunity to examine, first hand, the evolution of the health reform in Israel since it was enacted in 1995 and to study its advantages and challenges. Between 2006 and 2009 he stayed as a senior researcher and deputy general manager at the Taub Center for Social Policy Studies in Israel. His main areas of interests and research are Health Policy, Health Equity, Health Insurance, and Health economics He is a faculty member in the Department of Health Policy and Administration at Ben-Gurion University of the Negev, and in constant relations with the Israel National Institute for Health Policy and Health Services Research in Israel.

Abraham (Avi) Israeli

Professor Abraham (Avi) Israeli is Chief Scientist of the Ministry of Health, and the Head of the Health Policy, Health Care Management and Health Economics Department at the Hebrew University – Hadassah Faculty of Medicine. Prior to this he was the Director General of the Israel Ministry of Health (2003–2009) and the Director – General of Hadassah Medical Organization (1998 –2001).

He holds the Chair of Dr. Julien Rozan Professorship of Family Medicine and Health Promotion Chair at the Hebrew University–Hadassah Medical School, Jerusalem (since 1996) and teaches there regularly.

Professor Israeli chaired the national committee to update the Israeli national standard basket of health services.

Professor Israeli received his medical degree and his master in public health from the Hadassah – Hebrew University Medical School. He completed residencies in Internal Medicine and in Health–Care Management at Hadassah University Hospital and has certification in both specialties. He received his Master's Degree from the Sloan School of Management at MIT, Boston.

His scientific activities are related to applied, methodological and theoretical research in the fields of health policy, health care management, and the epidemiological, economic, social and cultural basis for decision–making.

His publications deal with translation of academic knowledge and inputs from the field into policy setting and decision–making processes. He is the Co–editor of the Israel Journal of Health Policy Research.

Two additional key research foci are rationing / priority setting and comparative health care systems.

Orit Jacobson

Orit Jacobson, RN, MA, Ph.D, A senior health administrator and researcher, is the CEO of MOR institute for medical data own by Clalit Health Services.

Till 7/2012 was the deputy director general and director of the community health division of Clalit Health Services, the healthcare provider and insurer of more than half of the Israeli population. Dr Jacobson graduated the Nursing school of the Tel-Aviv Nursing School, specialized in intensive care, and later received her B.A. in nursing, M.A in labor studies, both the Tel-Aviv university, and a Ph.D. in health administration at the Ben-Gurion University, Faculty of Health Sciences.

Following nursing training, Dr Jacobson held senior management positions at the Tel-Aviv medical center, followed by 7 years at the ministry of health, as Director of Nurse Education in Israel. Dr Jacobson joined Clalit in 1997, and has held the roles of Chief Nursing Officer, Director of the Tel-
Aviv District, and was appointed Director of community health in 2007.

Dr Jacobson has gained international experience in planning and implementing health programs, one example being a reform project in the community health system in Uzbekistan, collaborating with the US-Aid.

Dr Jacobson was been affiliated with the Tel-Aviv University shackler school of medicine until 2000, and serves as a guest lecturer in several academic institutes.

Dr Jacobson held several key public positions, including membership in the National Council of Health, in the Taub Center for Social Policy Studies in Israel, and several scientific councils by nomination of the Minister of Health.

Jonathan C. Javitt

Jonathan C. Javitt, MD, MPH, CEO & Vice Chairman of Telcare, Inc. is a physician with a background in information technology, health economics, and public health. Telcare has pioneered the use of wireless devices to connect patients to their physicians and has developed the first FDA-cleared cellular-enabled glucose meter and cloud server for people with diabetes. He has been associated with startup ventures in health IT for the past 20 years. In his academic life, Jonathan is an adjunct Professor of the Johns Hopkins School of Medicine and serves on the Myers-JDC-Brookdale Institute Advisory Board.

Dr. Javitt was appointed by President Bush in 2003 to the President's Information Technology Advisory Committee (PITAC), where he chaired the Health Subcommittee and also served as a Special Employee of the Undersecretary of Defense (ATL). PITAC's report, Revolutionizing Health Care through Information Technology, has served as a blueprint for concerted Executive and Legislative Branch focus on computerizing the nation's healthcare. He continues to serve as Senior Fellow in the National Security Health Policy Center of the Potomac Institute.

Jonathan is a graduate of Princeton University, the Cornell University Medical College, the Harvard School of Public Health, and Johns Hopkins University. He authored the first book on computers in medicine in 1984 and has published more than 200 scientific works in the New England Journal of Medicine, the Journal of the American Medical Association, and numerous other peer-reviewed publications.

Ehud Kokia

Prof. Ehud Kokia, Graduated of Sackler school of Medicine Tel Aviv University, 1974.

Board certified OBGYN.

Research fellowship, University of Maryland at Baltimore, 1990–1992.

Former – Medical Director, MHS, Hanegeve District Manager.

Former – CEO, Maccabi Healthcare Services (MHS).

Former – The Director General of the Hadassah Medical Organization since 2012.

Amnon Lahad

Amnon Lahad, MD, MPH is Chairman of the Departments of Family Medicine at Hebrew University, Jerusalem, and of the Clalit Health Services, Jerusalem district. He currently chairs the Israeli National Committee for the Health of the Community.

Dr. Lahad earned his MD from Hebrew University and completed Family Medicine Residency at Clalit Health Services in Jerusalem. He also completed residency training in Public Health – General Preventive Medicine and earned his MPH at the University of Washington, School of Public Health in Seattle.

Bruce E. Landon

Bruce E. Landon, M.D., M.B.A., is Professor of Health Care Policy and Medicine at Harvard Medical School. He practices internal medicine at the Beth Israel Deaconess Medical Center.

Dr. Landon's primary research interest has been assessing the impact of different characteristics of physicians and health care organizations, ranging from health plans to physician group practices, on the provision of health care services. He has over fifteen years of experience in health services research and has been the principal investigator of numerous Federal and foundation grants. He is currently studying quality of care and utilization patterns in Medicare's managed care program (Medicare Advantage) and using methods from network science to study networks of physicians based on patient sharing. He also has an active research program investigating the comparative effectiveness of various vascular surgery procedures.

Dr. Landon has been elected to the American Society of Clinical Investigation and the Association of American Professors and serves on the Health Policy Advisory Committee of the Myers JDC Brookdale Institute's Smokler Center for Health Policy Research. He also chairs the Contracts and Payments Committee at the Beth Israel Deaconess Physician Organization.

Dr. Landon graduated summa cum laude from the Wharton School at the University of Pennsylvania with a major in finance. He received his M.D. degree from the University of Pennsylvania School of Medicine, and an M.B.A with a concentration in health care management from the Wharton School. He also received a M.Sc. in Health Policy from the Harvard School of Public Health.

Jeremy M. Levin

Jeremy M. Levin, D.Phil, MB BChir, became President and CEO of Teva Pharmaceutical Industries Ltd. on May 9, 2012. He is based at the Headquarters in Petach Tikva, Israel.

Prior to joining Teva, Dr. Levin was a member of the Senior Management Team at Bristol-Myers Squibb (BMS), as Senior Vice President of Strategy, Alliances and Transactions. He was responsible for the company's global and "String of Pearls" strategies, as well as M&A, licensing, divestitures, and corporate and academic alliances. At the same time, Dr. Levin served as President and Director of two wholly-owned BMS subsidiaries.

Before joining BMS, Dr. Levin served as the Global Head of Strategic Alliances at Novartis Institutes of Biomedical Research, where he managed alliances with academia and biotechnology, and established strategic collaborations. In addition, Dr. Levin has served on the executive committees and boards of numerous internationally renowned bioscience, biotechnology, venture fund and research organizations.

He holds a BA in Zoology from Oxford, and an MA and doctorate (DPhil) in Cell Biology and Chromatin Structure from the University of Oxford. He also holds an MB, BChir degree (Bachelor of Medicine, Bachelor of Surgery) from the University of Cambridge. He resides in Israel.

Orly Manor

Orly Manor is a Professor of Biostatistics at the Braun School of Public Health and Community Medicine of the Hebrew University–Hadassah Medical Organization in Jerusalem. Prof. Manor is a former Director of the School.

Prof. Manor received her first and second degrees in Statistics from the Hebrew University and her PhD in Statistics from Stockholm University. Currently Prof. Manor leads the Israel National Program for Quality Indicators in Community Healthcare. Prof. Manor is the founder of the Israel Longitudinal Mortality Studies. Prof. Manor's research interests include health inequalities, the developmental origin of adult disease and quality of care. In 2012, Prof. Manor was the recipient of The Hebrew University Rector's award for outstanding faculty member.

Martin McKee

Professor Martin McKee, MD DSc., qualified in medicine in Belfast, Northern Ireland, with subsequent training in internal medicine and public health. He is Professor of European Public Health at the London School of Hygiene and Tropical Medicine where he co-directs of the European Centre on Health of Societies in Transition (ECOHOST), a WHO Collaborating Centre. He is also research director of the European Observatory on Health Systems and Policies. He has published over 640 academic papers and 40 books and his contributions to European health policy have been recognised by, among others, election to the UK Academy of Medical Sciences, the Romanian Academy of Medical Sciences, and the US Institute of Medicine, by the award of honorary doctorates from Hungary, The Netherlands, and Sweden and visiting professorships at universities in Europe and Asia, the 2003 Andrija Stampar medal for contributions to European public health and in 2005 was made a Commander of the Order of the British Empire (CBE). He has an active following on Twitter as @martinmckee

Shlomo Mor-Yosef

Prof. Shlomo Mor-Yosef is the Chairman of the Board of the Israel National Institute for Health Policy Research and the Director General of Bituach Leumi, National Insurance Institute of Israel.

In 2011, Prof. Mor-Yosef completed his tenure as Director General of the Hadassah Medical Organization (HMO) in Jerusalem. His eleven years as Director General were the crowning glory of his 38 years at Hadassah, from his first year of medical school until 2011, with just a few brief exceptions.

Prof. Mor-Yosef graduated from the Hebrew University-Hadassah Medical School in 1980, completing his obstetrics and gynecology specialization at Hadassah. He served as a senior physician in the Department of Obstetrics and Gynecology at Hadassah with special focus on cervical cancer. From 1988-89 Prof. Mor-Yosef completed a subspecialty in Gynecological Oncology at Queen Elizabeth Hospital, Gateshead, England.

In 1990, Prof. Mor-Yosef assumed the position of Deputy Director of the Hadassah Ein Kerem Hospital, following which he studied at the Harvard University JFK School of Government where he received his Master's Degree in Public Administration. In 1994, he assumed the post of Deputy Director General of HMO and then served as Director of Hadassah Ein Kerem. Prior to assuming his post as Director General of HMO, Prof. Mor-Yosef served as Director General of the Soroka Medical Center of the Negev.

Prof. Mor-Yosef has authored more than 100 scientific publications and has served on the faculty of several universities and boards of various organizations and companies. From 2001 – 2012, Prof. Mor-Yosef served as Chairman of Hadasit, HMO's Technology Transfer Company. Among his present responsibilities, Prof. Mor-Yosef serves as Chairman of the Public Committee for Fertility and Birth appointed by the Director General of the Ministry of Health to recommend legislation in the field of fertility and birth in Israel; and Member of the Master Plan for Transportation Committee of the Association for Planning, Development & Urban Preservation – Jerusalem.

Gur Ofer

Gur Ofer is Harvey M. and Lyn P. Meyerhoff Emeritus Professor of Soviet Economics, at the Departments of Economics and of Russian Studies, The Hebrew University of Jerusalem, Israel. (www.economics.huji.ac.il). Gur Ofer received his BA and MA degrees in economics at the Hebrew University, and his PhD, at Harvard. In addition to extensive work on the Soviet Economy, he worked and published in the areas of the Welfare State and of Health Economics in Israel. During 1995–2008 he served as the head of The Israel National Institute for Health Policy and Health Services Research (www.israelhpr.org.il). Gur Ofer served as the head of the economics department at the HU (1985–86), as the president of the Israeli Economic Association (1998–99), and a chair of the international advisory board of NES, a graduate school of Economics in Moscow, which he also helped to establish and manage (1991–2004). Over the years Gur Ofer served as a visiting scholar, among others, in Harvard, Columbia, Yale, The Rand Corporation, the Wilson Center, the Brooking Institution, the World Bank and NES.

Ora Paltiel

Prof. Ora Paltiel was trained in Internal Medicine, Hematology and Oncology, and in Epidemiology and Biostatistics (McGill University, Canada). Her clinical focus is on the treatment of lymphomas and much of her research has focused on Cancer Epidemiology in Israel concentrating on a variety of risk factors, especially perinatal events and exposures. She heads the Master's Program in Clinical Epidemiology and the International Master's of Public Health Program at the Braun School of Public Health and Community Medicine at Hadassah-Hebrew University, and works as a Senior Physician in the Hematology Department at Hadassah Medical Center, Jerusalem, Israel. She serves as a member of the Executive Committee for the Israeli Quality Indicators Program in Community Health.

Joseph S. Pliskin

Joseph Pliskin is the Sidney Liswood Professor of Health Care Management at Ben-Gurion University of the Negev. He is a member of the Department of Industrial Engineering and Management and of the Department of Health Systems Management where he is the current Chair. Prof. Pliskin also has an appointment as an Adjunct Professor at the Department of Health Policy and Management at the Harvard School of Public Health.

He received his BSc degree in Mathematics and Statistics from the Hebrew University in Jerusalem (1969) and SM (1970) and PhD (1974) degrees in Applied Mathematics (Operations Research) from Harvard University. In the past he was on the Faculty of the Faculty of Management at Tel Aviv University and on the faculty of the School of Management at Boston University.

Prof. Pliskin's research interests focus on clinical decision making, operations management in health care organizations, cost-benefit and cost-effectiveness analysis in health and medicine, technology assessment, utility theory and decision analysis. He was the recipient of the "Career Achievement Award" from the Society for Medical Decision Making in 2005.

He has published two books and over 100 journal articles on issues relating to end stage renal disease, heart disease, Down syndrome, technology assessment and methodological issues in decision analysis. He was one of the first to coin and use the term QALY (Quality Adjusted Life Year). He is co-author of the book *Decision Making in Health and Medicine: Integrating Evidence and Values* (Cambridge University Press, Cambridge, UK, 2001), and the book *Focused Operations Management for Health Services Organizations (Jossey-Bass, San-Francisco, 2006)*.

Avi Porath

Prof. Porath is currently the Director of Maccabi Research Center. Previously he served as the Medical Director of Maccabi Healthcare Services, the second largest health plan in Israel.

Prof. Porath got his MD degree from the Hebrew University in Jerusalem and is Board Certified in Internal Medicine. Prof. Porath got his MPH degree in epidemiology from the University of North Carolina at Chapel Hill, USA.

Prof. Porath served as director of Medical Policy at Clalit Health Services, and director of the department of Medicine at the Soroka Medical Center, which is affiliated with the Faculty of Health Sciences at the Ben-Gurion University of the Negev.

Prof. Porath's holds a degree of Professor of Medicine at the Ben-Gurion University of the Negev and member of its epidemiology department.

Prof. Porath is the founder of the Israel Society of Quality in Health Care and was member of several national committees on health. He founded and directed the National Program of Quality Measures in the Community for the Israel Ministry of Health.

Prof. Porath's areas of research include quality in health care, and implementation of evidence into practice.

Bruce Rosen

Dr. Bruce Rosen is the Director of the Smokler Center for Health Policy Research of the Meyers-JDC-Brookdale Institute in Jerusalem. He holds a BA in economics from Harvard College and a doctorate in Health Policy and Management from the Harvard School of Public Health. Dr. Rosen is a member of the Board of Directors of the Israeli National Institute for Health Policy.

Dr. Rosen's research has focused on the areas of financial incentives, vulnerable populations, quality monitoring, and the evaluation of major national policy changes. In the mid-90s he served as a key professional consultant to the Knesset committee that developed Israel's National Health Insurance Law. He recently co-edited a World Scientific book on responsibility and accountability in health care systems around the world. He is also the author of "Health Systems in Transition - Israel", which was prepared for the European Observatory of Health Care Systems and serves as a sort of encyclopedia of Israeli health care.

Throughout his career, Dr. Rosen has emphasized the need to link research with policy development, and to bring international expertise to bear on Israeli health policy issues. To further these objectives, he:

- Works with visiting scholars and student interns from other countries,
- Organizes bi-national and multi-national policy workshops,
- Has published a series of papers for US readers on selected aspects of Israeli health care,
- Recently helped establish a new on-line, open access journal - The Israel Journal of Health Policy Research - which he now co-edits, and
- Is working with the leadership of Academy Health to help the US health services research community engage more effectively with colleagues in other countries

Sara Rosenbaum

Sara Rosenbaum J.D. is the Harold and Jane Hirsh Professor of Health Law and Policy and Founding Chair of the Department of Health Policy, George Washington University School of Public Health and Health Services. She also holds professorships in the Schools of Law and Medicine and Health Sciences.

A graduate of Wesleyan University and Boston University Law School, Professor Rosenbaum has devoted her career to issues of health justice for populations who are medically underserved as a result of race, poverty, disability, or cultural exclusion. An honored teacher and scholar, a highly popular speaker, and a widely-read writer on many aspects of health law and policy, Professor Rosenbaum has emphasized public engagement as a core element of her professional life, providing public service to six Presidential Administrations and seventeen Congresses. She is best known for her work on the expansion of Medicaid, expanding health care access to medically underserved communities through community health centers, civil rights in health care, and national health reform.

Between 1993 and 1994, Professor Rosenbaum worked for President Clinton, where she directed the drafting of the Health Security Act and designed the Vaccines for Children program, which today provides near-universal immunization coverage to low income and medically underserved children. Professor Rosenbaum also regularly advises state governments on health policy and has served as a testifying expert in legal actions involving the rights of children under Medicaid.

A recipient of many national awards for her work, Professor Rosenbaum is the leading author of Law and the American Health Care System a landmark textbook that provides an in-depth exploration of the interaction between law and the U.S. health care system. A member of the Institute of Medicine, Professor Rosenbaum also is a past Chair of Academyhealth, serves on numerous governmental advisory committees, and is a founding Commissioner on the Medicaid and CHIP Payment and Access Commission (MACPAC), which advises Congress on federal Medicaid policy. Since 2010 Professor Rosenbaum also has served as an advisor to the Brookdale Institute's Smokler Center for Health Policy Research.

Richard B. Saltman

Richard B. Saltman is Professor of Health Policy and Management at the Emory University School of Public Health in Atlanta, Georgia. He was a co-founder of the European Observatory on Health Systems and Policies in Brussels in 1998, and is currently Associate Director of Research Policy and head of the Atlanta hub. He is also a co-founder and co-director of the Swedish Forum for Health Policy, based at the Vardal Foundation in Stockholm. He is an Adjunct Professor of Political Science at Emory University, a Visiting Professor at the London School of Economics and Political Science, and Visiting Professor at the Braun School of Public Health at the Hebrew University in Jerusalem. From 1991 to 1994, he was Director of the Department of Health Policy and Management at Emory. He holds a doctorate in political science from Stanford University.

He has published 20 books and over 150 articles and book chapters on a wide variety of health policy topics, particularly on the structure and behavior of European health care systems, and his work has been widely translated. In 1987 and again in 1999, he won the European Healthcare Management Association's annual prize for the best publication in health policy and management in Europe. His volumes for the European Observatory book series published by McGraw-Hill Education were short-listed for the Baxter Prize by the European Healthcare Management Association in 2002, 2004 and 2006.

Richard M. Scheffler

Richard M. Scheffler is Distinguished Professor of Health Economics and Public Policy at the School of Public Health and the Goldman School of Public Policy at the University of California, Berkeley. He also holds the Chair in Healthcare Markets & Consumer Welfare endowed by the Office of the Attorney General for the State of California. Professor Scheffler is director of The Nicholas C. Petris Center on Health Care Markets and Consumer Welfare. He has been a Rockefeller and a Fulbright Scholar, and served as President of the International Health Economists Association 4th Congress in 2004. Professor Scheffler has published over 150 papers and edited and written six books, including his most recent book, *Is There a Doctor in the House? Market Signals and Tomorrow's Supply of Doctors*, published by Stanford University Press, September 2008. His book *The ADHD Explosion and the Push for Performance: Myths, Medication, and Money* to be published by Oxford Press in 2014 and is supported by a Robert Wood Johnson Investigator Award. He has conducted a recent review on Pay For Performance in Health for the World Health Organization and the OECD. He was awarded the Fulbright Scholar at Pontifica Universidad Católica de Chile in Santiago, Chile as well as the Chair of Excellence Award at the Carlos III University of Madrid in Madrid, Spain in 2012. He is also Vice Chair of the Berkeley Forum for Improving California's Healthcare Delivery System and the lead author of the Berkeley Forum Report. He is currently working on a book titled *Pay for Performance in Health Systems Around the Globe.*

Stephen C. Schoenbaum

Since the beginning of 2011, Dr. Schoenbaum, MD, MPH, has been Special Advisor to the President of the Josiah Macy Jr. Foundation which fosters innovations in medical and inter-professional (e.g., physicians and nurses) education.

From 2000–2010, Dr. Schoenbaum was Executive Vice President for Programs at The Commonwealth Fund and Executive Director of its Commission on a High Performance Health System.

From 1993–1999, Dr. Schoenbaum was the medical director and then president of Harvard Pilgrim Health Care of New England, a mixed model HMO delivery system in Providence, RI. Prior to that, from 1981–1993, he was Deputy Medical Director at Harvard Community Health Plan in the Boston area, where his roles included developing specialty services, disease management programs, clinical guidelines, and enhancing the Plan's computerized clinical information systems. Nationally, he also played a significant role in the development of HEDIS (the Healthcare Effectiveness Data and Information Set).

In his early career he was trained as an epidemiologist at the Centers for Disease Control, became an infectious diseases specialist, and was a member of the Department of Medicine at what is now Brigham and Women's Hospital and became Associate Professor of Medicine at Harvard Medical School. At Harvard Community Health Plan, he practiced general internal medicine.

He is now a Lecturer in the Department of Population Medicine (formerly Ambulatory Care and Prevention) at Harvard Medical School, a department he helped to found; Adjunct Professor of Healthcare Leadership at Brown University; and the author of 170 professional publications. He was vice-chairman of the board of the former Picker Institute; former president of the board of the American College of Physician Executives; a longstanding member, now chair, of the International Academic Review Committee of the Joyce and Irving Goldman Medical School, Ben Gurion University, Beer Sheva, Israel; and an honorary fellow of the Royal College of Physicians.

Ari Shamiss

Prof. Ari Shamiss is the Director of Sheba General Hospital. He was the Surgeon General for the Israel Air Force and the Director of its Aeromedical Institute and he is a graduate of the US Navy Aerospace Medical Institute. Prof. Shamiss holds M.D from the Technion Institute and MPA from Harvard University. He is certified in Internal Medicine, Hypertension and Healthcare Management and he is a professor in Tel Aviv University on these disciplines with more than 50 published scientific papers. Prof. Shamiss is involved in numerous global business ventures including healthcare technologies, healthcare management services, investment consultancy and Healthcare Information and business development.

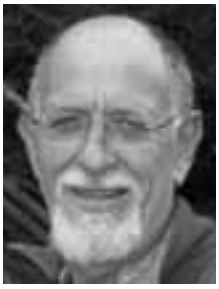
Mordechai Shani

Prof. Shani holds an M.D. degree from Hadassah Medical School at the Hebrew University of Jerusalem, and is a Professor of Medicine and a Professor of Health Systems Management at Tel Aviv University.

Prof. Shani is one of Israel's most prominent figures in the public health arena and has extensive clinical and academic experience. For 33 years he served as Director General of Sheba Medical Center, the biggest Medical Center in the Middle East. During this period he also served twice as the Director General of the Israeli Ministry of Health.

He was also the founder and director of the Kovens Health Systems Management Center and The School of Public Health at the Tel Aviv University. He acts as chairman and advisor in a wide array of national and international health organizations and scientific organizations.

In 2009 he was awarded the Israel Prize for Lifetime Achievement – Special Contribution to Society and the Country.



Amir Shmueli

Amir Shmueli is a professor of health economics at the Hebrew University-Hadassah School of Public Health in Jerusalem, Israel.

He has been affiliated with several international research networks (RAN, GHP, TECH).

He served on several public committees which have shaped the reformed Israeli health system.

Amir's main research interests include capitation contracts and risk-adjustment, solidarity in health care, equity and inequality in health, and economic aspects of complementary and alternative medicine.

Tamy Shohat

Tamy Shohat, MD, MPH, is the Director of the Israel Center for Disease Control (ICDC) since January 2008. She was also recently appointed the Head of the Epidemiology Department of the Tel-Aviv University, School of Public Health.

From 2004-2007, Prof. Shohat acted as the Tel-Aviv District Health Officer in the Ministry of Health. Before that, she was the Deputy of the Tel-Aviv District Health Officer in the Tel - Aviv District Health Office and the Deputy Director in the ICDC. Back in 1994 she was one of the founders of the ICDC.

During 1983-2003, Prof. Shohat held various positions in the Israeli Defense Force (IDF), including the Head of the Epidemiology Unit (1989-1991) in the Army Health Branch. During this time period, she also completed a fellowship in Medical Genetics (1986-1989) in Cedars-Sinai Medical Center, Los-Angeles, California, where she later had a position of a Visiting Scientist (1991-1992).

Prof. Shohat received her MD degree cum laude from the Tel-Aviv University and her MPH degree from the Hebrew University School of Public Health.

Prof. Shohat main areas of interest are establishing data sets and registries for non-communicable diseases, trends in health behaviors, and survey methods for communicable diseases. She headed the committee for health behaviors in the project "For Healthy Future, 2020" and is currently a member of the committee on immunization policy.

Shifra Shvarts

Education: Ph.D., Ben Gurion University, Beer-Sheva, Israel, 1993, Faculty of Health Sciences (History of Health Services).

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Shvarts S., "Health & Zionism–The Shaping of Israel Health Care System in the Early Years of the State 1948–1960", The University of Rochester, 2008.

Gil Siegal

GIL SIEGAL, MD, LLB, SJD is a surgeon and a health law professor with the **University of Virginia** School of Law, and at **Kiryat Ono College**, Israel, where he directs the Center for Health Law and Bioethics.

In addition, Dr. Siegal is a senior researcher at the Gertner Institute for Health Policy and Epidemiology, and is a member of the following national Committees: The National *Bioethics* Committee of the Israeli Academy of Sciences; The National Committee for *Research in Humans*; National Council for *Animal Experimentation* (representing the Israel Academy of Sciences); National Committee for *Non-medical Sex Selection*; The National Committee of the *Brain Death Act*, ; the National Advisory Committee on *Genetic Information; the Bioethical Advisory Committee of the National Organ Transplantation Center*. In Europe, Dr. Siegal directs the European Genetic Foundation's program on 'Genetics, Ethics and the Law', and has been on the Austrian Biobank advisory board since 2007.

Siegal is the Editor-in-Chief, Journal for Health Law & Bioethics (Heb).
His areas of expertise are biotechnology, patients' rights and comparative medical ethics.

He received his medical and law degrees from Tel Aviv University, Israel, and completed an otolaryngology residency at Bnai Zion Medical Center, Haifa, Israel. In 2003, he was a fellow in health policy and ethics at the Law School and the Institute for Practical Ethics, **University of Virginia**, USA. In 2004 he was a research fellow and consultant at **Harvard University** Schools of Medicine and Public Health. In 2009 he completed his SJD (PhD in Law) at the University of Virginia.

Fiona Sim

Fiona M. Sim, BSc (hons), MB, BS, MSc, DFSRH, LLM, MRCGP, FFPH, FRCP, graduated in medicine from University College London. Fiona is Chair of the Royal Society for Public Health and joint Editor-in-chief of the international peer reviewed journal Public Health.

She is London President of the Jewish Medical Association UK for 2012/13. Fiona is also the only UK based member of the International Advisory Committee of the Myers-JDC-Brookdale Institute's Smokler Center for Health Policy Research.

Fiona is a part-time family doctor in a deprived urban area. In clinical practice, Fiona's interests include tackling health inequalities, women's health and preventive medicine, teaching and training. She is also an accredited Public Health Consultant and trainer.

She has an honorary academic appointment at University College London, and is Visiting Professor at the University of Bedfordshire. She is a part-time clinical research fellow at the London School of Hygiene and Tropical Medicine.

Her main research interest is in building capacity and capability across all sectors, in order to deliver better health and to reduce health inequalities. Recent research interest has included tackling obesity through building capacity in communities and families as well as among health professionals. She publishes widely on public health topics.

She has held several medical leadership roles in the NHS and in medical education and was previously Head of Public Health Development at the English Department of Health, where she was responsible, amongst other things, for the establishment of the UK Register for Public Health Specialists [UKPHR], development of the Public Health Observatories and public health research, and for oversight of policy development and delivery on health inequalities.

Fiona has recently completed two terms as a Fitness to Practise Panellist and as a team member for Quality Assurance in medical education for the UK General Medical Council (GMC).

Lisa Simpson

Dr. Simpson, MB, BCh, MPH, FAAP, is the president and chief executive officer of AcademyHealth. A nationally recognized health policy researcher and pediatrician, she is a passionate advocate for the translation of research into policy and practice. Her research focuses on improving the performance of the health care system and includes studies of the quality and safety of care, health and health care disparities and the health policy and system response to childhood obesity.

Before joining AcademyHealth, Dr. Simpson was director of the Child Policy Research Center at Cincinnati Children's Hospital Medical Center and professor of pediatrics in the Division of Health Policy and Clinical Effectiveness, Department of Pediatrics, University of Cincinnati. She served as the Deputy Director of the Agency for Healthcare Research and Quality from 1996 to 2002.

Dr. Simpson serves on the Robert Wood Johnson Clinical Scholars Program National Advisory Council, the Editorial boards for the *Journal of Comparative Effectiveness Research* and *Frontiers in Public Health Systems and Services Research.*

Dr. Simpson earned her undergraduate and medical degrees at Trinity College (Dublin, Ireland), a master's in public health at the University of Hawaii, and completed a post-doctoral fellowship in health services research and health policy at the University of California, San Francisco.

Claudia A. Steiner

Claudia A. Steiner M.D., M.P.H. is a research medical officer with the Center for Delivery, Organization and Markets (CDOM), within the Agency for Healthcare Research and Quality. Dr. Steiner is an internist who conducts and manages research for the Center. She helps with the design, management and dissemination of the Healthcare Cost and Utilization Project (HCUP). Her research interests include the influence of ambulatory surgery on standards of care, utilization and clinical outcomes; the epidemiology of infectious diseases, including healthcare associated infections; and the prevalence and factors associated with readmissions to the acute care setting, and the use and impact of new medical technologies. She has examined the process and considerations used by private indemnity and managed care insurers when determining coverage for new medical technology. Dr. Steiner has experience with both primary and secondary data, including a national survey of health insurers, and the administrative databases of HCUP.

Dr. Steiner has published in *The New England Journal of Medicine, The Journal of the American Medical Association, The Journal of General Internal Medicine, The International Journal of Technology Assessment in Health Care, The American Journal of Managed Care, and Medical Care.* She referees papers for these same journals.

Dr. Steiner received her medical degree and completed residency training in Internal Medicine at the University of Colorado Health Sciences Center. Subsequently, she obtained a Masters of Public Health at the Johns Hopkins School of Hygiene and Public Health while completing a research fellowship through the Department of Medicine at Johns Hopkins University. She is licensed to practice medicine in Maryland, and continues to see patients part-time within the Johns Hopkins Medical Institutions.

David Stuckler

David Stuckler is a Senior Research Leader at Oxford University; after completing his Master's in Public Health at Yale University and PhD at Cambridge University, he became a professor in political economy at Harvard University; he also currently holds research posts at London School of Hygiene & Tropical Medicine and Chatham House. He has published over one-hundred peer-reviewed scientific articles in major journals on the subjects of economics and global health, and his work has featured on the cover of The New York Times and The Economist, as well as on BBC, NPR, and CNN, among others.

Orly Toren

Dr. Toren, RN, MSc, PhD. A Registered Nurse has a doctoral degree in nursing from Pittsburgh University and is currently the assistant director of nursing for research and development at the Hadassah Medical Organization.

In her former role she was the Director of Nursing and Paramedical Professions at the Sheba Medical Center, the largest hospital in Israel (1700 beds, 2500 employees).

Dr. Toren is a faculty member at the Hebrew University, School of Nursing and School of Public Health. Her research is focused on the nursing work force, and health policy. She has been granted several national grants to initiate studies on these topics, written several chapters on nursing management and edited with Orly Picker the first book in Hebrew on nursing management and leadership.

Karen Wolk Feinstein

Dr. Karen Wolk Feinstein is President and Chief Executive Officer of the Jewish Healthcare Foundation (JHF) and its two supporting organizations, the Pittsburgh Regional Health Initiative (PRHI) and Health Careers Futures (HCF). Together they offer a unique alchemy of grant making, research, teaching, coaching, resource development, and project management. Appointed the Foundation's first CEO in 1990, she has made these organizations leading voices in patient safety, healthcare quality and related workforce issues in the U.S. and internationally.

Dr. Feinstein is the author of numerous regional and national publications on quality and safety. In a previous life, she was the editor of the Urban & Social Change Review, and she is the editor of a new book Moving Beyond Repair: Perfecting Health Care. Additionally, she has served on the faculties of Boston College, Carnegie Mellon University, and the University of Pittsburgh. Dr. Feinstein has held executive professional and trustee posts at other nonprofits, including the United Way and the Allegheny Conference. She is a Past President of Grantmakers In Health and Grantmakers of Western Pa, and co-chair of the Pennsylvania Health Funders Collaborative. She serves on many nonprofit, governmental and for-profit boards, including the Network for Regional Healthcare Improvement, the Center for Innovation Advisory Committee at the National Board of Medical Examiners, the Board of Overseers at Brandeis University's Heller School, and on the Health Research Advisory Committee of the Pennsylvania Department of Health. Dr. Feinstein earned her bachelor's degree at Brown University, her master's at Boston College, and her doctorate at Brandeis University.

ABSTRACTS

Oral Presentations

HAS AUSTERITY MOVED THE GOALPOSTS?

Richard B. Saltman

Rollins School of Public Health, Emory University, Atlanta, USA.

This conference comes at an important point in the continuing consequences of the 2008 financial crisis. The current heated debate around economic austerity has complex implications for all publicly funded activities, particularly health care. Although most health sector analysts think major change is necessary, there is sharp disagreement among them as to what that change should be.

Some senior health policy figures call for more rather than less public money to be spent on health services, in order to meet growing need and to "invest in health". Others anticipate that less public funds will be available, and that substantial operating efficiencies and new non-public sources of funding will need to be found in order to reduce large annual budget deficits and rapidly growing rates of overall national debt.

The debate thus far has largely centered on optional approaches, emphasizing the voluntary nature of the choices to be made. But what if austerity is not a temporary condition? What if wealth generation has shifted to Asian Rim and BRIC countries, and Western economic growth remains low or non-existent for the forseeable future? Then what structural options exist? How should health policymakers respond to this fundamentally different situation?

The presentations at this meeting over the next three days will make a valuable contribution to this ongoing debate about possible future directions in health policy thinking.

THE AMERICAN QUEST TO CONTROL HEALTH EXPENDITURE GROWTH

Alan M.Garber

Harvard University, USA.

Although it contains many market features, the US health care system is a complex mix of government and private programs, influenced by a web of regulations and subsidies. The imminent adoption of some of the most ambitious features of the Affordable Care Act, at a time of deep political divisions, raises questions about the future direction of US health care. Among the consequences of the Affordable Care Act and other trends in health care, for example, are pressures for provider consolidation, leading to greater market power and calls for price regulation, while employer-based health insurance increasingly looks toward market mechanisms to rationalize care choices. I will discuss the implications of the ACA and trends in private insurance for the US health care market and some of the reasons why the heterogeneity of the US health care system is likely to persist.

HEALTH POLICY REFORM IN AN ERA OF AUSTERITY - LESSONS FROM WASHINGTON, DC

Sherry Glied

Columbia University, USA.

In 2010, the United States Congress passed the Affordable Care Act, a far-reaching reform of the health care system. While most other countries first expanded coverage and then began to tackle cost and quality issues, the US economic, budgetary, and health system context, as well as the political dynamic of reform, meant that Congress had to address coverage, costs, and quality in a single piece of legislation. The Affordable Care Act includes (among many others) provisions that address access to health insurance coverage, provisions that ensure that the legislation is not only self-financing but reduces the federal budget deficit, and provisions that aim to encourage innovative reforms of the health care delivery system.

While the design of the Affordable Care Act is uniquely American, many aspects of the law and its implementation were influenced by elements that affect health system design everywhere. Although its centerpiece is a vast expansion of coverage, fiscal austerity looms over the law. Congress passed it at the depth of an economic recession and in a period of widespread concerns about the current and future budget deficit. This fiscal context influenced the design of the law, the process through which it was enacted, and the regulatory process through which the provisions are being implemented.

This presentation will provide an overview of the context in which the Affordable Care Act was passed, a summary of the law's provisions, some "insider" reflections on regulations implementing these provisions, and an analysis of the forces shaping the design of the law. The presentation will have a particular focus on those elements of the legislation and the process that are of more relevance to policymakers and researchers outside the United States.

HOW HAVE EUROPEAN HEALTH SYSTEMS RESPONDED TO THE FINANCIAL CRISIS?

Martin McKee

London School of Hygiene and Tropical Medicine, UK.

The global financial crisis that began in 2008 has hit Europe especially hard. Failing to learn lessons from previous crises, and especially the Great Depression, governments, encouraged and cajoled by the European Commission, European Central Bank and, until it recently saw the light, the International Monetary Fund, have imposed severe austerity policies, choking off growth and delaying recovery. Largely ignoring the roots of the crisis in the failure to regulate the financial sector, to which they have given massive financial support, several governments have instead exploited the crisis to dismantle health and social welfare systems. The failure of this policy is now apparent, both in economic terms but, of relevance to this conference, in health terms. In the accompanying presentation, David Stuckler will describe our work on the health effects, so far largely ignored (and in some cases actively denied) by governments and international bodies. Here I will describe the responses within health systems. The presentation draws on a recent survey of 95 key informants in 47 countries, covering health system responses to the end of January 2013.

The magnitude of the shock associated with the financial and economic crisis, its depth and duration, and the pace of recovery, has varied substantially across countries in Europe. However, although the crisis has had significant consequences for health and health systems in some countries, these consequences are not always easy to quantify. It is clear that public spending on health fell in absolute terms and as a share of total government spending in many countries, in spite of efforts to protect the health budget. Countries with means-tested entitlement to publicly financed health care and those that rely heavily on the labour market to fund the health system have been particularly vulnerable to economic fluctuation. While automatic stabilisers played a critical role in some countries, in others, governments acted quickly to protect transfers and secure additional funding. However, political choices have been important in determining countries' ability to maintain an adequate and stable flow of funds to the health sector. Health systems adopted a wide range of strategies to cope with having fewer resources but some countries have reduced entitlements (especially to migrants). Many countries have

addressed pharmaceutical policy by lowering drug prices and encouraging greater use of generics. Some have also reduced or frozen salaries and closed or reduced opening hours of facilities.

Unfortunately, there has been remarkably little work to evaluate the impact of these changes, paralleling the striking lack of interest in documenting the health effects of austerity. Thus, while some policies, such as generic substitution, are likely to be beneficial (and arguably should have been undertaken anyway), others are likely to be harmful.

Finally the presentation will conclude by examining the effects of cuts in health spending for the wider economy, including a recalculation of its fiscal multiplier effect and the risks of incurring future costs by disinvesting in health now.

ACHIEVING AN EFFICIENT HEALTH CARE SYSTEM: FOCUS ON PATIENTS AND WORKFORCE

Stephen C. Schoenbaum

Special Advisor to the President, Josiah Macy Jr. Foundation, New York, NY USA.

Policy makers usually approach the issue of increasing health care system efficiency in relation to overall financing and organization of the system. Also important, but frequently overlooked are less global issues related to optimizing care for patients and workforce development and maintenance. This presentation focuses on a set of these issues: simplifying processes to make them more patient- and workforce-friendly; shared decision-making; team-based care; and the infrastructure and policy approaches that specifically support patient- and workforce-oriented efficiencies and effectiveness.

Simple, reliable processes engender patient trust which in turn enhances patient engagement and then greater patient responsibility and adherence. Patient input in process design is always desirable and frequently essential. Shared decision-making involves better patient understanding and participation and is associated with reduced use of expensive resources and as good or better patient satisfaction. True teamwork between team members with complementary knowledge and skills leads to better coordination of care for patients and more efficient use of human and other resources. Redesigning complex processes to achieve greater standardization and simplicity, shared decision-making, and teamwork on system-wide bases require knowledgeable, effective management. Policies that foster health information exchange for better communication between clinicians and between clinicians and patients, provide training and technical support for the workforce, make information on quality and cost transparent so that best practices can be identified and spread, and eliminate or modify payments that support inefficiencies or conflicting goals, are all necessary for achieving an efficient and effective health care system that puts patient interests first and meets them with an engaged and empowered workforce.

THE IMPACT OF THE AGEING OF AMERICA ON CHILDREN'S HEALTH

Gary L. Freed

University of Michigan, USA.

The continued demographic trend of the "aging of America" has many implications
for U.S. society. Although the absolute number of children in the population has remained relatively constant over tha past 30 years, children are becoming a smaller proportion of the overall population. The rapidly changing age related U.S. demographics raises issues we have not yet chosen to address. These changes have important implications for children and will become manifest in the financing of both public programs and private markets for health, education, and social services, whether or not specific political actions are taken. Investment in children's health can affect the health and productivity of the next generation of Americans. The case for increased spending and investment for the growing cadre of seniors is compelling. However, if the increases come at the absolute or proportional expense of children, then society must determine if the price is too high. To ensure a next, and a next, generation of healthy Americans, we must develop mechanisms that encourage private investment in improving the health of children while ensuring continued public support. These issues are not unique to the United States and are affecting almost all western industrialized democracies with an aging population.

VACCINATION IN TIMES OF AUSTERITY

Baruch Velan

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Three major periods can be identified in the history of vaccination: a) The "foundation building" period from the 19th century to WW-II. b) The "golden age", from the end of WW-II to the mid-1970s, when vaccination programs against the most threatening infectious agents (Diphtheria, Tetanus, Pertussis, Poliovirus, Measles, Mumps, Rubella, Influenza) were introduced. The driving forces behind these programs were the superpowers of the time the USA, the USSR and the international agencies WHO and UNESCO. During that period vaccination was based on strong ideological convictions, but at the same time served as means for gaining influence and prestige. c) The "vaccine-expansion" period extended from the early-1980s till recent times, when new innovative vaccines were introduced (HBV-A, HPV-B, Hib, Varicella, Rotavirus, HPV). The geopolitical setting during the "vaccine expansion" period was marked by the end of the cold-war, the emergence of neo-liberal trends and increased involvement of corporate capitalism in vaccine development.

An analysis of current trends suggests that we might be reaching a period of "vaccine-constriction", where introduction of new vaccines will be limited. This may result from the following: 1) Funds will be scarce decreasing the incentive for pharmacological companies to invest in vaccination. 2) The growing skepticism of the lay-public towards vaccination may deter authorities from introducing new programs. 3) The impression that vaccination has fulfilled its major role, together with the realization that vaccination cannot solve some major threats (HIV, Tuberculosis Malaria). 4) The false perception that infectious diseases have been tamed, and that funds could be diverted now to deal with other morbidities such as chronic diseases of the elderly.

All this suggests that periods of austerity can be dangerous times for vaccination. This underlines the responsibility of governmental agencies in maintaining the existing vaccination programs and promoting the development of new ones.

REASONS WHY PARENTS DO NOT COMPLY WITH RECOMMENDED PEDIATRIC VACCINES

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Background: Despite the well documented benefits of vaccines, vaccinations have evoked resistance among parents. No studies were performed on the reasons for not vaccinating children in Israel.

Study question: What are the reasons and their frequency, for not completing the recommended vaccines among children as documented in the medical records?

Methods: Retrospective cohort study, reviewed children's records in Mother and Child Healthcare Centers (MCHC) born during 2009, in the Haifa district and the Tel-Aviv municipality. Three vaccines were studied for full compliance: HBV-3th, DTaP-4th, MMR. We defined six categories for non-compliance: medical contraindication, parental refuse, parents asking for alternative vaccine schedules, parental behaviors, nursing staff behaviors, and other reasons. Socioeconomic factors associated with compliance were studies.

Results: Records of 14,232 children aged three were reviewed, 7.4% of the children had not received at least one of the 3 recommended vaccines. 59.6% had not received the vaccines because of parent's refusal or demand for an alternative schedule, 30.2% of the children had not completed all the three vaccines. There was an association between socioeconomic variables and the likelihood of not vaccinating the child. Jewish mothers born in Israel, living in Tel-Aviv Yafo with an academic education, over age 36.3 with an average of 2.6 children, were less likely to vaccinate their children (OR =1.23; 4.5; 1.48; 2.43; 1.09; 1.08, respectively $P < 0.05$).

Conclusions: Most of the reasons for not fully vaccinating children depend on the parents opposing to vaccines recommended by the Ministry of Health. The reasons for not complying with all three of the vaccines seems to be vaccines opposing based on autonomic decision making.

Health policy implication: Understanding the parent's reasons for not complying with recommended childhood vaccination is important for health policy interventions to plan specific and cultural adjusted programs to prevent decline in vaccine coverage rate.

LINKING CHILD PAYMENT SUBSIDIES TO IMMUNIZATIONS - AN EXPERIMENT IN PUBLIC POLICY

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Background: Establishing and maintaining high immunization coverage are critical for achieving herd immunity and the prevention of outbreaks of vaccine preventable diseases. Countries have implemented various strategies for achieving this end, among them legal mandates for vaccinations and school entry requirements. Parents in Israel are not legally required to immunize their children. While immunization coverage in Israel is consistently reported to be high, the information published refers to the population that frequents the Maternal and Child Health Stations responsible for immunizations and does not necessarily cover those sectors that may not partake of this service. Evidence of significant lacunae in immunization coverage may be taken from repeated outbreaks of measles in Israel among unimmunized populations. In addition, there appears to be a growing undercurrent of unease concerning immunization among the educated, urban population.

In 2008 the Director General of the Ministry of Health officially suggested linking child payment subsidies to proof of immunization. His suggestion was based on models of conditional transfer payments implemented to this purpose in other countries. The budget law of the following year mandated the linking the agreed on increase in child payment subsidies for the first 4 children to proof of immunizations. The actual implementation of the law has been delayed repeatedly for both technical and substantive reasons until June 2013. Three separate petitions to negate the law were submitted to the Supreme Court. The Court issued a holding order in 2012 but as of this time, has not yet published its final decision.

Health policy implications: Regardless of the court's decision, it is important to discuss the issues raised by this measure, its effects until this point and future implications.

THE OUTCOMES OF VARICELLA VACCINE ADOPTION IN THE POPULATION UNDER PRIVATE PURCHASE POLICY

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Background: Introduction of novel vaccinations as voluntary privately-purchased medical options has been long criticized as a potential source of public health inequity. Hitherto the main problem of this policy was considered the under-immunization in lower socioeconomic status (SES). However, so far the effect of SES was not demonstrated in the context of other potential vaccination-limiting factors. Moreover, the epidemiological outcomes of such policy have not been properly investigated for most privately-purchased vaccines.

Study Question: Which factors, beyond SES, have affected the adoption of privately-purchased varicella vaccine in Israel and how did varicella disease rates change due to disproportionate immunization?

Methods: Disease and vaccination rates were calculated in a random sample of 300,000 members of Clalit Health Services. Factors associated with under-immunization were analyzed in a subset of 110,902 children that included equal numbers of vaccinated and unvaccinated age-matched participants.

Results: By the end of 9-year-long private purchase period, vaccination rates in high SES were 4-times higher than in low SES. Vaccine under-utilization was associated with Arab/Bedouin ethnicity, rural residence, place of child's and parents' birth, SES, and birth order. Ethnicity and high birth order were the strongest independent risk factors for under-immunization, strongly surpassing SES.

We detected an 18.6%-gap between age-adjusted disease rates in high and low SES, which did not exist in the beginning of private-purchase period. That is, at the end of private immunization, low SES had the leading morbidity rates and high SES had the lowest disease rate.

Conclusions: Private purchase causes unequal immunization, with lowest rates among ethnic minorities, large sibships, immigrants, and low SES. Accordingly, the disease burden is disproportionate and reflects health inequity.

Health policy implications: Private-purchase periods, which in times of austerity are often practiced to introduce novel vaccines, must be short-termed, with close monitoring of resulting inequities in public health.

IMPROVING GOVERNANCE AND INSTITUTIONAL STRUCTURES TO REDUCE INEQUALITY IN IMMUNIZATION IN INDIA

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Background: In India the Diptheria-Pertussis-Tetanus (DPT) coverage is also an important quantification of access to, and the ability of, the health system to reach the target population to reduce infant mortality. However, DPT coverage in India is still low and approximately 21% children lack full DPT immunization, with wide variations across socio-economic groups.

Objectives: i) We examine key socio-economic gradients of children who are either not immunized or dropped out at different stages of immunization; ii) determine the changing pattern of socio-economic characteristics of children not covered under DPT; iii) examine current structural and institutional challenges facing immunization in India.

Methods: We utilized data from three rounds of National Family Health Survey: I (1992-93), II (1998-99), and III (2005-06). We estimated pooled multinomial and logistic regression models, approximating the probability that a child with a specific set of socio-economic and family characteristics is likely to have outcomes of DPT1, 2, and 3 vaccination compared to no DPT vaccination. We also estimate the marginal effects of change in socio-economic characteristics of children.

Results: For the most recent year, odds of DPT3 immunization were low for: female gender of child (Odds Ratio (OR) 0.87*), three or more children in the family (OR 0.82*), five or more household members (OR 0.74*), no education of mother (OR 0.18*, compared to higher education), poorest wealth quintile (OR 0.19*, compared to richest). Institutional deliveries in public (OR 1.82*) and private (OR 1.60*) sectors were associated with higher odds of DPT3 coverage, though the increase in gradients was significantly higher for public deliveries across time.

Conclusions and Policy Implications: Stagnant or decrease in DPT3 immunization are observed over time across socio-economic gradient. These patterns suggest the urgent need for immunization strategies, by strengthening service delivery in order to reduce socioeconomic inequalities in immunization coverage.

SOCIO-DEMOGRAPHIC MEASURES AND THE UPTAKE OF INFLUENZA VACCINATION IN ADULTS 50 YEARS AND OLDER IN ISRAEL

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Background: Vaccination is a cost-effective strategy to prevent morbidity and mortality associated with influenza infection.

Study question: Are socio-demographic measures (age, gender, income, education and population group) associated with vaccination compliance?

Methods: Data from the "Prevention" module of the second Israeli National Health Interview Survey (INHIS-2) was used. 2,389 individuals 21 years and older were interviewed, of whom 1,179 individuals were 50 years and older. The interviews took place from March 2008 to February 2009.

Results: The rate of vaccination was 38.2% (35.6-41.1). It was higher in individuals 65 years and older (57.7%) compared with individuals aged 50-64 years (25.1%) [OR=4.07 (3.15-5.26)]. Adjusted by age, the rate of vaccination was not associated with gender, income, education or population group.

Self-initiation of vaccination was reported by 45.0% of the participants. The most common external reasons for complying with the vaccination were recommendations by health professionals (28.3%) and promotion campaigns of health organizations (21.1%). These reasons were mentioned more often by individuals 65 years and older compared with ages 50-64 [56.9%, 45.7%, OR=1.56 (1.05-2.31)], individuals with low income compared with higher income [67.0%, 40.4%, OR=2.84 (1.84-4.38)], low education compared with higher education [66.7%, 48.8%, OR=1.98 (1.21-3.24)], and by Arab-Israelis compared with Jewish-Israelis [83.3%, 48.7%, OR=5.55 (2.51-12.26)].

Conclusion: Health professionals have a more effective influence on influenza vaccination among the elderly, among individuals of low socioeconomic status and among the Arab population.

Health policy implications: Health maintenance organizations should expand campaigns for encouraging influenza vaccination, especially in the groups identified in the present study.

USING THE NATIONAL KAP SURVEY TO INFORM DECISION-MAKING FOR THE NATIONAL PROGRAM TO PROMOTE ACTIVE, HEALTHY LIVING

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Background: With the aim of reducing levels of morbidity and mortality related to obesity, cardiovascular disease, diabetes and cancer, the Ministries of Health, Culture and Sport and Education initiated the National Program to Promote Active, Healthy Lifestyle.

Study Question: How does the national Knowledge, Attitudes and Practices Survey ("KAP") inform the decision-making process for the National Program to Promote Active, Healthy Lifestyle?

Methods: The 2010-11 KAP included 4,936 respondents - 2,740 Jews, 2,196 Arabs - who were interviewed by phone, using a structured questionnaire.

Results: 61.2% of female Arab respondents do not engage in any intentional physical activity, compared with 46.8% of female Jewish respondents*. Arab respondents were more sedentary, reported higher BMI*, smoked more and were exposed to more smoke. The survey revealed high levels of sedentary behavior at work, especially among Jewish respondents. 94.6% of respondents claimed to consider at least one nutrient when making food choices*.

Conclusions: Arab Israelis are more at risk to demonstrate unhealthy behaviors than Jews. Arab areas therefore comprise 50% of the municipalities receiving increased financial support and professional guidance through the National Program, for providing affordable opportunities for physical activity and fostering healthy public policies at schools and other public institutions. Additional directions include removing junk foods and sweetened drinks from schools, banning television advertisements of junk foods to children, "front-of-package" food labeling, tax breaks on fruits and vegetables for workplace refreshments, mandatory calorie-labeling at restaurants and addressing smoking among Arab men.

Health policy implications: The KAP offers vital information for addressing Israelis' struggles to live healthy lives. KAP 2010-11 catalyzed the launch of the National Program. Future KAP surveys will guide its evaluation.

* Preliminary data - Final results will be presented at conference.

"CHANCES AND CHOICES": THE SOCIAL CONTEXT OF INDIVIDUAL PARTICIPATION IN COLORECTAL CANCER SCREENING

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Background: Individuals in the target population in national screening programs for the early detection of Colorectal Cancer (CRC) respond differentially by socio-economic status. Mailed invitations are sent to encourage undertaking the recommended screening test (Fecal Occult Blood Test, FOBT), included in the Israeli basket of health-services. This may save lives, but screening rates increase slowly, especially among lower socio-economic (SES) groups.

Study Question: What is the social context of participation in CRC screening as per the perceptions of individuals in the screening target population?

Methods: A qualitative study, six focus-groups, carried out in 2009-10, in 2 middle and low socio-economic status, primary-care clinics in Israel. Twenty-four women and men, aged 50-68 participated. Group discussions were taped, transcribed, and analyzed using qualitative analysis software.

Results: Participants understood CRC early-detection rationale, yet emphasized their difficulty to implement it. They focused on personal implications for them of the HMO service organization, and reported an internal dialogue conducted with the messages they perceive stemming from the health-services organization while making their-own health-behavior decisions. Lower SES participants presenting negative aspects of the health-service provision (excluding their GP), tended not to perform FOBT; those seeing positive service aspects (mostly of middle SES), or both, tended to perform the test.

Conclusions: FOBT invitations are viewed by participants as an HMO service ("chances"), acceptance of which requires a decision ("choices"), linked, in turn, to their assessment of these services. Dissatisfaction with a component of the health-service reflects on reactions to other service-components.

Health policy implications: Balancing negative and positive experiences of health-services may guide effective CRC screening enhancement and the use of health services overall.

POLITICAL COMMITMENT TO HEALTH: POLICY INDICATORS FOR HEALTHY AND LIVEABLE CITIES

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Background: Political Commitment (PC) acts as a determinant of both population health and the development of health policy. It is also included in a guideline issued by the WHO Regional Office for the European Healthy City Network. However, PC is understood differently by different people in varying contexts and there is no broadly accepted scientific definition for it. Moreover, no known indicators have been developed for assessing PC for Healthy Cities, in spite of a great need and interest amongst different government levels, the media and other stakeholders.

Study Question: To assess PC to health while closely examining the ways it is being defined and used by various stakeholders and how such a commitment could ultimately work to promote liveable, healthy cities.

Methods: Qualitative research methods were used in the form of long-term observations, content analysis of policy documents and in-depth interviews with policymakers at the municipal/local and national level. Those include mayors and bureaucrats, representatives of civil society organisations, as well as professionals and researchers.

Results: PC to health is a multi-faceted process composed of interrelated dimensions: personal-leadership, organisational-managerial and socio-political, all together influence on developing and implementing health policy. Based on these results and a synthesis of health promotion and public policy literature, multi-dimensional model(s) have been developed, which serve as a framework for a validated list of 13 policy indicators.

Conclusions: Rather than a mere (personal) commitment of an elected official (or a political party) as commonly used, given its multi-nature, PC should be seen in a broad perspective while understanding barriers and incentives for development and implementation of viable health policies, taking into account different 'actors' and factors involved through a process.

Health policy implications: Both models and indicators are anticipated to be used by policymakers and stakeholders dealing with policy challenges and solutions for achieving population/community health, specifically in municipal/local governments' authorities.

PLANNING A MULTI-YEAR NATIONAL PROGRAM FOR CHILD-SAFETY - ADAPTING A DESIGNATED MODEL IN COMPARISON TO PARELLEL PROGRAMS IN THE WORLD

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Background: Unintentional injury is the leading cause of death among children all over the world. This tendency urged the European-Union to promote an initiative to develop and implement governmental action-plans to advance child-safety. The initiative is led by The European Child Safety Alliance (ECSA), of which Israel is a member. In February 2012, the Israeli government made an official decision to approve the planning of a multi-year program for child-safety, led by the Ministry of Health and in cooperation with 16 governmental ministries and national entities.

Research question: To examine a model for planning a multi-year child-safety program to be implemented in Israel, in comparison to parallel programs in the world.

Method: Comparing other national child-safety programs in ECSA, the United-States (CDC), New-Zealand and others with the planning process in Israel, based on adaptation to the Israeli governance.

Results: Varied differences were found among the models. The European model was developed as a generic model and offers a three-stage linear plan: mapping, strategic planning and guidelines for application. The American model is based on inter-sector work, influenced by the structure of the legal system in each state. Whereas The Israeli model offers a two-dimensional planning that is not linear, between the planning stages proposed by the European model.

Conclusions: The Israeli government adapted a designated model due to unique characteristics: The subject of child-safety is distributed among different governmental ministries and national entities; the need to focus on the governmental level and integrate ministerial and inter-ministerial work.

The desired impact on health policy: The area of child-safety represents a subcategory of the discipline of Health Promotion. Planning a model for a national child-safety action plan could serve other subjects related to Health Promotion, as well as impact the work of the policy-making processes in the field of health in Israel.

FOUR YEAR FOLLOW UP ON ADULT PNEUMOCOCCAL VACCINATION RATES SINCE THE INTRODUCTION OF NEW VACCINATION PROGRAM IN CLALIT HEALTH SERVICES

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Background: The Israel Ministry of Health recommends 23-valent polysaccharide anti-pneumococcal vaccination for patients with immune suppression or chronic diseases and individuals above the age of 65 years. On January 1, 2008, pneumococcal vaccination for adults was introduced as one of 70 quality measures in community medicine in Clalit Health Services (CHS), which is the largest public health maintenance organization in Israel with more than 4,000,000 enrollees (52% market share). At 2008, pneumococcal vaccine target population included all CHS enrollees >65 years and patients with specific chronic diseases. The relative weight of this quality measure within the CHS program was 3.19% (Performance goal was 75%).

Study Question: The impact of including pneumococcal vaccination as a quality measure in community medicine on rates of vaccinated CHS enrollees.

Methods: The current study describes the follow up on vaccination rates since 2008 which consisted of administrative and service-related processes. In 2010, the target of pneumococcal vaccination population was divided into two separated sub-populations - 1) the elderly, aged 65 years or older; 2) Patients with specific chronic conditions, aged 20 - 64 years.

Results: Between 2008 and 2012, approximately 400,000 CHS enrollees within the target population were vaccinated. During this period, the performance rate of this medical marker increased in more then 10-fold (compared to August 2007): from 6% on 2007 to 73% on November 2012 (77.5% among the elderly and 44.8% among patients with chronic diseases).

Conclusion and Health Policy Implications: The introduction of a comprehensive program of pneumococcal vaccination that was based on medical quality measure substantially increased enrollee vaccination rates among elderly and chronic patients.

MAXIMIZING HEALTH OUTCOMES UNDER BUDGET CONSTRAINTS: THE CASE OF USING STATINS FOR PRIMARY PREVENTION OF ADVERSE CARDIOVASCULAR EVENTS

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Background: Innovative interventions in medicine may improve patients' outcomes but such improvements may come at a substantial cost and significant budget impacts, thus limiting the number of patients that may benefit from them. An alternative is implementing a substantially lower-cost intervention to a much wider population, accepting inferior per-patient outcomes.
Study Question: Current economic models are limited in measuring the effect of using inferior lower-cost interventions on the entire target population. We examined whether this approach can provide better outcomes under a pre-specified budget constraint.
Methods: We used the results from the JUPITER trial (Justification for the Use of Statins in Prevention: An Intervention Trial Evaluating Rosuvastatin) and the United-States target population as a case study. We built a model that is capable of comparing the outcomes on the entire intended-use population, and compared three treatment alternatives: 1) Rosuvastatin for a limited patient population, with the clinical effect reported in JUPITER. 2) Lowest cost statin for most patients, with 75% of the JUPITER effect. 3) Usual care (do nothing). We used a budget constraint of $200M per year, and a 10-year time horizon, which allows for significant diffusion of this strategy in the target population.
Results: When compared with the "do nothing" alternative, under the pre-specified budget constraint, the Rosuvastatin alternative resulted in the prevention of 9,398 cardiovascular events, the lowest-cost statin alternative resulted in the prevention of 131,371 cardiovascular events.
Conclusions: Under budget constraints, using lowest-cost statins enables a substantially larger market access to treatment, which according to our model resulted in significantly better health outcomes for the target population.
Health policy implications: The novel model presented in this case study may assist policy-makers in achieving better health outcomes under a constrained budget for various clinical conditions.

CHALLENGES OF AN EQUITABLE HEALTH POLICY IN A PLURALISTIC SOCIETY - HEALTH POLICY IN TIMES OF AUSTERITY
B: Institutional Governance Strategies

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Background: Improving health conditions is a key political objective for the Norwegian Government. As public health services in Norway are financed by taxation, the services are designed to be equitable and equally accessible to all residents, regardless of social or economic status. With a focus on policy challenges in a pluralistic society the article moves from a global to a national level. After defining central concepts and introducing the theoretical framework from Dahlgren and Whitehead the article aims to shed light on health policy challenges for policy makers in Norway with an emphasis on vulnerable groups.

Study Question: What are the challenges for an equitable health policy in a pluralistic society?

Methods: Literature review on policy papers visualizing challenges with examples from Norway.

Results: Trends in health care policy in Norway have changed over time, as shown by the literature review. In the 70s the focus was on reducing inequities and building up the health service system, in the 80s cost containment and decentralization were key issues, while the 90s brought a focus on efficiency and leadership, and the 2000s brought renewed focus on reducing inequities while adding structural changes in delivery and organization. This paper shows that the issue of social inequity in health remains unresolved on a global scale. The analysis of the Norwegian policy changes points to some ways this challenge can be met.

Conclusions: Focus must be set on policy aims to enhance equitable access by policies by understanding the intricate phenomena of health service utilization, health seeking behaviors and the implementation of effective interventions on micro levels.

Health Policy implications: Policy makers, researchers and practitioners need to join efforts to conceive innovative actions.

CAN ISRAEL CONTINUE THE RECENT SURGE IN MAJOR HEALTH CARE REFORMS IF THE ECONOMY STOPS GROWING?

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Background: The recent global economic downturn has had a major effect on health policies in many countries, including a shift in focus from service expansion to cost containment. Until recently, Israel's economic growth remained relatively strong, but the country has now entered a period of greater austerity. In recent years, the Ministry of Health has launched major reforms in quite a few areas and it is not clear how the economic downturn will affect the pace and nature of reforms.

Study Questions: 1. To what extent did each of the recent major health care reforms require additional governmental or other resources? 2. To what extent did their objectives focus on service expansion/ improvement v. cost containment and improved efficiency?

Methods:

1. Review of key documents to identify the major reforms that were launched in the 2010–2012 period.
2. Analysis of budgetary and planning data to categorize the reforms in terms of their objectives as well as their governmental and system-wide costs.
3. Consultations with leading Israeli health policy analysts and policymakers regarding possible interpretations of the data.

Results: Recent reforms varied greatly in terms of their resource requirements. A few of the reforms entailed major infusions of new funds, while most did not; instead, they were financed primarily through priority shifts and increases in efficiency. Very few of the recent reforms had increased efficiency and cost containment as their main objectives.

Conclusions: Even if Israel enters a period of fiscal constraint in 2013, the Israeli health care system will probably be able to continue to launch important structural and programmatic reforms. At the same time, it is likely that the mix of reforms will have to shift somewhat from those entailing substantial resource expansions to those focused on cost containment and improved efficiency. Service expansions that also promote efficiency may also fare relatively well in the prioritization process.

Health policy implications: In preparing its strategic plans for the coming years, the Ministry of Health should take into account the possibility of a substantial change in the macro-economic and budgetary environment.

"RE-STRUCTURING RESPONSIBILITIES OF STATE, SOCIETY AND INDIVIDUAL FOR AN ERA OF PROLONGED AUSTERITY IN HEALTH SYSTEMS"

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In the post-2008 economic context of long-term slow or no growth in developed Western countries, health systems confront a new era. Squeezed between financially strapped governments and continually growing pressures for increased volume and quality of medical services, as well as for dramatically expanded "upstream" preventive social interventions, health systems in large segments of Europe as well as other OECD countries may no longer be able to rely on the post-WW II paradigm of increasing public funding and provision.

Instead, a new "social compact" between state and citizen will need to emerge that involves a substantially greater role for a wide range of non-state, non-publicly funded or operated actors. Such actors include not-for-profit and for-profit providers and insurers, local community organizations, independent local providers, and private households including intergenerational families. This shift away from state-based health systems will require many structural changes, re-generating and expanding the diverse civil society that existed in many countries before the state role became dominant.

This new "civil society" approach will, however, need to be structured and nurtured legislatively and perhaps financially by precisely the same state entities that it will need to supplement and in some cases replace. Rather than a simple retreat from the health sector, the role of government will shift more toward the broader notion of "governance" - ensuring through light-touch but clear regulation that an adequate number of socially acceptable alternatives emerge.

This paper will explore what some of these new institutional options and arrangements might entail. It starts from the premise that the vacuum created by the state's growing fiscal and institutional incapacity will need to be filled by new and/or revitalized institutions and relationships. The paper will sketch out what some of these new institutions and responsibilities might be. It also will relate these new arrangements back to the dominant post-WWII norms as they have evolved in current thinking, and raise some of the uncomfortable issues and tradeoffs that the transition toward post-austerity health systems will involve.

AUSTERITY FOR WHOM? ADDRESSING CONTRIBUTIONS OF TOBACCO, PHARMACEUTICAL AND HEALTH INSURANCE INDUSTRIES TO HEALTH CARE COSTS

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Background: Austerity often means controlling costs of health care with better health behavior, less inappropriate treatment, and more efficient service organization. Notwithstanding the importance of these approaches and the respect due to individual responsibility, their effectiveness is limited upstream by the hold that industries' profits have on individuals, professionals and organizations. Addressing these profits is the next step to limit costs of health care.

Study question: How may one realistically oppose the profit and power of large corporations and proxies in the health care system?

Method: A theoretical approach grounded on literature review and on a social epidemiological framework was used to identify sites to guide effective policies.

Results: Law suits by governments to recover cost of caring for disease fraction induced by tobacco and price increase secondary to taxation have been successful.

This is relevant to the current debate on alcohol policies in the UK. Coordinated approaches to control of utilization, patent policies, sharing of research knowledge and clinical testing with pharmaceutical corporations may be more effective than independent approaches. The toll of health insurance profits on people's needs and physician integrity may reach a point when organized medical and other health professional resistance through several pathways (including public health) is inevitable.

Conclusions: Approaches for upstream intervention to control health care are realistic.

Health policy implications: Such policies would decrease cost of health care without hurting the public's health. They would involve reduction of excess profits or executive salaries and a redistribution of health care work force's jobs into programs of research, health education, and improvement of health care efficacy to keep the total number of jobs constant.

BUILDING GOVERNANCE CAPACITY IN AUSTERITY'S SHADOW: STRATEGIES AND OUTCOMES FROM THE SWEDISH FORUM FOR HEALTH POLICY

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Sweden's economy has weathered the post-2008 crisis relatively well so far, returning rapidly to growth in 2010. However there is growing concern among economists about the consequences for Sweden of European and US slowdowns, given that Sweden exports more than 40% of the total value of its economic production. A slowdown in Swedish economic growth would reduce the ability of the largely tax-based Swedish health system to raise additional revenues.

In the health sector, traditional (and relatively successful) cost control mechanisms have come under increasing strain from patient demands for more timely access to higher quality services, and will likely be further stretched by the impending impact of new EU rules regarding cross-border care. Moreover, traditionally tight public sector constraints over services and expenditures may no longer be feasible in an environment of growing expectations from citizens for individually as well as population oriented care.

This malign combination of potentially shrinking economic growth coupled with persistently increasing health sector demand suggests that national policymakers will require new policies and strategies in the not too distant future. The need for new governance approaches in the health sector has recently been acknowledged by the Swedish national government. In May 2012, the final report of Ministry of Health and Social Affairs' official government inquiry into the national government's future role in the health sector recommended that the 12 current national agencies dealing with the health sector be consolidated into 4 new agencies, each concentrated on one major health policy mission: knowledge management, inspection, information, and strategic leadership.

In this emerging climate of potential health sector change, the role of the Swedish Forum for Health Policy is to provide an independent neutral platform where new strategies and alternative policy directions can be safely

examined and assessed. The Forum operates a range of invitation-only workshops, small seminars and dinners where national and regional policymakers, senior health professionals, and academic experts can come together to explore possible new future directions for Swedish health policy. Key innovators in other country health systems are invited to present at these sessions, and a Swedish language paper on the status inside Sweden of the issue under consideration is commissioned and distributed to participants in advance. The Forum also operates a publicly available website and also publishes hard-copy volumes with invited analytic papers, making the broad topics under discussion accessible to wider health sector and also general public audiences. The overall objective of the Forum is to broaden the horizon of the policymaking debate as the need for system change grows.

This paper will examine the activities of the Swedish Forum for Health Policy from three inter-related perspectives. First, it will briefly describe the purpose and functions of the Forum in the current economic and political environment in Sweden. Second, it will explore several recent primary care and hospital examples of the Forum's efforts to focus the ongoing Swedish debate more effectively on new and/or important organizational options within the Swedish health system. Lastly, the paper will consider the underlying premises that could be transferable into other national policy contexts elsewhere in Europe and beyond.

INTEGRATED REGIONAL AND LOCAL GOVERNANCE TOOLS TO CHANGE MANAGEMENT IN HEALTHCARE: THE EVOLUTION OF ITALIAN EXPERIENCE

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Background: Health systems show high variation in terms of quality, volumes and costs of services delivered. Still less is known on which governance tools can stimuli performance improvement integrating local and regional level. Indeed extant literature widely recognizes the incompleteness of healthcare actors, either institutions or individuals.

Study question: This paper aims to propose governance mechanisms that can be adopted to improve performance considering multilevel actors. First evidence on the application of the proposed model are even discussed.

Methods: The model of governance proposed is based on an extensive action research carried out by the Laboratorio Management e Sanità since 2003. First evidence are based on the comparison of regional and national data on health care performance.

Results: To deal with multiple actors and introducing collaboration and integration, the governance system should follow two typologies of intervention. The first concerns services which have international standards of reference based on EBM. This typology of intervention is based on top down approach looking for the integration of control systems at local and regional. The second typology of intervention concerns services which do not have any international standards. This intervention should develop regional professional networks following a bottom up approach. The final objective is to increase the accountability of professionals on priority setting and value for money.

Evidence show that Regions that already adopted the first kind of intervention improve performance more than others. No evidence is available yet for the second typology of intervention.

Conclusions and health policy implications: On one hand Regional governments should adopt a top down approach integrating governance tool with both regional governance tools and the local budgeting process. On the other hand Regions should promote the bottom up approach involving in professionals to set standards and way of working for services where EBM is not available.

AVERTING THE FEDERALISM CLIFF: REDESIGNING THE FEDERAL-STATE RELATIONSHIP IN THE CONTEXT OF THE AFFORDABLE CARE ACT

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Background: The American approach to providing access to health care for low-income populations involves a complex federalist structure. With financing shared between the federal government and the states, and significant authority for establishing income eligibility levels left to the states, the result has been a patchwork of coverage with significant gaps and a high degree of variability around the country. While subject to criticism for its weaknesses, this historical structure has been fairly stable.

The Affordable Care Act disturbs this uneasy truce. By establishing a single, national, eligibility floor, the law removes an important aspect of state flexibility. (The Supreme Court's ruling redefines the floor, but the nature of the structural change remains intact.) The federal government will bear the full cost of a major expansion of insurance coverage, with responsibility for implementation of these coverage provisions resting largely with the states. Meanwhile, all payers are placing renewed emphasis on reducing the rate of growth of health care spending. The simultaneous pursuit of coverage expansions and cost containment places significant pressure on the American federal system.

Study Question: Can American federalism harness the shared interest in cost containment without reversing the gains in coverage embodied in the new law?

Methods: Policy analysis.

Results: This paper presents a framework for meeting this challenge by building upon the structure of "shared savings" embodied in new Medicare payment provisions within the Affordable Care Act. It proposes to redefine certain aspects of the shared federal-state financing model in the context of expanded insurance coverage and cost-saving goals.

Conclusions: It is possible to modify the structure of American federalism to accommodate the need for resource constraint within the context of expanded health insurance coverage.

Health policy implications: While designed for the United States, this proposal may have application for other federalist systems.

DISPARITIES IN AMENABLE MORTALITY IN ISRAEL

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Background: Mortality from causes amenable to health care is a valuable indicator of population health and quality of health care.

Study question: This study investigates trends in inter-regional differences in amenable mortality rates in Israel over time, and investigates contributory factors.

Methods: Age-adjusted amenable mortality rates were calculated from the nationwide database of causes of death by region for the years 1999-2010, and then analyzed similarly for groups of causes.

Results: Age-adjusted amenable mortality rates have been decreasing steadily in Israel in all regions, for males between 26% and 38% and for females between 22% and 32% for 1999-2001 compared to 2008-2010. Highest rates for both genders were found in the peripheral Northern and Southern regions, followed by the Haifa region. The lowest rates for males for most of the period were in the Jerusalem region, although they increased at the end of the period, 2008-2010 to the national rate. The Central and Tel Aviv regions had the next lowest rates. The relative difference between highest and lowest regions increased for males during the last decade, with Southern district rates 18% higher than those in the Central district in 1999-2001 compared to 38% in 2008-2010 while for females there was a decrease from 24% to 20% in the corresponding periods. The highest decrease in rates of circulatory disease deaths were for females in the Northern and Southern districts, but those for infectious diseases increased for males in the Southern, Jerusalem and Northern districts, as compared to decreases for all other districts and for females.

Conclusion: Regional disparities have remained over the study period although they are increasing for males but decreasing for females.

Health policy implications: Efforts need to be made to improve health in peripheral regions, and in particular for reducing infectious disease mortality.

Uninsured Children in Immigrant Families: Left Behind by Health Care Reform in the United states?

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Background: The Patient Protection and Affordable Care Act of 2010 (ACA) excluded undocumented immigrants in the United States from participating in either the Exchanges or the Medicaid expansion. These provisions affect children in immigrant families either directly (own citizenship status) or indirectly (parent's citizenship status).

Study Question: Determine the population of children (ages 0–18) either directly or indirectly affected by ACA exclusions and their likelihood of being uninsured.

Methods: The 2009 California Health Interview Survey was used, which contained immigration status data for both children and parents. Bivariate analysis determined the population sizes; multivariate analysis will determine likelihood of being uninsured. The total sample is 11,000 children (weighted population 10,558,000). Immigration status is as follows: 1) citizen child and parents; 2) citizen child, legal permanent resident parent (LPR); 3) citizen child, undocumented immigrant parent; and 4) noncitizen child.

Results: Noncitizen children (538,000) have a proportion of being uninsured over three times that of citizen children and parents (27.4% compared to 8%). Citizen children with noncitizen parents are uninsured at comparable rates to citizen children with citizen parents. Multivariate results are still to be determined.

Conclusions: Nearly 150,000 uninsured noncitizen children in California will be directly excluded under ACA provisions. Also, 100,000 uninsured citizen children have undocumented immigrant parents that might find it difficult to enroll their children.

Health Policy Implications: Sizeable populations of uninsured children in California will either be directly or indirectly excluded from obtaining coverage through ACA expansions. The exclusions target the most vulnerable population, with the highest rate of being uninsured of any immigration status group. Nearly 250,000 uninsured children in immigrant families will still need health care, but may find themselves with fewer provider options if public hospital funding cuts are enacted without careful thought to still providing quality health care to the residual uninsured.

POLICY DECISIONS CONCERNING MIGRANT WORKERS' HEALTH ENTITLEMENTS - A COMPARATIVE ANALYSIS OF GERMANY AND ISRAEL

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Background: Migrant workers' healthcare access has become one of the pressing health policy issues worldwide. Germany recruited millions of "guestworkers" following WWII to satisfy its labor market's needs. Until today, legally employed migrant workers are included in the German healthcare system. In Israel, international labor migration was introduced in the 1990s. Today approximately 200,000 migrant workers reside in Israel. They are largely excluded from the public healthcare system. Israeli law obliges employers to purchase private health coverage for their foreign workers.

Study question: To analyze and compare decision-making processes concerning migrant worker health policies in Israel and Germany

Methods: Our study combined qualitative and quantitative methods: a) 72 in-depth interviews with key informants in Germany and Israel, b) an analysis of socio-demographic and health-related data retrieved from NGO-run clinics in Tel-Aviv and Berlin (9,379 and 16,265 patient records respectively).

Results: The study shows how divergent logics such as economic, public health-, immigration control- and human rights-rationales shape migrant worker health policies. Our findings suggest that an inclusive migrant worker healthcare model offers economic and public health advantages. However, decision-making processes are encumbered by factors such as paucity of high-quality data, barriers to the utilization of existing data and lack of constructive dialogue amongst stakeholders.

Conclusions and Health Policy Implications: In Germany as well as in Israel, the debate on migrant workers' health entitlements intertwines evidence- and value-based arguments that ultimately pinpoint the question: Who deserves access to publicly funded healthcare? This debate thus brings to the fore core questions concerning (re-) conceptualizations of the welfare state in an era of globalization and austerity. In order to arrive at better-informed decision-making processes we recommend enhanced exploitation of existing data on migrant workers' health needs and improved interaction amongst the various stakeholders, e.g. in the form of round tables.

FROM STRATEGY TO IMPLEMENTATION: LEVERAGING OF NURSING RESEARCH FOR IMPROVED CLINICAL RESULTS IN THE ORGANIZATION

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Background: Creating a professional base of evidence and research promotes the quality of care in health organizations. Thus, an organizational model was designed in 2006 by a professional committee of nurses led by Clalit's head nurse in order to bridge between research and clinical practice. The purpose of the model is to improve health outcomes while deepening the knowledge and research practice of the nurses. The model includes a professional support from examining research evidence to carrying out research.
Research Support System Goals: 1. Implementation of applied research by nurses in the clinical field as an aid for achieving the organization's strategic objectives. 2. Empowering the nurse in her professional leadership role, based on practice and applied research, as a cohesive means for conserving and recruiting nurses. 3. Improving the quality of care in the organization.
Method: In 2010, a research coordinator from the head nurse team was nominated, and research units were created in Clalit nursing schools, with the purpose of assisting nurses in their research. Meanwhile, nurses with master's degrees were trained in research. In addition, EPB (evidence-based practice) workshops were held in order to provide tools to examine the evidentiary base for intervention.
Results: The research units support 10 ongoing studies in various institutions. Ten multi-centres studies were held as part of a research course. Furthermore, over 30 clinical questions were discussed in the EPB workshops, examining the therapeutic routine. This has led to numerous organizational results spanning several aspects: Improvement quality of care, promoting quality of service, contribution to nurses' recruitment and conserving and economic efficiency.
Conclusions and Policy Implications: The model developed leads to the change needed in order to promote quality of care by means of clinical curiosity and evidence-based practice. In addition, all aspects of research may serve as a draw in recruiting and conserving nurses.

BIO-MEDICAL RESEARCH IN TIMES OF AUSTERITY

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Background: In times of austerity, when budget cuts are inevitable, funding for medical research tends to be an easy target for cutbacks. Compared with some of the more obviously urgent needs of the medical system, such as the provision of hospital beds or subsidies for life-saving drugs, budget allocations to medical research appear as a luxury rather than as a necessity. The long-term benefits of medical research are immense. Its role in maintaining and improving the level of medical care and the proficiency of health care professionals is undisputed. Moreover, medical research has proven to be an outstanding lever for economic growth. It establishes the foundations and body of knowledge on which the biotechnology and medical device industries are built and thus constitutes the main engine propelling the development of drugs and new medical technologies.

Study Goal: This paper identifies the major barriers in medical research funding in Israel and analyzes the multiple benefits derived from investment in this field.

Findings: A comparison of government budget outlays for civilian R&D in all research fields (given as percentage of GDP) shows that Israel has one of the highest investment rates among the OECD countries. Nevertheless, when it comes to funding in medical science, the 0.7% rate of R&D investment in Israel pales in comparison to the OECD median of 10.2%. This disparity cannot be explained in terms of economics. Key indicators clearly demonstrate that the return on investment in medical research in Israel is highly cost-effective. For example, revenues from drugs developed in Israel exceeded six billion dollars in 2011.

Health policy implications: Given its role as a driving force in the economy, the funding of medical research is a necessity, especially during periods of recession. Israel's visionary founders allocated substantial resources to research during the austerity years following the establishment of the state. We continue to harvest the fruits of these investments. Only through the adequate support of medical research will we be able to provide first-class medical service and spark the kind of innovation that can sustain and accelerate future economic growth. Accordingly, we strongly recommend that medical research will not be a subject to budget cuts. On the contrary, in order to perpetuate its positive contribution to public welfare, innovation and economic growth, its funding should be significantly increased.

REDUCING REHOSPITALIZATION RATES: ONGOING MONITORING AND ITS IMPACT ON INTERVENTIONS CARRIED OUT IN A LARGE ISRAELI HMO

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Background: In 2010, the Ministry of Health offered financial incentives to HMO's to reduce 30-day re-hospitalization rates for patients admitted to Internal Medicine departments. In 2011, Maccabi piloted its first intervention program, monitoring re-admission rates on an ongoing basis.

Study Question: How successful was the initial pilot program and the modifications made in response to ongoing evaluation?

Methods: 30-day readmission rates for patients hospitalized for at least 2 nights in Internal Medicine Units and discharged to the community were calculated from the HMO database on an ongoing basis. At-risk population groups were identified, and the impact of interventions, monitored accordingly.

Results: Variables associated with increased risk of re-hospitalization were: nursing home status, admitting hospital, patients in homecare, patients suffering from a serious illnesses (AIDS, Gaucher, dialysis, thalassemia, malignancy). Patients in the pilot program had a 14% lower readmission rate than a comparable population group (pilot:12% vs comp:14%) in the first 9 months of intervention. However, it became clear that the initial efforts made would be insufficient to achieve an overall 10% reduction (the target set by the Ministry of Health for remuneration). Furthermore, factors unrelated to the intervention also impacted on readmission rates. In response, a number of changes were made to the intervention process. Efforts were made to increase the number of patients referred to each unit and to reduce the number of referrals not meeting Ministry of Health criteria. Patients previously considered ineligible (nursing home and homecare patients) were included, with special outreach programs developed for these sub-population groups. Intervention units were opened in all regions.

Conclusions: The pilot intervention was successful in reducing readmission rates, but insufficient in scope and impact to reduce overall HMO rates on a national level.

Health policy implications: Constant monitoring and feedback are required to refine interventions and maximize their potential.

EVIDENCE-BASED POLICY? THE WEIGHT OF SCIENTIFIC EVIDENCE ON ISRAELI TOBACCO-CONTROL POLICY

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Background: Increasing attention focuses on grounding health policy decisions in scientific evidence. However, health policy is produced and shaped by numerous actors, with differing orientations towards reliance on empirical evidence.

Study Question: How do various kinds of makers and shapers of Israeli tobacco-control policy use scientific evidence in their work?

Methods: This study is part of a wider study of actors and influences on Israeli tobacco-control policy. Data were collected via qualitative, semi-structured interviews with those involved in formulating, enacting, and enforcing Israeli tobacco-control policies. The sample (n=24) included key players in three major realms: *Knesset* [Parliament]; government ministries (especially Health and Finance); and the "third sector" [*migzar ha'shlishi*] activists and members of non-governmental organizations [NGOs]. The sample also included health policy researchers and a journalist. Interviews were conducted with a new, 18-item interview guide, and were audio-taped and transcribed.

Results: Our preliminary conclusions indicate three major patterns in how evidence influences policy formation. Professionals, such as those in government ministries, did mention evidence-based policy, but seldom spontaneously. Evidence was often a "distant third" factor behind, first, what was currently "hot" or "trendy" and, second, budgetary issues. Amongst *Knesset* actors, trendiness of an issue was mentioned first, and the amount of lobbyist or public pressure second. Amongst those in the "third sector", most were already committed personally to a certain policy. Neither they nor the Knesset figures tended to mention tended scientific evidence at all, beyond its helping strengthen a case they'd already decided to make - rather than its being a direct influence on their own decisions.

Conclusions: Scientific evidence does not seem a major direct influence on Israeli tobacco-control policy, particularly outside the professional sector.

Health policy implications: Means of grounding policy development more firmly in evidence are worth exploring.

THE CONTRIBUTIONOF OF THE ISRAELI HEALTH CARE SYSTEMTOTHE SURVIVAL OF MOTOR VEHICLE CRASH VICTIMS

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Background: In Israel, mortality from traffic crashes decreased from 636 in 1998 to 346 in 2009. Professionals attribute this decrease to enforcement, infrastructure and behavioral changes, while little credit is given to the trauma system. Research confirms that trauma systems improve injury outcomes and reduce mortality among trauma casualties. In the 1990's, a national trauma system (pre-hospital and hospital) was implemented in Israel, aiming to reduce trauma related disability and mortality.

Objective: To evaluate the contribution of the Israeli Health System, specifically the trauma system, on the reduction in mortality among traffic casualties and to estimate the survival.

Methods: A retrospective study, based on the National Trauma Registry, 1998-2008.

Results: During the study period, the Trauma Registry included 202,780 hospitalized trauma patients, of which 25.6% were traffic related. Amongst severe and critical (s&c) traffic casualties (ISS 16+), mortality decreased by 48%. Casualties diagnosed with traumatic brain injury (TBI) decreased by 36.8%. Mortality among severe torso and brain injuries (AIS>3) decreased from 47.5% in 1998 to 39.5% in 2008. The regression analysis demonstrated that the risk of mortality is greater among males, pedestrians, elderly (75+), and TBI and torso injuries. A simulation, presuming that mortality rates among s&c traffic casualties remained constant at 21.05% (based on 1998 mortality rates), demonstrated that without improvements in the trauma system, 202 traffic casualties would have died in 2008 compared to the actual 98 deaths – a 53% difference. Theoretically, 107 lives were saved!

Conclusions: Without advances in the trauma system, mortality rates would be considerably greater. While the trauma system significantly contributes to reducing mortality, it isn't appropriately accredited for its proportion in the fight against traffic related disability and mortality.

Health Policy Implications: While the trauma system doesn't receive appropriate funding and resources, it has succeeded in reducing mortality. Redistributing health funding could have a significant impact on trauma related mortality and disability. Additional pre-hospital staff and vehicles, improved trauma units and training are examples where health policy could potentially reduce trauma mortality at even greater proportions.

IMPROVING IMPROVEMENT IN HEALTH CARE

Mark R. Chassin

The Joint Commission, USA.

Demands are increasing for health care systems around the world to demonstrate higher levels of safety and quality. Many stakeholders are joining in this chorus, including governments, businesses, and patients. Health care has made great strides in the past decade toward improving quality of care. But major problems remain. Safety processes do not perform nearly as well as they should. From the seemingly simple (e.g., hand hygiene) to the more complex (e.g., the many steps in medication administration), errors abound and lead to preventable patient harm on a regular basis. Many of these quality problems also burden health systems with avoidable costs.

To make much greater progress will require applying lessons from outside health care, from industries that have exemplary safety records. Such industries, known as high reliability organizations, include commercial aviation, nuclear power, and amusement parks. Learning from the experience of these organizations has vital implications for leadership, organizational culture, and process improvement in health care.

The Joint Commission is leading the effort to develop specific roadmaps for healthcare organizations to become highly reliable. Dr. Chassin will discuss what steps hospitals and health systems should take to make the most rapid progress toward consistent excellence in health care quality. He will describe how effectively the newest process improvement tools and methods from industry (lean, six sigma and change management) address the most resistant quality and safety problems, while also promoting efficiency. He will also review the latest findings from the Joint Commission's Center for Transforming Healthcare, which, together with its partner hospitals and health systems, has employed these tools to begin to demonstrate that high reliability healthcare is within reach.

CARING FOR OLDER PERSONS WITH MULTIPLE CHRONIC CONDITIONS

Charles Boult

Johns Hopkins University, USA.

After a brief outline of the current deficiencies of chronic care, this talk will focus on innovative alternatives, emphasizing the Guided Care model's features and outcomes. Also included will be a description of technical assistance that is available to organizations wishing to adopt this model.

PUBLIC HOSPITAL GOVERNANCE IN EUROPE: REVIEWING INNOVATIVE STRATEGIES

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Background: Governance of publicly-operated hospitals involves steering the totality of their institutional activity, influencing most aspects of organizational behaviour and recognizing complex relationships between stakeholders. The European Observatory on Health Systems and Policies published in 2011 a book on Hospital Governance, with cases on Czech Republic, England, Estonia, Israel, Netherlands, Norway, Portugal and Spain. Changes were found in the way hospitals are run, away from command and control but also from private market segmentation.

Study Question: Have recent years' financial turbulences refuted the notion that innovative (semi) autonomy, new financial and accountability arrangements and adequate decision-making capacity are necessary in public hospitals governance?

Methods: A situation review, consulting study authors, with emphasis on the case studies of Czech Republic, Netherlands, Norway and Spain.

Results: Mergers and organizational re-structuring, such as those at Helsinki and Uusimaa University Hospital, Stockholm Huddinge University Hospital and Karolinska Hospital and Sheffield Teaching Hospital) all confirm that institutional arrangements will continue undergoing changes. As autonomization in public hospitals has blurred the boundaries between public and private sectors, two main effects have emerged: first, political actors have shown an inclination to slip back towards greater control (the impetus always ran deep, but tight budgets, fiscal crises and limited funding capacity now provide another justification). Second, debates are not always run in a transparent manner, and one-sided pictures are more frequent than usual.

Conclusions: Variation between and within countries provides a laboratory to assess the benefits of hospital governance models. Pragmatism in search for efficiency is needed. Efforts to restructure governance towards a "public firm" or other more autonomous arrangement should not reduce hospitals' institutional ability to respond appropriately to their changing environment.

Health Policy Implications: Hospital governance needs to be discussed in a climate of transparency, with robust information on the tools used (including regulation) and on the results obtained.

TACKLING THE FINANCIAL AND ORGANIZATIONAL CHALLENGES OF AN AGING MULTI-MORBID POPULATION: THE NATIONAL PERSPECTIVE

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Background: The recent decades have seen a marked change in morbidity patterns in the developed world. The 'epidemiological transition' from infectious to chronic illness was the hallmark of the last century, is now further evolving towards an era of multi-morbidity, in which the coexistence of multiple chronic diseases – at an increasingly younger ages – has become the norm among adults. Coexistance of multiple chronic diseases has detrimental synergistic effects on the individual, family, care providers and the healthcare system.

Study Question: In times of unmet shortages in funding and personnel availability that are expected to worsen further before they get any better, this strain has the potential to unbalance the system if current trends will ensue.

What are the key components of the paradigms shift required for the Israeli health system as it prepare to do more (care) with less (resources) for a prolonged period of increasing needs.

Methods: Through examples of challenges that were successfully met in Israel's health system, and others that yet remain unmet, we discuss potential systematic changes that can drive health systems towards successful adaptation to the challenges ahead.

Results: The Israeli healthcare system has unique attributes that have allowed it to cope relatively well with the changes to date. Universal health insurance coverage, increased emphasis of strong accessible primary care services, selective early adoption of new technologies and long-term scope of membership with a single provider are an excellent starting point. Yet further steps are still pending in care coordination, equity, patient engagement and predictive proactive care.

Conclusions: Israel has been a pioneer in some systematic aspects of advanced care for chronic illness, and has derived important lessons from these efforts.

Health Policy Implications: Decision makers must align planning efforts and incentives to promote a needed paradigm and practice shift.

HOW HEALTH REFORM EFFORTS IN THE U.S. HISTORICALLY HAVE DEALT WITH CHILDREN AND ADULTS WITH DISABILITIES

Sara Rosenbaum

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The U.S. is a nation that historically has experienced extraordinary challenges in building the concept of risk solidarity into health reform. For this reason, addressing the health care needs of persons with disabilities has faced an arduous uphill climb, with most of the gains concentrated in Medicaid, a program whose fundamental mission focuses on coverage for populations whose impoverishment and/or health status place them outside market and political norms.

In certain respects the Affordable Care Act represents a seminal breakthrough as a result of its reforms aimed at ensuring access to coverage among persons with disabilities, including guaranteed issue and renewal, the use of community rating, and a bar against pricing discrimination and pre-existing condition exclusions. Yet in retaining its dependence for coverage on a highly segmented, voluntary, and limited-benefit-design commercial insurance market, the Act continues to rely heavily on Medicaid for assistance to persons with disabilities, even as it paradoxically creates incentives for states to reduce Medicaid disability coverage in favor of private insurance products sold through Exchanges. How these trends affect health care for persons with disabilities represents an issue that merits close scrutiny in the coming years, as Exchange implementation proceeds slowly and as Medicaid itself continues to be a focus of broader, ongoing re-design efforts.

COMMUNITY HEALTH WORKERS AND CHRONIC DISEASE PREVENTION AND CONTROL: EFFECTIVE AS WELL AS LESS COSTLY?

Ephraim Shapiro, Irit Elroy

Myers-JDC-Brookdale Institute Smokler Center for Health Policy Research, Israel.

Background: Health care costs are a continuing problem globally, with chronic disease being a primary reason. At a time of austerity when health system resources are often limited, we should go beyond existing efforts targeting the health care system to find innovative and low-cost solutions, such as identifying underutilized resources, especially human capital. The Community Health Worker (CHW) model is an example of such an effort. **CHWs are typically non-clinicians, who have a shared culture with those they serve** to prevent and control disease**.** They can both supplement and complement clinicians and reduce costs through decreased health care system utilization, through prevention as well as lower expenses. However, while CHWs are increasingly utilized, current research on their effectiveness and costs has been inadequate.

Presentation Questions: 1) Are CHWs effective in chronic disease programs for vulnerable populations 2) Can the CHW model be useful globally in addressing health disparities in chronic disease while minimizing costs?

Methods: This study reviews existing research and presents case studies drawn from quantitative and qualitative research performed by the authors in the U.S. and Israel. Data was collected through surveys and intensive interviews and a literature review performed.

Results: The programs studied address chronic disease prevention and control for vulnerable populations in NYC and in Israel. CHWs are associated with improved chronic disease related outcomes; subgroup variations exist. Two CHW models used will be contrasted. CHW cost structures and potential for improved cost-effectiveness will be discussed.

Conclusions: Community health workers can improve health outcomes, especially among vulnerable populations, thus reducing health disparities in a potentially cost-effective manner. Further research in this area is needed, however.

Health policy implications: Opportunities exist to implement CHW-focused programs on a more widespread basis to improve population health while also reducing costs. Initiatives should be tailored to contextual factors.

HIGH-RISK CASE IDENTIFICATION FOR COMPREHENSIVE COMPLEX CARE MANAGEMENT

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Background: Targeting patients for multimorbidity care interventions is complicated because there are no clear guidelines for selecting patients for inclusion in these programs. Data driven tools are increasingly used for identifying patients for participation, yet, whether these tools identify the "right" patients for inclusion is still debated.

Study Question: We aimed to establish a systematic patient identification process, building on validated computerized prediction tools and clinical input, to achieve both "impactability" and high predictive accuracy for targeted care management.

Methods: A mixed methods design was used in a general adult population from Clalit Health Services. Patient data from 2010-2011 were collected to derive patient risk scores using the Adjusted Clinical Groups (ACG)® predictive model algorithms. Physicians were surveyed to elicit clinical considerations for high-risk patient identification. Population characteristics were compared between high-risk and all other patients. Predictive power was assessed through Positive Predictive Value (PPV) and c-statistic analysis.

Results: The high risk group included 5,341 patients (mean 50 patients per physician). The c-statistic was 0.753, and the PPV for the 6% highest risk patients was 40%. Study inclusion criteria incorporated into the systematic model selection process were refined based on clinical input from six physicians completing the survey for 375 of their patients. Percent agreement between physicians' and the ACG predictive model classification was 62%. Identified high-risk patients' age, number of chronic conditions and utilization were substantially higher than that of all other patients.

Conclusions: Our study shows that applying criteria, intended to increase "impactibility," to a "generic" high-risk patient identification model, is a feasible and accurate selection approach.

Health Policy Implications: A critical success factor for care management programs is the patient population that participates; integrating clinical and predictive accuracy considerations into a systematic patient selection process can help to ensure that appropriate patients participate.

IMPROVING ACCESS TO CARDIAC REHABILITATION POST MI: CHALLENGES AND ENCOURAGING RESULTS

Abla Adawi, Adel Ektelat, Abed Darawsha, Yuri Rivkin, Fany Harush, Sigal Kashi, Habib Kardahji, Yifat Lavi, Ran Balicer, Bruria Rikon, Yoel Oppenhaimer, Rachel Chituv, Hanneke Rotman

CHS Northern District - Community health services division, Nazareth, Israel; CHS Research center - Chief physician office, Tel Aviv, Israel.

Background: *Adherence to Cardiac Rehabilitation (CR) program for post Mi patients is known to improve health outcomes and reduce re-admission.* In literature, outcomes of center based CR and community based CR are similar. *Factors that influence* participation and adherence: *Initiated referral by hospital or community team, distance & transportation, gender,* nurse-led coordination of care in community, distribution of pamphlets. Only 6% of post MI patients North District Israel participated in a CR program in 2010. Seeing this troubling figure, a multi professional team was set up.
Study Question: Evaluating the effect on participation, by improving access to a community CR program in 3 existing community clinics.
Methods: Post MI patients were referred to the community CR nurse, at discharge from ICU. Initiating contact within 48 hours from discharge, the patient received a professional CR nursing contact and a cardiologist check up within two weeks. Follow up included 4 multi professional guided sessions & 3 calls within 6 months. Consultation with physical therapists and nutritionist was provided according to needs. Participation rates were measured.
Results: A total of 154 patients participated in the CR community program from February to November 2012, raising participation rate to 22%.
Conclusions: Improving access by providing a CR team twice a week, in an existing community clinic seem to have promising results. Post MI patients received immediate and guided support close to home after being discharged from hospital.
Health policy implications: Easier access to CR improves participation and adherence. This will improve health outcomes, quality of life, decrease re-admission and increase patient satisfaction from healthcare services.

WIRELESS MEDICAL DEVICES HAVE THE POTENTIAL TO SAVE LIVES AND SAVE COST

Jonathan C. Javitt

Telcare Inc, USA.

The key challenge facing all Western health care systems is management of chronic illnesses that consumes 70% of healthcare spending. While better patient adherence to therapy is universally recognized as key to better outcomes and lower cost, traditional medical approaches have proven inadequate to the task. The author will discuss the new era of wireless medical devices that are being deployed in order to connect patients to their caregivers in real time.

BUSINESS INTELLIGENCE SYSTEM FOR ONLINE MANAGING OF HOSPITAL OVER-OCCUPANCY

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Background: Israel's medical system is regulated by the Ministries of Finance and of Health with an extremely tight budget. During many years the health expenditure has been < 8% of the gross domestic product (GDP) resulting in severe hospital bed shortage. Rambam Health Care Campus (RHCC) is a 1,000-bed academic hospital and tertiary referral center serving over 2 million people in Northern Israel. RHCC has an average occupancy of >100%, often exceeding 120% in internal medicine departments and critical care units. Such hospital over-occupancy blocks patient's flow, increases the length of stay (LOS) in the emergency department (ED) and deteriorates patient's service and satisfaction.

Study Question: The RHCC sought a solution to this problem via an online tool for allocating beds and services.

Methods: A new on-line module was added to the hospital Business Intelligence (BI) System. The on-line BI refreshes every 2 minutes and provides graphic display, on a PC or mobile device, of critical resources required to the decision makers in the hospital. The parameters displayed are vacant hospital beds by department, the number of pts in the ED by their main diagnosis and the LOS. The BI system enables drilling down to the medical record of each patient including display of consultations, imaging studies and lab tests results.

Results: Objective parameters indicate that the on-line BI module successfully helped the decision makers to manage hospital over-occupancy.

Conclusions & implications: Our experience with the BI on-line has proven it to be an innovative technology that effectively assists hospital decision makers to manage over-occupancy. The information provided by the system enables improved decision-making regarding allocation of beds and resources leading to improved quality of care.

"POLICY BASED DEMOGRAPHY, MORBIDITY AND GEOGRAPHY"- A PROPOSAL FOR MAPPING SYSTEM (GIS) AS A PLANNING TOOL AND DECISION SUPPORT. CLALIT HEALTH SERVICES EXPERIENCE

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Background: GIS (Geographic Information System) is a system of mapping and geographic information. The geographical approach allows presentation of integrated information on a map, highlighting the spatial dimension analysis. Number of studies, have shown that the spatial figure itself and in integration with other data, can provide a deeper and wider look, in the context of environmental influences, trends and expansion phenomena.

Experience gained in Clalit Health Services indicates that the spatial observation has an added unique value in health services system – supply, organization and consumption.

Study question and methods: This work will present a number of samples of using the GIS as a decision supporting tool for health services distribution, services supply and demands. The additional information obtained by mapping, and its impact on decision making will be demonstrated and examined.

Results: We will present maps illustrating the usage patterns of GIS in the following areas:

1. Medical content fields: GIS and morbidity, GIS and medications consumption, GIS and quality measures.
2. Services distribution: primary, secondary, hospitals.
3. Supply – physician hours per person.
4. Relationship between supply of specific medical services and demands.

Conclusions and Health Policy Implications: The geographic mapping system is a powerful decision support for the deployment aspects and availability of services. Clalit Health Services experience indicates that spatial investigation adds significant information and highlights phenomena like lack or excessive tendency to use services in a specific location.

Incorporation of spatial information into decision making processes should be encouraged.

INSTITUTIONAL CONSIDERATIONS: THE MISSING LINK IN MAXIMIZING PAYOFF FROM HEALTH INFORMATION EXCHANGE, A COMPARATIVE ANALYSIS OF THE US AND ISRAEL

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Background: Healthcare Information Technology (IT) investments are growing, with new investment running the gamut from infrastructure (Electronic Health Records in hospital and community settings), all the way to sophisticated clinical decision support systems, image analysis, and predictive analytics. Institutional barriers that limit data flow, reduce the payoff from health IT. Still more investment, in the shape of Health Information Exchanges (HIEs), seeks to overcome barriers and improve payoff from health IT. The issue of how institutional relationships shape data flow between players has been insufficiently addressed in the literature.

Study Question: The study attempts to understand the evolution of health information data flows between institutions in both Israel and the US.

Methods: The study is based on a review of HIE evolution in Israel and the US. In Israel, the review focuses on how institutional relationships shape community-hospital data flow. In the US, the review explores how policy changes affect institutional landscapes, and how those institutional changes affect, in turn, the development and viability of HIEs. Institutional analysis is applied to explain the results and draw implications for health policy.

Results: The evolution of H can be traced directly to institutional structures in each country. In Israel, institutions that contributed to success in HIE also act to limit additional gains. In the US, policy changes trigger adaptation in institutional structures which, in turn, affect data exchange between providers.

Conclusions: Single-minded focus on technical and logistical miss important market structure, legal and cultural contingencies necessary for reaching the payoff promised by health IT. Incentives and regulation can help shape institutional boundaries and alliances in a way that maximizes the payoff in health IT investments.

Health policy implications: Public or private funds directed to improving outcomes or reducing costs through health IT need to address data flow between institutional boundaries.

TOWARDS AN eHEALTH POLICY: A DESCRIPTIVE AND ANALYTICAL STUDY OF THE UTILIZATION OF INFORMATION & COMMUNICATION TECHNOLOGY (ICT) IN THE ISRAELI COMMUNITY HEALTHCARE DELIVERY SYSTEM

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Background: The Israeli healthcare sector has benefited from the Internet and mobile phones, offering a more efficient way to reach the patient and to manage the system. At the same time that costs can be reduced. In addition, the Ministry of Health, aware of these potential benefits has been working to develop national projects to integrate information. How these trends are unfolding requires further investigation.

Study Question: The study will try to find if the implementation of ICT has led to changes such as patient empowerment, how doctors and managers perceive the change, and other related questions. Additionally, the study is aimed at better comprehending the role of the national policy and to explore options for building a national strategy regarding ICT in healthcare.

Methods: In-depth interviews with the Ministry of Health, the private sector, hospitals and research institutes. The sample was built using a snow-ball methodology and secondary sources were used for triangulation.

Results: Increased deployment of ICT has increased patient empowerment. From the doctor´s perspective, although ICT have provided more information, changes of these magnitudes were not easy in the beginning and good leadership was the key for success. At the national level, not all the respondents agreed on the necessity of a national strategy, however it seems that the role of the government is becoming more important.

Conclusions: ICT tools were successfully implemented and the general perception is that has been beneficial. Following implementation in the field, government has become more involved and initiated future national projects. It will be important to monitor how the different initiatives in ICT become integrated.

Health policy implications: The work provides information in order to understand and improve ICT services. Additionally, the results suggest alternatives for future investments in these technologies and provide input regarding national policies in the area.

PUSHING USEFUL SCIENCE TO HEALTH SYSTEM MANAGERS AND POLICYMAKERS

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Background: Health system managers and policymakers need timely access to high quality, policy relevant systematic reviews that are retrievable using policymaker friendly terminology and written in ways that highlight what they need to know to make decisions about health systems.

Study Question: Our objectives were to obtain health system managers' and policymakers' views about different approaches for developing user-friendly summaries of systematic reviews.

Methods: We conducted semi-structured interviews with managers and policymakers in federal and provincial governments and regional health authorities across Canada to obtain feedback on three examples of summaries. During the interviews we asked which of the approaches they found helpful and ideas for improving upon current efforts.

Results: Our interviews (n=18) identified that majority of the respondents preferred summaries that were presented in a clear, concise, and helpful way, even if the summary was long. Many respondents stated that they: i) preferred key messages and findings up front, ii) would like details regarding background, methods, and applicability, iii) appreciate quality ratings, and iv) prefer bullets and tables to paragraphs.

Conclusions: Health system managers and policymakers recognized the importance of using evidence to inform decision making and appreciated the efforts of summarizing systematic reviews user-friendly formats. They want to have access to informed summaries that provide both the high level conclusions but also provide some of the substantive background so they are aware of how the conclusions were attained.

Health Policy Implications: This research addresses how information should be packaged and transmitted to health system managers and policymakers. The findings will assist the scientific community by outlining strategies for

producing summaries of reviews that will be more easily accessed (and hopefully then used) by health system managers and policymakers to inform decision-making. The findings will help close the knowledge to policy gap

TURNOVER AND JOB SATISFACTION AMONG PARAMEDICS IN ISRAEL

Oren Wacht[1,2], Keren Dopelt[1], Dagan Schwartz[2], Avishay Goldberg[1,2], Limor Aharonson-Daniel[2], Nadav Davidovitch[1]

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Background: The Paramedic is a relatively new health care profession in the field of medicine. The profession was introduced in Israel in 1979 by the national EMS system. Globally, the profession suffers from a relatively high turnover rate among other medical professions. The purpose of this study was to measure job satisfaction, intent to leave, and turnover rates among paramedics in Israel.

Study Question:

1. What is the current turnover rate among paramedics in Israel
2. Is there a high intent to leave the profession
3. Do active paramedics have a high level of job satisfaction

Methods: An online survey for qualified paramedics. The survey collected demographic information, as well as measures of job satisfaction and intent to leave the profession.

Results: A total of 528 paramedics participated in the study (35% of the population). About half were still working as active paramedics, 46% of them indicated that they might leave the profession in the near future. In three years 50% left the profession. Although paramedics indicated a high level of job satisfaction, they indicated that they are underpaid, and don't have enough promotion possibilities. Additionally, 74% felt that a lack of legislation negatively affects their professional status, and 93% emphasized that they are in a need of a professional association. Only 60% would choose again to become paramedics.

Conclusion: The Israeli paramedic has the highest documented turnover rates in the world. These rates are significantly higher than those of physicians, nurses or physiotherapists. The high turnover is derived partly from the inherit qualities of the paramedic profession and partly from reasons unique to Israel. The high turnover rates have significant implications on the EMS system, the paramedic profession and the health system as a whole.

A SOLUTION TO THE PHYSICIAN SHORTAGE IN ISRAEL: INTEGRATION OF IMMIGRATING MID-LEVEL MEDICAL PROVIDERS

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Background: Israel is reporting a physician shortage, especially in key areas such as primary care, anesthesiology, and gerontology; predicted to become a crisis over the next ten years. Currently policy has been implemented to increase physicians in Israel through increased medical student enrollment. The Israel Ministry of Health has also expedited licensure for "physicians abroad" to attract more immigrating physicians. To close the gap in physician shortages, other countries have also integrated Mid-level Providers (MLP's) such as Nurse Practitioners, Nurse Anesthetists and Physician Assistants into current systems. Evidence-based international research over decades has reported that MLP's provide safe, economic, quality medical care with both patients and physicians reporting high satisfaction scores internationally.

Study Question: Following internationally established processes of integration, how can immigrant accredited MLP's be integrated into the Israeli health care system?

Methods: Cross-sectional survey of 10 countries who have integrated MLPs into practice, and comparison of MLP "scope of practice". Descriptive analysis of credentialing process for immigrant MLPs into those countries.

Results: MLPs are utilized in many countries. Nurse Practitioners: 23 countries; Nurse Anesthetists 100 countries, Physician Assistants: 6 countries. Scope of Practice in each respective country is similar: many essential independent functions that are considered exclusively physician "scope of practice". Credentialing process for MLP's varies from country to country.

Health Policy Implications: The results of successful collaborative implementation are expected to not only assuage the Israeli physician shortage in specific fields, but will contribute towards the training of other MLP professionals through education programs, role modeling, and clinical training. This will lead to a greater pool of medical providers in Israel, essentially restructuring and modernizing healthcare policy in Israel.

PHYSICIAN HOSPITAL STAFFING MODEL

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Background: In the Israeli public medicine there is a significant lack of doctors' positions and patient ward beds. In 2005, the Israel Medical Association (IMA) hired Ergo to develop a model for hospital physician staffing standard that will allow doctors to provide adequate medical services. The existing norm is from 1976, revised in 1983 and in 1997. In 2010, IMA applied the model on 16 professional medical associations producing the required number of doctors for most of the hospital wards in Israel.

Method: The 16 disciplines are associated with the following organizational clusters: hospitalization with or without surgery, institutes and others, such as anesthesia and oncology. For each discipline a steering committee of experts was established. In the main work areas, the doctors' work was measured, and data were collected (patient flow, hospitalization length, waiting duration, and more). The project provided the number of positions needed to meet patient flow. Staffing requirements related to current work processes and those relating to desired situation (best practice) were presented.

Results: 1. There is no correlation between the staffing today and the existing norm. 2. There is a considerable shortage of doctors in certain disciplines, which brings waiting time often stretch considerably. 3. In many disciplines the ratio between retiring physicians and graduating interns will be negative in the coming years, before considering population increase. 4. Due to high occupancy in the wards patients are discharged too early, without proper examination and completed treatment leading to repeated hospitalization.

Conclusion: 1. Staffing requirements must be developed in cooperation with the Ministries of Health, Treasury, employers, and medical associations. 2. There is a need to increase number of students in medical schools and number of residents and staff positions in most disciplines. 3. The structure of shifts in hospitals needs to be changed.

UNDERSTANDING HOW TO COPE WITH VIOLENCE IN THE HOSPITAL SETTING DURING AND ERA OF AUSTERITY

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Background: According to the WHO, violence against the medical staff can lead to a diminution in quality of care given to perpetrators of violence. During times of austerity, when providers will face added pressures to contain costs and raise levels of care, the issue of violence may be exacerbated.

Objectives: To study the relation between the ability of health providers to handle situations with potential for violence and the actual occurrence of violence and the impact of the latter on quality of care.

Methodology: An empirical study carried out in a large general hospital in Israel, including 705 questionnaires filled out by doctors and nurses, nine in depth interviews with perpetrators, nine in depth interviews with victims, and four focus groups with hospital staff. Methods of analysis included bi-variate and multi-variate regression for the quantitative data, and text based derivation of categories and analysis of their relations for the qualitative data.

Findings: The data from 705 questionnaires (93% response rate) indicate that about half of the perceived reasons for violent episodes are due to lack of satisfaction of patients / families with the interpersonal treatment given by physicians. The findings indicate high frequency of poor communications and inappropriate preparations and preparation of patients. The focus groups revealed that providers face difficulties in adequately responding to patients' social and psychological needs. Additional analysis reveals a clear correlation between the provider's perception of his ability to avoid violent encounters and avoidance of a reduction in quality of care, whereas the less the provider feels able to cope with situations of violence, the greater the negative impact on quality of care.

Conclusions: There is a clear connection between the occurrence of a violent episode and the quality of care received by the patient/perpetrator – a violent episode leads to a diminution in quality of care. The greater the self perceived ability of providers to prevent and handle episodes of violence, the less negative impact on quality of care. These findings are of key importance for hospital leaders, managers and policy makers who are seeking to improve quality of care and service levels at the same time that hospital budgets are likely to be squeezed.

CONSIDERING HOSPITALS' CONGESTION IN REGULATION OF CASUALTIES DURING TIMES OF AUSTERITY

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Background: Recent disasters such as Hurricane Sandy or the Japanese earthquake, tsunami and radiological spill presented that even strong societies may need at times to function under 'austerity mode' due to collapse of infrastructure.

Study Question: To develop a tool for comparative measurement of hospitals' emergency congestion levels, to facilitate decision-making regarding casualty evacuation.

Methods: A hospitals' 'load index model' taking into account casualty treatment sites, surge capacity, bottlenecks and their impact, was developed and validated through a Delphi process. The model was tested in a series of simulation exercises, as well as during the conflict between Gaza and Israel in November 2012.

Results: 55 out of 100 content experts responded to the Delphi process. Consensus was achieved regarding: Operating Rooms (OR) occupancy in proportion to OR surge capacity; admittance of severe/moderate casualties in trauma departments in proportion to number of physicians; severe/moderate patients in surgical departments in proportion to number of physicians in the surgical division; admittance of severe/moderate casualties in trauma departments in proportion to intensive care beds; and number of severe/moderate patients hospitalized in the surgical division in proportion to intensive care physicians. Variance in expert teams' decisions regarding casualty evacuation decreased significantly following utilization of the 'load index model'. The model was found to be of contribution to policy-making concerning casualty evacuation during the 2012 conflict.

Conclusions: The developed 'load index model' is useful in defining casualty evacuation destinations. Additional tests should be conducted in order to verify sensitivity and efficiency of the model and its implementation.

Health Policy Implications: In order to facilitate casualty evacuation processes in times of austerity, for example during emergencies, decision-support tools are needed. The 'load index model' can contribute to policy-makers through optimal use of vital resources during times of scarcity.

IS ACCESSIBILITY TO PUBLIC SERVICES DAMAGED IN HOSPITALS WITH PRIVATE SERVICES? THE JERUSALEM EXPERIENCE

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Background: Two large hospitals in Jerusalem provide private ("sharap") in parallel to public services. Proposals to extend the model to other hospitals fuel controversy in part because of paucity of information about impacts on public services.

Study Questions: What are waiting times for appointments in public vs. private outpatient clinics and what are the perceptions of family physicians (FP) about accessibility to public services in Jerusalem hospitals?

Methods: Medical students, as secret shoppers, called hospital appointment centers requesting earliest slots in public and private hospital clinics. In addition, we conducted a web-based survey of FP on perceived accessibility.

Results: Respective times to public and private appointments averaged 55 days (range 3-244) and 7 (range 0-38) - differences culminating at 6-8 months for some specialties. Most FP reported reasonable waiting times to public appointments *for only a minority* of their patients. Many felt accessibility to public services had deteriorated in the last decade at both hospitals. Nearly half said they were usually unable to reach a hospital physician for consult. When able, most reported suggestions to refer the patient to private service and 80% described self-referral to further private procedures after initial consult. Cancellations regularly occurred more often in public appointments. To shorten wait times, 80% of FP admitted referring patients to private services, 70% use personal contacts or other hospitals, 50% refer patients to emergency rooms while 30% feel helpless. Significant differences were observed between the two hospitals suggesting modification by local culture. Most FP felt large public vs. private wait gaps should be averted and constitute illegal discrimination.

Conclusions: Accessibility to public services appears to have been damaged in hospitals with private services in Jerusalem.

Health policy implications: In-hospital private services tend to take over public services because of financial incentives. Access equity requires better regulation of this model.

FAMILY PHYSICIANS FACILITATED DELEGATION OF POWER OF ATTORNEY: MISSED OPPORTUNITIES FOR END OF LIFE COST CONTAINMENT

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Background: Towards the end of life there is increased consumption of heath resources. In many circumstances medical and nursing service are provided to elderly and morbid patients with limited communication capabilites due to system inertia and default "pro-life" inclination; futile, unnecessary, unwanted and harmful services result. Family physicians (FP) are in a position to facilitate provisional power of attorney delegation, thereby enabling humane end-of-life care.

Study Questions: What are the involvement and willingness of family physicians to facilitate power-of-attorney delegation to their patients?

Methods: A cross sectional telephone and internet survey of family physicians with a standardized question.

Results: a total of 177 FPs participated in the survey. Of these, 147 (83%) had patients in their end of life; 112 (63%) new of the option to appoint such a function. A quarter discussed this matter with their patients, and 27 eventually did independently do so. FP who discussed this matter with their patients were less likely to fear that the topic would lead to patient depression or some other organic limitation (2% to 15%; p=0.016) and less likely to fear family dispute. These FP also felt more capable to discuss this matter with some patient. There were similar rates of FP perception of patient dislike of the topic, inability to grasp the questions and a sense that scientific knowledge will further evolve, beyond the set date. No other differences were documented between the study topics.

C**onclusions:** some FP have identified the need for power-of-attorney delegation. Many claim that they lack the necessary training.

Health policy implications: Preventive patient empowering through delegation of power-of-attorney is not sufficiently utilized and could serve for curtailing resource abuse during end-of-life care.

THE PATIENT SATISFACTION CHASM: FRONTLINE CLINICIANS' ATTITUDES TOWARDS HOSPITAL MANAGEMENT STRATEGIES AND ACTIVITIES FOR IMPROVING PATIENT SATISFACTION DURING HOSPITALIZATION

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Background: Achieving high levels of patient satisfaction requires hospital management to be proactive in patient-centered care improvement initiatives and to engage frontline clinicians in this process.

Study Question: The study aim to examine clinician attitudes towards hospital management activities with respect to improving patient satisfaction and their engagement in this process.

Method: We surveyed clinicians in four academic hospitals located in Israel, Denmark, the UK and the USA.

Results: We collected 1004 questionnaires (79.9% response rate) from four hospitals in four countries on three continents. Overall, 90.4% of clinicians believed that improving patient satisfaction during hospitalization was achievable, but only 9.2% of clinicians thought their department had a structured plan to do so, with significant differences between the countries ($p<0.0001$). Among responders, only 38% remembered targeted actions to improve patient satisfaction and just 34% stated having received feedback from hospital management regarding patient satisfaction status in their department during the past year. In multivariate analyses, clinicians who received feedback from hospital management and remembered targeted actions to improve patient satisfaction were more likely to state that their department had a structured plan to improve patient satisfaction.

Conclusions: This portrait of clinicians' attitudes highlights a chasm between hospital management and frontline clinicians with respect to improving patient satisfaction. It appears that while hospital management asserts that patient-centered care is important and invests in patient satisfaction and patient experience surveys, our findings suggest that the majority do not have a structured plan for promoting improvement of patient satisfaction and engaging clinicians in the process.

Health Policy Implication: Healthcare organizations should develop approaches to engage frontline clinicians in the patient satisfaction improvement

process and ensure they get routine feedback about satisfaction. Furthermore, we believe that healthcare organizations should take a more active role in developing and implementing patient satisfaction improvement programs during hospitalization.

ENGAGING PATIENTS TO IMPROVE DEPRESSION CARE QUALITY IN DIVERSE PRIMARY CARE SETTINGS: RCT OF COMPUTER-BASED TARGETED AND TAILORED MESSAGING

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Background: Depression is an important, costly, and undertreated problem worldwide. Encouraging patients to disclose depressive symptoms and accept treatment holds promise for improving initial depression care quality in primary care (PC) settings, where the majority of depressed patients are seen.
Study Question: Do targeted or tailored computer-based patient education programs: 1) increase the likelihood that PC patients with significant depressive symptoms will ask for information about depression; 2) increase the likelihood that they will receive "Components of Initial Depression Care" (CIDC) - antidepressant medication, a mental health referral, or both; and 3) improve depression symptoms and health-related quality of life?
Methods: We created two computer-based patient education programs to encourage patients to speak with their primary care physicians about depressive symptoms: 1) a 3-minute, targeted Public Service Announcement (PSA) and 2) a 5-15 minute, tailored, Interactive Multimedia Computer Program (IMCP). 559 patients with significant depressive symptoms (Patient Health Questionnaire [PHQ] scores >=5) seen in diverse health care settings in 2 US cities were approached prior to a routine office visit and randomized to the PSA, the IMCP, or a control video on sleep hygiene. Patients were contacted by phone to assess outcomes at 12-weeks.
Results: Compared to control, those assigned to the PSA or IMCP were more likely to ask for depression-related information (adjusted probabilities 11%, 19%, and 20%, respectively; $p<0.05$). IMCP patients were more likely to receive CIDC (adjusted odds ratio 1.8, $p=0.03$). However, there were no differences in depression or health outcomes at 12-weeks ($p>0.05$).
Conclusions and Health Policy Implications: Both the targeted PSA and tailored IMCP successfully encouraged patients to request depression-related information during primary care visits. However, only the IMCP improved care

delivery. The study provides proof of concept that tailored computer-based education can help patients become agents for improving the quality of their own care.

IMPROVING OVERALL HEALTH AND REDUCING COSTS BY INTEGRATING BEHAVIORAL HEALTH INTERVENTION SERVICES INTO PRIMARY CARE

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Background: Primary care professionals are positioned to identify behavioral health issues and provide evidence-based treatment before conditions worsen. Only half of patients with depression are identified, and less than half with a behavioral health diagnosis receive any kind of treatment. Referring patients to specialists is challenging. In the meantime, behavioral health issues increase in prevalence and exacerbate chronic illnesses.

Study Question: Proven models help providers identify and treat behavioral health conditions and more than 40 randomized, controlled trials have demonstrated that collaborative care is more effective than usual care. In this systematic approach, providers are supported by a care manager and a consulting psychiatrist to treat issues in the primary care setting.

Methods: Partners in Integrated Care (PIC), incorporates models for addressing depression (IMPACT) and unhealthy substance use (SBIRT) into 40 primary care offices. Core components include: 1) Screening; 2) Patient engagement (using Motivational Interviewing) and facilitation of team-based collaboration; 3) Caseload reviews with a consulting psychiatrist; 4) Systematic follow-up; and 5) Stepped care approach to depression treatment.

Results: Screening improves the identification of patients with depression (~20%) and unhealthy substance use (~20%). The Care Manager improves care by: 1) Helping patients understand mental health diagnoses and treatment; 2) Administering assessments to identify treatment effectiveness; 3) Working with patients to implement care plans; 4) Facilitating communication between providers and consulting psychiatrists; and 5) Delivering "behavioral activation" therapy and other interventions.

Conclusions: Though incorporating behavioral health screening and interventions into primary care offices reduces costs and improves care, offices are busy and resist "additional" processes. Implementation must include the Lean approach to healthcare to reduce existing non-value added time.

Health policy implications: Improving behavioral health screening and intervention can address patients' behavioral health issues before they worsen and thus improves patients' quality of life and reduces overall health care expenses.

PREDICTORS OF UTILIZATION OF DENTAL HEALTH SERVICES AMONG ELDERS IN ISRAEL IN COMPARISON TO EUROPEAN COUNTRIES

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Background: Good oral health is important for general health and social functioning, particularly among older populations. Utilization of medical services is related to health insurance policy. In Israel, dental care is excluded from the basic services covered by the National Health Insurance Law. In Europe, dental care is widely or partially covered by national programs, reflected in great variations between countries in utilization rates of dental services among the elderly. However, data regarding patterns of explanatory factors of utilization within countries is limited.

Study Question: This study examines utilization of dental services in Israel compared to several European countries with various dental insurance schemes, using Andersen's Behavioral Model to identify factors related to and predicting utilization dental care utilization.

Methods: Persons aged >65 years (N=777 in Israel), who participated in two waves (W1=2004/5, W2=2009/10) of the Survey of Health and Retirement in Europe (SHARE). Variables included predisposing (background variables), enabling (e.g., income, mobility), need factors (dentate state), and dental care utilization.

Results: In Israel, utilization of dental services decreased from 39% in W1 to 34% in W2, compared to 80% and 81% in Sweden, 52% and 48% in the Netherlands, 41% and 39% in Austria, and 20% and 19%, respectively, in Spain. In Israel, multivariate analyses revealed that in addition to background variables and economic state, different variables were related to utilization at W1 than those significantly predicting utilization at W2. Diverse models of variables predicting dental care utilization were shown for the other five countries.

Conclusions: When dental care is excluded from national health plans, utilization of dental services is lower. In Israel, the most deprived elderly are at greater risk for poor oral health and its implications for health and social functioning.

Health policy implications: Dental care for older persons should be included in national health plans.

DRIVING PATIENT-CENTERED CARE IN ISRAEL BY MEASURING THE PATIENT EXPERIENCE: LESSONS FROM THE UNITED STATES

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Patient-centered care as one goal for the health care system has drawn increasing interest in recent years as evidence grows for the importance of incorporating patients' needs and perspectives into care delivery. Implementation of patient-centered care and higher patient satisfaction has been shown to be associated with improved clinical outcomes, health service efficiency and a positive effect on health-related business metrics. In the U.S., public reports on patient experience, and, more recently, payment linked to patient experience scores has prompted an increasing number of healthcare organizations to strive to become more patient-oriented and use patient surveys to assess their progress. Although the healthcare system in Israel has been a laggard in this regard, the Israeli Ministry of Health recently has taken its first steps to include patient experience as a dimension of healthcare quality. This proposal addresses what Israel can learn from the U.S. in terms of measuring patient experience as Israeli policy is being shaped. We propose three main lessons:

1. There is a need for a national patient experience survey in Israel. The results of this survey should be transparent to the public and, eventually, tied to provider reimbursement.
2. An Israeli survey should be customized to take into account the country's unique needs and culture. Nonetheless, it still must be based on international standards, while also accommodating important emerging domains of care such as patient activation.
3. New and innovative solutions should be considered that allow for better data collection at higher response rates. These solutions should take advantage of unique technological opportunities that exist in Israel.

REDUCING THE DURATION OF UNDERGRADUATE MEDICAL EDUCATION: BENEFITS AND LIMITATIONS

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Background: There is widespread agreement that medical education is unnecessarily long; that it does not meet all of the needs for physicians' workforce; and that its content is inconsistent with the job characteristics of many of its graduates. In a period characterized by a physician shortage and fiscal constraints, it is especially important to explore ways to reduce the cost and duration of physicians' training.

Objective: To propose reforms in undergraduate medical education in an attempt to respond to these problems.

Proposed reforms: High school graduates would be eligible for undergraduate medical education programs of four years duration. Applicants will have to commit themselves to a medical specialty by choosing one of four paths: (a) "Interventions / consultations" path that would prepare its graduates for residencies in secondary and tertiary specialties, (b) "continuous patient care" path for primary care specialties, such as family medicine and psychiatry, (c) "diagnostic laboratory medicine and biomedical research" path that would prepare for either diagnostic laboratory-based careers, such as pathology and bacteriology, or biomedical research, and (d) "epidemiology and public health" path for careers in population-based research, preventive medicine and health care administration. Graduates would be eligible for residency training only in specialties included in their paths.

Expected benefits for health care: Hopefully, an early commitment to a specialty will reduce the duration of medical education, improve the regulation of physicians' workforce and adapt the curricular content to the job requirements from medical graduates.

Limitations: This proposal departs radically from traditional medical education concepts. It leaves many unresolved questions, and will not be implemented in the foreseeable future. Still, the rapid increases in biomedical knowledge and in health care costs necessitate a reform in medical education. Such a reform will probably occur, whether in response to demands by medical educators or by health policy makers.

AN INVESTIGATION OF THE PROFESSIONAL BOUNDARIES BETWEEN PHYSICIANS AND NURSES: NEONATOLOGY - A CASE STUDY

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Background: Medical and technological developments, financial constraints, and the lack of physicians are driving health policy leaders to re-examine the boundaries between physicians and nurses and the division of responsibilities among them. Based on the results, the study offers an applicative model for Israeli NICUs.

Research questions: 1. What are the current work practices and division of responsibilities between physicians and nurses in Israeli NICUs? 2. What do physicians and nurses think about their working environment, work flow and the possible expansion of nurses' role in Israeli NICUs? 3. What is a possible model for division of responsibilities between physicians and nurses in Israeli NICUs and the development of an advanced neonatal nurse practitioner?

Methods: 1. Open interviews with key opinion leaders, unit managers and head nurses in Israeli NICU's. 2. Survey using a self-report questionnaire among a sample of physicians and nurses in 22 Israeli NICUs.

Findings: The main problems in Israeli NICUs today are: lack of physicians, overcrowded units, lack of complementary manpower and fragmented work processes. A large portion of nurses do not perform tasks that are currently approved by the Ministry of Health. The main obstacles are the need for institutional approval to perform these activities, and nurses' lack of awareness about them. Conversely, there are situations where nurses are forced to take action and decisions that they are not authorized to take, mainly due to lack of available physicians and the physicians' workload. Physicians and nurses have agreed to transfer some of the authority from physicians to nurses. This trend may improvement of the quality care, although it will increase the burden on nurses. However, for invasive procedures, there is a consensus that only physicians should perform.

Conclusions: There is a need to:

1. Delegate authorities for nurses based on processes of care and not sporadic procedures.
2. Curtail the institutional power to restrict procedures approved by the Ministry of Health.

3. Empower nurses and expand their authority for decision making
4. Incorporate Advanced Neonatal Nurse Practitioner to work within the neonatology team

Policy Implications: a suggested model for policy decision makers includes:

A. Structuring clear areas of responsibility and authority for NICU nurses
B. Defining the appropriate clinical education for different levels of nurses in NICU's
C. Creating new positions for Advanced Neonatal Nurse Practitioners.

A COMMUNITY PHARMACY AS A PRIMARY HEALTHCARE CENTER WITH AN INTERNATIONAL STANDARD - ISO 9001:2008 IN ISRAEL

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Background: Throughout the last decade an increasing number of people are turning to their community pharmacists for advice. The accessibility of pharmacies, usually open 8-14 hours a day and having a professional available at all times, turns the pharmacy into a better and preferred alternative to long queues and other uncomfortable constraints.

Study Question: Using the past year's activity at the Europharm pharmacy, we will examine whether the upgrading of pharmacies into Primary Healthcare Centers can contribute to the overall efficiency of the health care system.

Methods: We examined the activity of the pharmacy as a Primary Healthcare Center in three areas, between the months of January 2012 and December 2012: Strep A tests, blood pressure measurements, and questioning and recording complaints about side effects resulting from the switching of medications.

Results: 23% of Strep A tests were found positive. 10% of the participants with the positive results were already diagnosed and being treated, the rest of the patients with positive results were sent to their doctor for treatment.

Blood pressure tests (ages 40+), found that 60% suffered from high blood pressure (they were referred to a doctor) and 30% were found to be borderline hypertensive.

When recording the side effects of medications, it was found that switching medicine at a fast rate causes confusion among the 60+ population.

Conclusion: Upgrading pharmacies to Primary Healthcare Centers, makes it possible to reduce expenses for health care systems, mainly for insurance providers, and to be more available and give better service to its patients.

Health Policy Implications: Healthcare systems should acknowledge pharmacies as institutions that can provide significant contributions to patients and to their operations.

THE FUTURE PLAN FOR HEALTHCARE IN STOCKHOLM COUNTY COUNCIL

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Background: Health care in Sweden has traditionally been delivered through a publicly financed system with public service provision. In Stockholm county, a purchaser-provider model has been adopted by the regional health authority, the Stockholm County Council (SCC). With a rapidly growing population, a bold initiative has been taken to develop a plan for health services development in the region.

Methods: The method used in the development of the plan was participatory with a number of working groups from all parts of the health care system and the purchaser function. This was supported by careful modeling of future health care needs, costs and development based on extensive analysis of available databases. All results and reports were eventually compiled in a Future Plan that was adopted by the politically elected council and is now being implemented by a program office.

Results: Health care needs will increase continuously over the study period due to increases in both population size and in ageing. The need for in-patient services is estimated to increase by 33% in 2030 compared to 2009. In order to finance this within existing financial framework the total costs of health care must be reduced by at least 1 % yearly to keep a balanced budget. Focus will be on cost efficiency and productivity in the entire health care system through several measures. Only the patients who need emergency hospital resources will be treated in these settings. Specialist centres will be established at smaller community hospitals where specialist care will be provided. Highly specialized care will be concentrated to a new university hospital. Increased use of health information technology makes information accessible to patients and promotes efficiency among providers. Health care resources will be concentrated on patients with high consumption of services. Private health care providers are expected to contribute to some of the future investments in for example infrastructure and to a more innovative health service delivery.

Conclusions: Several measures are implemented to guarantee qualitative and equitable services despite increasing needs and future financial limitations.

Health policy implications: The SCC Future Plan is a comprehensive attempt to redesign a health care structure within existing financial parameters in order to meet the future needs of the county's population.

DEVICE EVALUATION AND RESTRUCTURING MANAGERIAL AND PROFESSIONAL PRACTICES IN SOCIO-MEDICAL ESTABLISHMENT IN FRANCE IN CONTEXT OF ECONOMICAL RESTRICTIONS

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Background: Much research in France on the reorganization process medico-social establishments subject to the law of January 2002-2 to clarify the issues and practices of the different categories of actors, dependent health policies in France, in relation to implementation in January 2010, the Regional Health Agencies. These processes are related to dynamic evaluation of professional practices and managerial collaborative building new modes of governance in a crisis of the welfare state.

Study Question: Our analysis focuses on the changes and negotiations established professional practices (Boussard, 2010), subject to the orders of regulatory instruments (Lascoumes, 2004) for institutionalized practices through external evaluation and standardized managerial communication.

Methods: A qualitative approach through a discourse analysis of employees (staff and management interviews) in an accommodation for dependent persons, we highlight a crisis mutative professional identities shows that the gap between professional practices and management practices.

Results: Before the evaluation, the professional practices of the care of the elderly people are based on the "good will" of staff and are exerted without qualifications, on the motivation to work with the residents or on the incapacity to find another work. However the care could create, in the situations of intimacy, of physical and psychological violence. Practices are "appropriate", indivualisées, not collectivized. After evaluation by the standard assessment and management, without negotiation creates breaks in teams, loss of motivation and value. If the standard is negotiated (Constandriopoulos, Champagne 1993), reconstructs practices and encourage the sharing of knowledge.

Conclusions: The informal relationship, refusal of writing, oral information in semi-autonomous teams, develop basic unit its own standards disappear into the device that standardizes the evaluation practices and according to the management, bullied or regulates.

Health policy implications: Use methods of evaluation mechanisms in the context of economic crisis affecting the health and therefore the medico-social institutions can according ecology management, efficient work practices and positive changes in relationships with patients. A management that takes into account the historical and cultural context installs standard practices negotiated, progressive and effective.

THE ISRAEL NATIONAL PROGRAM FOR QUALITY INDICATORS IN COMMUNITY HEALTHCARE (QICH) - STRUCTURE, PROCESS AND OUTCOME

Orly Manor

On behalf of the Directorate of the Israel National Program for Quality Indicators in Community Healthcare

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Quality assessment should be a cornerstone of every healthcare system. The Israel National Program for Quality Indicators in Community Healthcare (QICH) provides consumers, health professionals and policy makers with information on quality measures in primary care in Israel and thus enables monitoring and improving the healthcare system. The structural basis of QICH is unique, as it is rooted in the partnership of all four Israeli health plans and the program's academic directorate. Quality indicators are collected uniformly by each health plan using electronic health records that include physician visits, hospital procedures, laboratory test results and pharmacy claims. Aggregate data per health plan are submitted annually to the program directorate to produce national-level rates stratified by age and gender. The current QICH indicator set examines seven areas of healthcare: health promotion, cancer screening, child and adolescent health, care for older adults, asthma, cardiovascular health, and diabetes. The process of updating existing measures and introducing new dimensions to healthcare assessment is conducted by taking into consideration a wide range of aspects including emergence of new evidence and changes in existing evidence, changes within the healthcare infrastructure, availability of electronic data, prioritization and balancing the additional burden of measurement with potential rewards. This process is carried out in close cooperation with all stakeholders and by consensus. Current and future challenges to QICH include creating appropriate measures which examine outcomes, and addressing comorbidities, longitudinal care and making "wise choices" as well as enabling the assessment of social disparities in the quality of healthcare.

MAKING "WISE" CHOICES: WHY AND HOW

Ora Paltiel

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Physicians are often faced with a dichotomy of choices, including whether to treat actively or observe; to test or not; to screen, or to await clinical signs of disease. Overuse of routine diagnostic and therapeutic procedures has been associated with high cost and low clinical benefit, with a potential for harm. Recognizing this, in the context of a commitment to professionalism, Howard Brody challenged medical specialties to name "the top five list"- " five diagnostic tests or treatments that are very commonly ordered by members of that specialty, that are among the most expensive services provided, and that have been shown by the currently available evidence not to provide any meaningful benefit to at least some major categories of patients for whom they are commonly ordered" (NEJM 2010;362:283-5). This challenge was initially taken up by the National Physician Alliance, family physicians, internists and pediatricians, followed by nine specialty organizations, culminating in the recent publication of "top five" lists by 35 medical specialties (http://www.choosingwisely.org/).

In an atmosphere where "doing more" is often perceived as "doing better", it is crucial that choosing wisely by occasionally doing less not be construed as a unilateral decision to ration or deprive patients of necessary health care. Since patients are generally more concerned about missed diagnoses than over-diagnosis, a dialogue must take place in order to ensure the successful adoption of these guidelines. The inclusion of consumer organizations in the process was therefore aimed at enhancing communication between physicians and the public.

This session will deal with the mechanics, professional and legal aspects of this process and its applicability. In the first presentation we will review the rationale and procedures of the "Choosing Wisely" process, provide examples, and raise questions regarding next steps, including the ability to transform these guidelines to quality indicators and the feasibility of adapting this approach to the Israeli healthcare system.

WHERE WE SHOULD NOT PUT OUR TIME AND MONEY IN PRIMARY CARE - Choosing wisely in primary care.

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When asked, the general public usually believes that in medicine, doing more means doing better. In Israel, many people think that the main reason the HMOs do not perform more tests is economical.

In the past several years, numerous studies and publications showed the harm caused by overdoing. In 2007, the JAMA published an article that establish the carcinogenic risk of CTC angiography which was followed by a recommendation of the director general of the Israeli Ministry of Health to avoid performing this procedure. In 2009, the USPSTF recommended to stop screening mammography for women at normal risk between the ages of 40-50, due to over-diagnosis and overtreatment. In the same year, two RCTs examining the use of PSA for early detection of prostate cancer showed no to limited benefit of this PSA use as opposed to massive overtreatment which results from it. In 2012, the "Choosing Wisely", the American Academy of Family Practice, and the American College of Physicians recommended against performing several common tests and treatments, including routine stress tests for asymptomatic people, back imaging in simple low back pain, and treating sinusitis and bronchitis with antibiotics. Some treatments, while they may have moderate benefits, are probably too time consuming and costly. They also confuse the public. These include the very traditional pneumonia immunization, reducing blood cholesterol in most healthy people, lowering blood pressure below 140/90 and over-controlling blood sugar.

Keeping in line with the above, the Israeli Task Force for Health Promotion and Preventive Medicine in their 2013 clinical guidelines recommended against performing many routinely used tests. In addition, the National Committee for Community Health and the Ministry of Health suggested limiting many widely used treatments and tests.

For highly effective primary care, we must define the tests and treatments that are really important and avoid those that are "fashionable" and are promoted mainly by interest groups.

A LEGAL PERSPECTIVE ON WISDOM, CHOICES & REVEALED PREFERENCES

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The science of decision-making has been in the focus of attention in recent years, celebrated by several Nobel prizes awarded to researchers who have pioneered properties of decision-making and attempting to rectify inherent flaws.

Surprisingly, patients, physicians, judges, jurors and lawmakers are all similarly prone to such systematic errors, and all need to be de-biased.

In an era of increased liability of healthcare providers, delineating standard practice carries a significant burden for practitioners, their institutions, and the healthcare system at large, as well as for patients.

In my presentation, I reflect on legal concepts that relate to ideas of common practice (omission and commission), and the elusive "standard of care". In an atmosphere where "doing more" is often perceived as "doing better", it is crucial to establish evidence-based practices that are construed as the preferred practice, notwithstanding the lasting need to ration health care expenditures. In a similar way, patients' ex-post preferences ("if given the option I would have…") must be confronted is an ex-ante illumination of revealed choices.

THE VALUE OF LOW VALUE LISTS: MOVING FROM LISTS TO IMPLEMENTABLE STRATEGIES

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There is tremendous international activity seeking to identify and reduce the use of health care services that provide little or no benefit – low value services. Motivations for doing so include ethical obligations to prevent harm and improve care, but mostly derive from the economic imperative to reduce spending while still maintaining overall quality of care.

Numerous organizations internationally have promulgated "low value lists", with the most prominent recent example being the "choosing wisely" campaign of the American Board of Internal Medicine Foundation. The challenge now is to move from the identification of low value services to the implementation of policies and strategies to reduce their use. Various approaches in this area seek to use clinical measurement and feedback, but are complicated by the issue of clinical heterogeneity. This is because it is rare that a particular service is considered of low value for all indications. Widely available administrative claims data typically lack the clinical nuance to identify accurately populations for whom a service is of low value. Similarly, across the board coverage limitations also may be too blunt an instrument and insurance coverage that incorporates value-based insurance design also would need to be designed with such clinical nuances in mind. Thus, the most promising target for implementing low value lists will be physician organizations such as physician groups or integrated delivery systems. With appropriate financial incentives, such organizations can harness clinical data to initiate strategies closer to the point of care that are sufficiently nuanced so as to be accepted by member physicians.

Numerous low value services have been identified internationally and efforts must now turn to operationalizing these recommendations to eliminate wasteful services. Success will require novel approaches designed to provide information and influence decisions at the point of care.

CHALLENGES IN THE DEVELOPMENT OF PEDIATRIC QUALITY MEASURES

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Although there are many quality measures for adult health care, the number of quality measures for the pediatric population that have been developed and tested for reliability and validity is very small. There are inherent issues of complexity that must be taken into consideration in the development of pediatric measures relative to adult measures summarized as the 5 D's: (1) Development: as different developmental stages of children, quality metrics may vary, (2) Dependency: depending on the age of the child, they may be more or less dependent on adult caregivers for the provision of medications or other interventions, (3) Different epidemiology: at different ages, that is variation in epidemiology of both infectious and non-infectious diseases, (4) Demographics: the racial and ethnic demography of children in the US is different for children than adults, and (5) Disparities: racial and ethnic disparities are more pronounced in childhood.

QUALITY MEASURES DEVELOPMENT FOR INFANTS AND TODDLERS PREVENTIVE HEALTH SERVICES

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Background: The Israeli national quality measure currently does not include almost any measure related to children health or specifically to the infant and toddlers preventive services.

Study Question: The study aims to define quality of care measures for Infants and Toddlers Preventive Health Services in Israel.

Methods: A multi-disciplinary steering committee was established to determine the main areas for measurements. Following a pilot study, the results were brought to the committee for discussion and final measures were defined. The measurement was conducted in computerized ministry of health stations, among children born in 2005-2006, compared according to ethnic origin, mother education and sub-districts.

Results: Quality measurements were chosen by consensus: vaccination, growth and development. In every area measures were chosen according to importance and feasibility. We found that:

For all measures difference were found between Jews and Arabs, mostly even higher than 10% difference in favor for the Arab children.

Differences were found among sub-districts in the various measures.

No significant differences were found between the birth cohorts and according to mother education.

Conclusions: Developing such program is an important management tool in order to improve the quality of the services, using a continuous measurement process.

Health policy implications: To develop a national quality measurement program for infants and toddlers preventive health services that include all the services suppliers. The program should be gradually integrated into the Israeli national quality measures in the community.

To standardize the measurements in order to present transparent data for all stakeholders, serving as a basis for policy making and resource allocation.

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IMPLEMENTING SUSTAINABLE QUALITY IMPROVEMENT IN A RESOURCE CONSTRAINED SETTING

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Background: In developing countries where majority of maternal deaths occur, the provision of quality reproductive health care services is challenged by inadequate resources; poor infrastructure, overcrowded facilities and shortages of staff. In Kenya there is an existing policy framework outlined in the Kenya Quality Model for Health and clinical guidelines. However, putting these standards and recommendations into clinical practice has proved difficult, especially in the context of outpatient services where majority of clinical contacts occur.

Study Question: The project presented aims to demonstrate the adaptation and implementation of a quality improvement system that is tailored to the requirements of outpatient care in Kenya.

Methods: The quality improvement system adapted is based on the experience of the European Practice Assessment (EPA). The overall aim is to support facilities to better exploit their available resources and strengths to improve the quality of health services despite low levels of resources. Individual facilities (health centers and hospitals) are enabled to assess the quality of their own services, identify strengths and challenges, benchmark them against other facilities, and set their own quality improvement targets. An electronic and internet based tool (VISOTOOL®) is available for transferring data into indicators, for feedback and benchmarking.

Results: This presentation reports on the process of adapting and tailoring the EPA methodology to the requirements of Kenyan outpatient services with a focus on reproductive health care. It will also provide preliminary results from the pilot introduction of the adapted indicators in rural Kenyan facilities.

Conclusions: It is possible to develop a quality improvement system that is tailored to the specific requirements of the Kenyans outpatient health system and builds predominantly on the resources locally available.

Health policy implications: Quality of health care can be improved sustainably in resource poor settings through the contextual application of good practice implemented in other regions.

MALPRACTICE RISK IN AMBULATORY PRACTICES: EVALUATION BY STAFF AND ADMINISTRATORS IN THE PROMISES STUDY

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Background: Policymakers face imperatives to increase accountability for patients harmed by malpractice, reform the legal system for adjudicating patient claims, minimize safety risks, learn from errors, and hold down costs. PROMISES (Proactive Reduction of Outpatient Malpractice: Improving Safety, Efficiency and Satisfaction) – a randomized trial of 25 ambulatory practices in Massachusetts participating in a safety-focused improvement collaborative – is investigating how to achieve these goals.

Study Question: How do staff and administrators assess multiple, ambulatory, high-risk malpractice and safety areas?

Methods: Twenty of 25 practice managers completed an administrator survey about the presence of safety structures and processes; 292 of 482 (60.5%) providers and staff completed a complementary survey about the quality of safety-related processes. Novel and psychometrically-sound surveys covered 11 safety areas. We examined differences in perceptions by safety domain and among respondents and professional disciplines.

Results: Administrators frequently reported that processes and functionality considered important for safety were absent or partially implemented, e.g., only 16% of practices had a systematic way of tracking referrals; 18% had electronic prescription alerts linked to patient-specific information. Providers overall rated positively their systems for tracking test results, electronic medication management, and referral management. However, provider responses also reflected deficiencies, e.g., just 50% agreed that their practice's system for following-up on referrals is effective. Provider responses varied widely across practices and within practices, with different disciplines reflecting concerns

related to the areas for which they had responsibility, e.g., half of nurses (but fewer physicians) indicated that their office had problems exchanging information with other offices.

Conclusions: Results from surveys focusing on high-risk ambulatory patient-safety areas identified significant opportunities for improving reliability of test results, referral, and medication management and communication practices.

Health Policy Implications: Understanding vulnerabilities in current safety practices will help identify opportunities to prevent harm and guide interventions and policymakers in efforts to address malpractice risk and reform strategies in primary care.

PRIMARY PREVENTION OF CARDIOMETABOLIC DISEASE - IS EVERYBODY RECEIVING QUALITY CARE?

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Background: Low cardiometabolic risk profiles in younger adults increase longevity, reduce morbidity, and lower the burden of healthcare in the long-term. A healthy cardiometabolic risk profile includes controlled blood pressure and cholesterol levels, a normal body mass index (BMI), and a non-smoking status.

Study Question: To characterize the quality of preventive healthcare for cardiometabolic disease in the adult population in Israel (2006-2010).

Methods: Data from the Israel National Program for Quality Indicators in Community Healthcare (QICH) (2006-2010) were examined for the adult population, aged 35-74 years. QICH data comprises electronic patient records collected for the entire Israeli population from all four health plans in Israel - Clalit Health Services, Leumit Health Fund, Maccabi Healthcare Services, and Meuhedet Health Fund. Data were aggregated to create the national indicator set.

Results: In 2010, rates of primary prevention of cardiometabolic disease in community healthcare were high (>77%). Subgroup analyses revealed higher rates with increasing age and among women. During the study period absolute rate differences for blood pressure documentation were 9-20% lower for adults 20-34 years compared with 45-54 years, for cholesterol documentation was 8-14% lower among adults aged 35-44 years than 45-54 years, and for BMI documentation was 11-25% lower among adults aged 20-34 years than 45-54 years. Rates among women were higher than for men with marked differences among young adults. In 2010, documentation rates of cholesterol levels for 34-44 year olds were 86% for women and only 75% for men.

Conclusions: High rates of primary prevention for cardiometabolic disease are achieved in Israel but with lower rates among young adults and men.

Health Policy Implications: Young adults and men are identified as requiring improved basic preventive care. Targeting these subpopulations will have substantial direct and indirect effects on healthcare costs.

WIN, WIN OUTCOMES: THE CONTRIBUTION OF CLINICAL QUALITY IMPROVEMENT PROGRAMS BASED ON ORGANIZATIONAL CULTURE TO COST CONTAINENMENT IN HEALTH CARE

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Background: There is broad policy consensus that both cost containment and quality improvement are critical, but the association between costs and quality is poorly understood. Clalit Health Services (Clalit), which insures 4 million people, conducts nation-wide quality improvements programs on health problems; diabetes care, heart failure, prevention of recurrent hospitalization of frail old adults and more.

Study Question: Do quality improvement programs based on organizational culture, lead to improved health outcomes and cost containment as well?

Methods: All intervention programs include EBM guidelines, clinical pathway, education of the health care providers, appointment of the main health caregiver, designed computerized systems, partnership with the patients and performance measurement by computerized indicators with feedback to the providers. The interventions consider as well current organizational culture. The costs are measured by Clalit computer systems which implement an identical method for each patient.

Results: In diabetes program the patients' follow up improved during the last 17 years 4 times fold, and the percentage of patients with HbA1c less than 7% rose from 10% to 50%. The limbs amputation incidence descended in third, the blindness incidence descended almost in half and the number of hospitalization days descended in 5%. The annual cost rise of diabetes patient was lower comparing to average patient in Clalit. Comparable outcomes were observed in other quality improvement programs.

Conclusions: In Clalit setting, quality improvement interventions contributed to cost containment. We attribute our success to a systematic, long term implementation of quality improvement programs with all their components, and integrating change in the work flow of health care providers within the organizational culture

Health Policy Implications: Continues investment in quality improvement programs based on organizational cultural management can achieve the defined goals and cost containment.

BUILDING AN INFRASTRUCTURE TO ASSESS THE IMPACT OF QUALITY INDICATORS ON HEALTH OUTCOMES IN ISRAEL: METHODOLOGICAL ISSUES AND PRELIMINARY RESULTS

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Background: Studies of the relationship between changes in primary care quality indicators and health status of the target population are lacking. Over the past decade, the Israel National Program for Quality Indicators in Community Healthcare (QICH) has demonstrated improvements in healthcare quality including disease prevention and care.

Study Question: To examine the association between changes in healthcare quality and health outcomes.

Methods: An ecological study based on time-series analyses will be performed using data from QICH (2002-2012) and national datasets. Health outcomes include: diabetes mellitus (blindness, renal replacement therapy, limb amputations), asthma (hospitalizations), influenza vaccination (hospitalizations, all-cause mortality and influenza-specific mortality in the elderly during the winter months), cardiovascular disease (mortality, admissions for acute myocardial infarction, cardiac interventions), and breast and colon cancer (incidence, mortality, and stage at diagnosis). Trends in outcomes in the decade preceding the inception of the QICH and the subsequent decade will be described. Changes in trends since QICH will be examined as well as the correlation between QICH trends and the relevant outcomes. The contribution of QICH to changes in outcomes will be modeled and will consider changes in disease definitions, diagnosis, and treatment.

Results: Methodological issues will be examined, with specific attention to trends in mortality and diabetes outcomes.

Conclusions and Health Policy Implications: Monitoring healthcare quality provides essential information on guideline adherence by healthcare providers. The infrastructure to assess the impact of higher quality on health outcomes is critical for policymakers and allocation of resources.

CONTAINING COSTS BY INCREASING QUALITY: THE PROMISE OF LEAN METHODS

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Background: Across OECD countries, economic downturns have severely affected healthcare spending as a share of GDP. Consequently, healthcare systems in many countries are at a crossroad. They must either reduce the quality of or access to healthcare services, or require that all expenditures yield outcomes that are both efficient and ensure population health. The choice is all the more pressing in countries facing worker shortages. Work stoppages and resignations are likely if systems elect to pass the impact of tightening budgets onto already over-burdened workers.

Study Question: Increasingly, powerful Lean-based improvement methods are being successfully applied to reduce costs while improving the quality of health care. And yet adoption has often been limited to pilot projects. Answering key question could hasten adoption: What is the level of leadership involvement and staff training required to ensure sustained cost and quality outcomes?

Methods: The presentation will employ case studies of Lean-based improvement initiatives to identify common elements associated with their success.

Results: The case studies document compelling outcomes, replicable planning and implementation steps, and highlight the role of system leaders and staff in sustaining and spreading success.

Conclusions: Lean-based methods, when incorporating best practices from around the world can reduce costs while improving quality and can be sustained over time.

Health policy implications: If recent trends continue, many countries will not be able to afford systems that underperform in containing costs and ensuring quality. Widespread adoption of inexpensive and powerful improvement methods like Lean, hold great promise in this environment.

ADJUSTING THE NATIONAL HEALTH EXPENDITURE IN OECD COUNTRIES TO THE DIFFERENT AGES DISTRIBUTION

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National Expenditure on Health in Israel as a percentage of GDP in 2010 was 7.7% and the Health Expenditure per Capita was $2,046 PPP.

A comparison of data with the OECD countries indicated that the figures in Israel are low: Of the 34 member countries, Israel's place in Total Health Spending as percent of GDP was 26 and Health Expenditure per Capita – 28.

Examination of Israel's place in international comparisons of the public health spending showed that the place is even lower (27,30).

One of the arguments heard on international comparisons of National Health Expenditure indicators, is the claim that this data does not reflect the distribution of age in different countries. As we know, the population of Israel is "younger" than other OECD member countries.

The purpose of the study was to create a "comparative bar", adjusting the differences of age distribution between countries. This allows us to make international comparisons of Health Expenditure, Neutralized of age factor.

These adjustments were made on the basis of the distribution of National Health Expenditure by age group in Israel 2010.

ONE ORGANIZATION, SEVERAL COMPETING OBJECTIVES? BUILDING ORGANIZATIONAL ALIGNMENT THROUGHT INTEGRATION OF OCCUPATIONAL HEALTH AND SAFETY, EFFICIENCY AND QUALITY IMPROVEMENT

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Background: The main purpose of health care organizations is to provide safe, efficient and high-quality care. Business systems and processes are set up to support this, along with systems relating to quality improvement, environmental sustainability and occupational health and safety (OHS). However, these systems are usually not integrated and their interdependence unclear.

Study Question: Does the perceived interdependency of OHS and business objectives change when OHS is integrated in a continuous improvement system (kaizen, a Lean tool) in a Swedish regional hospital?

Methods: This study is part of an on-going quasi-experimental intervention project where OHS is integrated with kaizen. Employees (N=400) provided self-ratings in questionnaires at baseline and 6 months after the integration. Managers (N=8) were interviewed during the same time period.

Results: While the managers cherish the idea that OHS and business objectives are interdependent, only half of the employees' initially perceived that the interrelations are considered in practice. This, however, improved significantly as OHS was integrated with kaizen.

Conclusions: Integration of OHS with continuous improvement may be a hands-on way of illuminating how changes in the workplace have concurrent effects on several systems, thereby increasing the likelihood for finding solutions that are sustainable from more than one perspective.

Health Policy Implications: By integrating different processes and systems within the same organization, better alignment may be achieved and this, in turn, is important for the sustainability of the organization.

THE IMPACT OF ADHERENCE TO TIOTROPIUM ON HEALTHCARE UTILIZATION OF COPD PATIENTS

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Introduction: Previous studies had demonstrated association between Tiotropium therapy (once-daily inhaled anticholinergic), and exacerbations reductions, improvements in dyspnea and quality of life. Little is known about the influence of adherence to this therapy on healthcare utilization.

Study Question: If adherence to Tiotropium results in decreased health care utilization two years after treatment onset.

Methods: A longitudinal retrospective study was conducted among all COPD patients prescribed for Tiotropium 18 mg between April 2008 and January 2011 in the pulmonary clinic of the Soroka Medical Center. Adherence to therapy was defined as proportion day covered (PDC)≥80%. Adherent patients (n=79) were compared to non-adherent patients (PDC<80%, n=114). Measures of health care utilization from Clalit Health Services computerized database were analyzed 1 year before and 2 years after therapy onset. Comparison between years was analyzed using the Wilcoxon signed-rank test.

Results: Mean age of all COPD patients was 67.8±10.9 yrs, forced expired volume in one second (FEV1) was 41.9±13.0, pack yrs was 52.7±37.1 (40% stopped smoking), age adjusted Charlson comorbidity index (CCI) was 6.3±3.3. No significant differences were found between adherent and non-adherent patients with regard to smoking habits, demographical and clinical characteristics. Among adherent patients: compared to one year before therapy onset, hospitalization costs reduced by 26% in the following year (p=0.05) and remained unchanged in the second year after therapy onset (p=0.25). This trend was not found among non-adherent patients (p=0.58; p=0.86 respectively). No significant difference in total annual healthcare costs was found in the first and second year following therapy onset in both groups. In adherent patients, this result stem predominantly from increased medication and surgery utilization that offset the decreased hospitalization costs.

Conclusions and Health Policy Implication: Adherence to Tiotropium was associated with decreased hospitalization costs. Exploring reasons for high non-adherence (114/193) may optimize the use of hospital scarce resources.

REDUCING HEALTH INEQUITIES: THE ROLE OF MEDICAL EDUCATION

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Background: Israel, as other countries, is struggling to strengthen its community health care and to reduce health inequalities. In recent years, medical schools have developed several unique programs, attaining impressive achievements in promoting equitable care for rural and peripheral populations.

Study Question: To compare the social and community orientation of graduates from the various medical schools.

Methods: Online cross-sectional survey among 9,000 physicians who are graduates of Israeli medical schools. The survey was conducted from May to June 2011.

Results: 1,491 physicians completed the survey. There were no demographic differences (age, gender, religion, or country of birth) among graduates of the various medical schools. Higher rates of physicians who studied at the Technion and Ben-Gurion University (BGU) are working or have worked in the periphery (~50% vs. ~30% average of Hebrew and Tel-Aviv University schools, $p<0.001$). Among BGU graduates, 45% are active in community programs (45% vs. 34-37% in other schools, $p<0.001$). Among physicians active in community programs, 31% of BGU alumni estimated that their medical education greatly influenced their community involvement (37% vs. 8-14% in other schools, $p<0.001$). Among BGU graduates, 67% noted that their studies had a social orientation, compared to 3-5% in other schools ($p<0.001$).

Conclusions: We found that BGU medical school graduates had higher rates of community and social involvement and the highest perception of medical education influence on this behavior. As the BGU medical school, located in the southern periphery of Israel, was established with an emphasis on community and social medicine in its curriculum, these findings show the potential role of medical education in reducing health disparities by influencing graduates to work in the periphery and to be more involved in community programs.

Health policy implications: These insights are crucial when considering changes in medical schools' curricula and implementing a long-term national plan for an equitable health care system.

THE CHALLENGE OF IMPROVING QUALITY BY THE ACCREDITATION PROCESS IN A PEDIATRIC TERTIARY CARE MEDICAL CENTER

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Background: The process of accreditation in hospitals is well known in its intent to create a systematic wide spectrum analysis and approval of quality processes. Standards in the accreditation process are mainly divided into patient centered and healthcare organizational standards. The endpoint of the accreditation process is to meet certain standards that require continuous improvements in structure, processes and outcomes.

Aim: Schneider children's medical center, is one of 14 hospitals of Clalit HMO, and is the only standalone tertiary care pediatric medical center in Israel. In the process of accreditating all Clalit hospitals, Schneider has started its preparations in 2011. Since there are many differences in the structure, procedure, and processes, between general hospitals and pediatric hospitals, the process of accreditation was tailored and suited to fit the pediatric world of quality and patient safety.

Methods: During 2011–13 accreditation standards were tailored for the pediatric population and the medical teams treating this population. A process of planning, finding gaps, changing processes, and implementing them was done according to the different policies and procedures required.

Results: Out of the 14 standard groups, four were especially tailored to fit the pediatric world. These are: a: Medication Management and Use (MMU), b: Facility Management and Safety (FMS), c: Patient and Family Rights (PFR), and d: Prevention and control of Infection (PCI). Within these four groups we focused on patient safety issues that need special considerations, such as preventing "times 10" medication errors, dealing with patient rights when the patient is not the custodian, managing the facility while focusing on pediatric caution in electricity, materials, and patient environment, and taking special considerations of infection prevention in populations such as neonates and premature patients.

Health policy implications: The accreditation process is an extremely important tool in quality and patient safety improvement for hospitals. We

conclude and show here, that this tool should be altered and tailored to fit hospitals that are focused on treating the pediatric population with all its special considerations for special safety needs.

ANALYSIS FOR IMPROVING THE QUALITY PROCESS OF PATIENT SAFETY HANDOFF FROM PEDIATRIC CARDIAC SURGERY TO PEDIATRIC CARDIAC ICU

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Background: patient Handoff occurs at any time where there is a transfer of responsibility for the patient. It's critical that the complete medical information, which refers to the patient, transferred with him. Studies indicate that this process doesn't always happen properly. Busy medical staff, may omit important patient information during handoffs. Communication breakdowns and poor information are leading cause of medical errors. Between 1995–2004, communication failures were the main cause of 65% of sentinel events that are not related to the disease of the patient. In 2005 JCAHO found that 70% of sentinel events were caused by communication breakdowns, half of them during transferring patients.

Study Question: research focuses on characterizing and identifying problems in the children's handoff from Pediatric Cardiac Surgery to ICU by emphasis patient safety. Main objectives: Building a pro-active risk management model for patient handoff, proposing intervention plan for Improving the Quality Process of Patient Handoff.

Methods: integration of the Qualitative research and Quantitative research.

Sample: we observed 62 handovers randomly.

Research tools: Literature review in risk management and handovers, In-depth interviews based on questionnaire in conjunction with medical personnel. Observations to gather data about patient transfer using a structured questionnaire. Data analysis: building categories for each of the research questions, combined with quantitative analysis methods.

Results: a. Lack of equipment and alternative equipment availability, failure to inspect the equipment. On 46.8% of cases there were technical problems in surgery room; b. In 20% of cases there wasn't a convey message to the ICU for patient arrival; c. Anesthetist passed 98.4% of cases. The surgeon participates at 14.5% of the cases. The assistant surgeon participates at 74.2% of the cases; d. Research shows that some relevant information has not been handed over or only partially migrated; e. The value of the quality teamwork variable is 3.11. This needs improvements.

Conclusions: Research observations indicate deficiencies in the process. There is no defined policy or training program for handoffs. There are gaps between required and existing procedures.

Health policy implications: To improve the quality and safety of treatment at patient handover. We recommend adopting solutions that correspond to international requirements: "Safe Practices for Better Healthcare", such as the recommendations of the JCAHO National Patient Safety Goals in order to achieve international standards.

WHEN BAD THINGS HAPPEN: STRATEGIES HOSPITALS CAN USE TO IMPROVE QUALITY RATINGS WHEN PATIENTS EXPERIENCE ADVERSE EVENTS

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Background: Although patient safety is a cornerstone of quality, the relationship between patient safety and patient experience of care is not well understood.

Study Question: To evaluate the association between hospitalized patient-reported quality, adverse events (AEs), and mitigating factors such as disclosure of the event, participation/involvement of patients in their care, and adequacy of discharge planning.

Methods: Massachusetts adult hospital patients were surveyed about the number of AEs (0, 1, 2+), quality of care (excellent/very good/good/fair/poor), and other patient experiences. Physician reviewers assessed the validity of the patient-reported AEs. Using multivariable models, we compared the probabilities of high quality ratings by patients with and without AEs.

Results: The proportion of patients reporting high quality was inversely associated with the number of AEs (85% for patients with no AEs compared with 77% of patients with 1 AE and 62% of patients with 2+ AEs, $p<.001$). High quality was greater if patients reported more involvement in their care (86% vs 53%); or good discharge planning (85% vs 64%). Among patients with at least one AE, those who experienced a satisfactory disclosure of the event, were involved in their care, and reported good discharge planning, offered similar adjusted quality ratings compared to patients who experienced no AE at all (86% vs 85%, $p>.05$).

Conclusions: Patients' global ratings of hospital quality of care are inversely associated with experiencing AEs. However, positive experiences with participation/involvement in care, discharge planning, and event disclosure are independently associated with higher quality ratings and may mitigate the negative impact of experiencing an AE.

Health policy implications: Hospitals can improve their quality ratings among patients experiencing a safety event by ensuring that the events are properly disclosed to patients who experience them, that patients perceive that they participated in their own care, and good discharge planning was provided.

AUDITING SELF-REPORTED QUALITY INDICATORS: LESSONS LEARNED

Jacob Dreiher [1], Shlomo Vinker [2], Rina Yahalom[1], Ehud Davidson[1],Haim Bitterman[2], Yaron Mushkat[1],Lilly Perelman[1],Ayala Mordechai[1],Arnon D. Cohen[2]

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Background: Clalit has 36 quality indicators (QIs) for its 14 hospitals. QIs were based on automatically extracted data from Clalit's database. In 2012, QIs based on the medical record were introduced. Lacking a standard complete computerized medical record, these QIs were based on self-reporting process.
Study Question: An audit of self-reported data submitted for these QIs.
Methods: An audit was conducted by the Hospital Division of Clalit. In each hospital, relevant records were reviewed regarding 6 indicators: medications recommended at discharge following an acute myocardial infarction (MI), antibiotics given within six hours for community-acquired pneumonia (CAP) in the elderly, primary percutaneous coronary intervention (PCI) within 90 minutes for ST-elevation MI, acquired pressure sores, patient falls, and patient falls with injury. According to the JCI's validation methodology, each record was classified as either (1) included in the denominator only, (2) included both in the numerator and in the denominator, or (3) excluded from the denominator. The percent agreement between the auditor and the self report was calculated. A threshold of 75% agreement was defined as satisfactory, in compliance with JCI definitions.
Results: 562 records were reviewed. For CAP treated with antibiotics within six hours, agreement was 70-100% (1 hospital <75%). For PCI within 90 minutes in STEMI, agreement was 0-95%, (3 hospitals <75%). Regarding medications at discharge following MI, agreement was high for aspirin, beta blockers and statins (86-100%), but lower for ACEI/ARBs (36-100%, 4 hospitals <75%), Regarding acquired pressure sores, agreement was 84-100%. Self reported data regarding patients' falls and patients' falls with injury had 100% agreement.
Conclusions: Data reported by Clalit's hospitals were mostly reliable, with uncommon cases of under-reporting or misunderstanding of inclusion criteria.
Health policy implications: External auditing and validation of self-reported quality indicators proved to be a useful method for detecting discrepancies in reporting,

THE EFFECT OF PAY FOR PERFORMANCE (P4P) ON QUALITY OF CARE IN CARDIAC SURGERY

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Background: P4p is a value-based purchasing approach that rewards healthcare services providers for meeting pre-defined goals, thereby targeting quality improvement and costs reduction. This study presents the first implementation of a p4p model in Israel and its effect on quality indicators in heart surgeries.
Study Question: To examine whether model implementation was followed by improvement in process and outcome indicators in cardiac and thoracic surgeries, and if these changes persisted over time**.**
Methods: The model was implemented in January 2009, resulting in a reduction of insurers' payment to the hospital, in the case of failure in one or more of the model-reported criteria. (outcomes: post-operative CVA, sternum infection that required surgical intervention, and an additional surgery within 48H, requiring the use of a Heart-Lung Machine; and process measures: carotid doppler performance in elective patients >65 years-old, documentation of aspirin, beta-blockers and statins prescription post-operatively and at discharge, when clinically appropriate). N=1456 heart and N=1043 thorax surgeries were included, performed from 2008 to October 2011. Process and outcome rates before and after implementation were compared, additionally to yearly rates comparisons.
Results: No changes were seen in model-reported outcomes in heart surgeries. Nevertheless, significant improvement in the reporting of case-mix and process indicators was observed. In addition, decreases in unreported outcome rates were achieved (e.g., peri-hospitalization mortality decreased from 9.3% to 4.2%, *p value*=0.021), in addition to significant improvements in some unreported process indicators. A yearly rates comparison revealed consistent decrease in mortality rates and other outcomes during the follow-up period. In thoracic surgeries, no significant changes were observed, except for a clear improvement in electronic data entry.
Conclusions: No direct effect of the p4p model implementation on the pre-defined outcomes was observed, perhaps since the incentive was defined at the organization's level. However, it seems that structured and continuous performance assessment mechanisms had a beneficial effect on performances.

Health Policy Implications: We recommend the establishment of a comprehensive EMR-based data collection system, including reporting on main process and outcome parameters. In order to achieve maximal, sustainable benefits, the system will be based on *Meaningful Use Criteria*, so that it can serve as an effective platform for the departments' work schemes, additionally to feedback, comparison and learning purposes.

UNIQUE TOOLS (QUALITY INDICATORS (QIS)) FOR EVALUATION AND QUALITY IMPROVEMENT IN LONG TERM CARE FACILITIES (LTCF) - IMPLEMENTATION OF AN INTERNATIONAL SYSTEM

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Background: There is great variation among geriatric institutions and services regarding quality of care. Functional, social, health and administrative variables affect it greatly. The number of disabled old persons and of institutions increase continuously concurrent with a tendency to cost containment. State and insurers emphasize both quality and efficiency of services. Therefore an accurate, reliable instrument to assess quality in care is needed.

Objective: 1. To adopt and implement, internationally validated quality measures in LTCFs in Israel. 2. To assess differences in the prevalence of QIs between treating facilities.

Method: More than 500 LTCF residents were randomly chosen in 7 sites. The data was collected by nurses using the interRAI–LTCF, an international tool for health and care assessment for the elderly. The QIs used, were based on markers indicating presence of care or health conditions (e.g., psychosocial, medical, functioning mobility). Data were entered into algorithms of quality measures, adjusted for covariates (using stratification and regression).

Results: Institutions differ by their QIs. QIs regarding falls, burns, low BMI, inappropriate behavior, use of indwelling catheters, engaging in little or no activity will be described and presented (for example, percent of residents with inappropriate behavior varies between 13% and 54% across the participating facilities).

Conclusions: QIs development is a vanguard process in Israel. In the LTCF environment, the QIs may identify facilities that have particular types of care problems by comparison with their peers, and may be subject to more extensive monitoring. We used QIs in institutions to create internal

quality improvement and decision-making committees. This research may be an example for quality improvement in long term care in Israel.

Health policy implications: Austerity policy in health care maybe a "killer" for quality and provide many adverse effects. Austerity measures under awareness and smart control may benefit patients and providers. LTC is vulnerable to austerity measures and may be abused. Hence the importance of QIs in LTC.

HOSPITAL READMISSIONS AND EMERGENCY REVISITS IN THE U.S.: DATA, TOOLS AND FINDINGS FROM THE HEALTHCARE COST AND UTILIZATION PROJECT (HCUP)

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Hospital readmissions within a 30-day interval are costly and could reflect: severity and complexity of a patient's condition, quality of care in the hospital and/or the effective use of services outside the hospital. A number of policies are in use or under development in the U.S. aimed at avoiding readmissions. Payments for certain safety events that can lead to readmissions are reduced, payments for readmission for particular conditions are reduced, and comparative risk-adjusted rates of readmission by hospital are reported publicly. An aggregate saving in hospital cost due to better insurance for ambulatory care services was projected in the major health insurance reforms of 2010.

HCUP is a program of the Agency for Healthcare Research and Quality that assembles statewide, all-payer databases of inpatient (IP) discharges and emergency department (ED) discharges that can be used to study readmissions and revisits without revealing patient identity. Approximately 20 states have adequate data from all hospitals for linking IP and ED visits by the same person. We will briefly describe the availability of data and tools such as the Patient Safety Indicators, indicators of preventable admissions, and information for risk adjustment.

We will review 3 published studies using HCUP to address: (a) the effect of the number of different chronic conditions on readmission rates and hospital cost per year; (b) effects of adverse events in surgical patients on rates of death and readmission; and (c) differences in the likelihood of readmission for elderly enrollees in Medicare Advantage plans vs. the mainstream Fee-for-Service coverage. Each study is sensitive to methodology choices that are not uniform in the literature.

Finally, we will present interim findings from current research that combines IP readmissions and ER revisits for more complete patterns of observed hospital use for a particular chronic condition that reflects ineffective use or management of care outside the hospital.

COMMUNITY WARD: ENHANCED TREATMENT SERVICE IN THE COMMUNITY AS A SOLUTION TO TRANSITION CARE FAILURES AND HIGH RE-ADMISSION RATE

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Background: Studies and governmental data show that hospital 30 day readmission rate, both in Israel and in other developed countries averages 20%. Among the factors correlated with high readmission rate are old age, chronic diseases, polypharmacy, low socioeconomic status and more. The ministry of health set readmission rate as a quality criterion to Israeli HMO's, assuring designated budgetary funding if criteria are met. Maccabi Healthcare services studied the factors correlated with high readmission rate and established a new community service that identifies patients who are subject to being released from hospitalization in an internal medicine or a geriatric ward, and are suspected as being high risk for readmission, and offer them enhanced transitional care in the community.

Study Question: The study aims at evaluating the effectiveness of the new service: the community ward, using readmission rate as the designated criterion. The study explores factors influencing success all along the patients chain of custody from the hospital, through the community ward to the family physician.

Methods: The service was established in 1/2/2011 within 6 months of it's planning. It consists of a small interdisciplinary team of doctors, nurses, medical service coordinators, a social worker, clinical pharmacist and a dietitian. The patients are identified by the HMO nurses which operate within the hospital with the cooperation of the hospital team. The community ward team asses the patient's needs immediately following his discharge and takes responsibility of the patient for 7–10 days in coordination with the family physician. The method of care in much like in a hospital ward with physician rounds, discussions and resolutions, but the patient is at home.

Results: 2125 patients were referred and treated from opening of the service until today. Readmission rate in the intervention group was 14.7% compared with overall 22%. 34% of the patients received house visits from the team. Satisfaction of both patients and family physicians from the new service is high.

Conclusions: Our experience with operating a community ward in the past

2 years in Maccabi Healthcare services in two districts shows a potential for improving transitory care and reducing costs.

Health policy implications: Readmission is a major problem in medical care and results in excess morbidity and cost. A simple solution is presented and evaluated. Implying the solution to other health care organizations is feasible.

READMISSIONS TO INTERNAL MEDICINE DEPARTMENTS

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Background: Hospital overcrowding is high in acute care departments in Israel compared with OECD countries, and overcrowding in internal medicine departments is particularly high.

Study Question: To study the trends in readmission rates in internal medicine departments and to estimate the risk factors for readmission.

Methods: The research is based on the Hospital Discharges Database maintained by the Ministry of Health. We analyzed discharges from internal medicine departments that were hospitalized for at least two nights. Readmission was defined as overnight emergency hospitalization within 30 days, with stays in internal medicine or ICU departments. Trends by demographic, hospitalization and morbidity characteristics are displayed. A multivariate regression analysis determined the risk factors for readmission adjusting for age, gender, operated, LOS, emergency, admission, diagnoses, and admission to ICU.

Results: In 2011, there were 197 thousand hospitalizations discharged from internal medicine departments. The readmission rate was stable over the last decade, 19%–20%. The logistic model shows that patients with stays of 8+ days have OR to return within 30 days of 1.5 vs. patients with stay of 2–7 days. The risk for readmission increases with age, with OR=1.7 for those aged 85+, 1.5 for those aged 75–84, and 1.4 for those aged 65–74, compared with those aged less than 65. Males have a higher risk (OR=1.2) vs. females. The OR for those with neoplasms was 1.7, with CHF was 1.5, and with renal failure 1.3 vs. those without these diseases.

Conclusions: The rate of hospital readmissions in Israel was stable over the years.

Health policy implications: To try to reduce the readmission rate by preventative treatment and continuity of care in the community, particularly for populations with comorbidity, to be coordinated with the health funds.

CASE STUDIES TO BETTER UNDERSTAND READMISSIONS IN MINORITY SERVING HOSPITALS

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Background: The US Affordable Care Act penalized hospitals with high readmission rates. Minority-serving institutions have higher rates of readmissions, and may be financially disadvantaged.
Study Question: To better understand the characteristics, settings, and strategies that differentiate strong and poor performing minority-serving hospitals.
Methods: Our sample included high and low readmission hospitals with black patient populations >50%. Case studies were conducted using semi-structured interviews about clinical priorities, strategies to reduce readmissions, and general impressions about US policies. Themes and intensity of comments were coded and analyzed.
Results: Nearly all respondents felt that readmission rates are an important quality metric, and most felt their hospitals could do better to reduce readmissions. New programs were being implemented regardless of whether they were going to be penalized. Hospitals with fewer self-pay patients, higher occupancy rates, and higher margins had more programs to improve transitions of care, including call centers, focused attention on discharge planning, and accessing local external resources to support program staff. Nevertheless, all felt they were unable to reduce readmissions because of patient and community factors, including difficulties with paying for and managing medications, literacy, housing stability, and income.
Conclusions: Hospitals with better finances and higher occupancy are more likely to have targeted programs, whereas those struggling financially report the most concerns about the impact of social factors. Many of the programs were new, and their ability to successfully reduce readmissions is still unknown.
Health policy implications: Minority-serving hospitals in our case studies faced substantial challenges to reducing readmissions, including their own financial health as well as community and patient-level factors. Better understanding of the strategies and approaches that work in resource-poor

settings, or accounting for the poverty of the underlying patient population, are two potential strategies for ensuring that CMS's readmissions policies do not inadvertently worsen disparities.

FROM BENCH TO BEDSIDE: USING PREDICTIVE ALGORYTHMS AND PATIENT REPORTED MEASURES TO TARGET READMISSION REDUCTION AT CLALIT

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Background: Readmission reduction is at the focus of health care systems worldwide in efforts to improve efficiency across care settings. Yet, evidence on effective organization-wide implementation of readmission reduction strategies is lacking.

Study Question: We aimed to develop an organization-wide strategy for reducing 30 day readmissions of older internal medicine patients, including: high-risk patient targeting mechanisms, a transitional care intervention (focused both on inpatient and post-hospitalization care), and outcome assessment.

Methods: The comprehensive strategy includes a data-driven high-risk patient identification algorithm, classifying all older Clalit enrollees (65+) according to their a-priori risk for readmission (scores range 0-100); a nurse-led intervention to target high risk patients in all general hospitals in Israel; a post-discharge community follow-up arm; and a transitional care evaluation component, using a validated survey.

Results: Readmission rates in 2012 vary between 16.5% and 26.5% by hospital. The unique real-time admission risk identification algorithm exhibits relatively high predictive accuracy (c-stat = 0.69). Readmission risk scores are generated for all older Clalit enrollees and are available on the second day of admission. Care transition nurses were trained and stationed in each Israeli hospital, targeting high-risk patients and providing discharge planning intervention. Upon discharge, primary care clinic nurses call the patient and assess post-discharge needs, using a structured transitional care instrument. Initial implementation resulted already in 1350 completed surveys, indicating high quality of transitional care (average score: 84.4, of a 0-100 scale).

Conclusions: Feasibility of a large-scale organization-wide strategy involving readmission risk targeted interventions for all older Clalit patients (in any hospital as well as in all community clinics) was established. Early results show favorable patient evaluations.

Health Policy Implications: Targeting readmission reduction requires implementation of an all-encompassing approach, directed by sophisticated risk prediction tools to maximize efficiency, involving both hospitals and community care settings.

THE NEXT BIG CHALLENGE FOR US HEALTHCARE SYSTEM: SLOWING THE GROWTH IN SPENDING

Stuart Altman

Brandeis University, USA.

In my presentation I will discuss how the US has tried and failed to control health spending three times in the last 40 years. I will then discuss why the changes included in the current health reform legislation are not strong enough to control spending but that actions by states may be more effective. I will then discuss what is happening in the state of Massachusetts.

ECONOMIC MEASURES IN THE HEALTH SECTOR IN A COUNTRY UNDER A FINANCIAL ASSISTANCE PROGRAMME

Pedro Pita Barros

Nova School of Business and Economics, Universidade Nova de Lisboa, Portugal.

Since May 2011 Portugal is under a financial assistance program from the European Commission, the European Central Bank and the International Monetary Fund.

The National Health Service (NHS), run by the Government, has been targeted for more than 50 measures of reform under the Memorandum of Understanding that governs the financial assistance program, touching almost every area of activity of the NHS. We review the main measures present in the program, the degree of implementation and the effects produced so far. Progress in implementation has been uneven, with some areas progressing faster than others. The results are reviewed in terms of changes in the health system and, whenever possible, addressing both the economic and the health impact of the measures adopted.

A NEW VISION FOR CALIFORNIA'S HEALTHCARE SYSTEM: INTEGRATIVE CARE WITH ALIGNED FINANCIAL INCENTIVES

Richard M. Scheffler, Liora Bowers

University of California, Berkeley, USA.

An unprecedented, year-long collaborative effort involving policy experts from UC Berkeley, CEOs of major health insurers and health care delivery systems, and leaders from California's public sector has produced a detailed roadmap that would transform the state's health care system and improve care and outcomes while saving billions of dollars in the process.

Convened by experts from UC Berkeley's School of Public Health, forum members include presidents and CEOs of Anthem Blue Cross, Blue Shield of California, Cedars-Sinai Health System, Dignity Health, Health Net, HealthCare Partners, Kaiser Permanente, MemorialCare Health System, Monarch HealthCare, Sharp HealthCare and Sutter Health. The heads of these hospital systems, medical groups and health insurers joined state and federal health care officials in a series of meetings held throughout the past year.

UC Berkeley's Richard Scheffler, Distinguished Professor of Health Economics and Public Policy and director of the Petris Center on HealthCare Markets and Consumer Welfare, and Liora Bowers, director of Health Policy and Practice at the Petris Center, are lead authors of the report. While designed in the context of California's unique set of health care challenges, the initiatives endorsed by the forum offer relevant and realistic reforms for states across the country.

The report represents an innovative private sector approach to a problem that the federal and most state governments have failed at: improving quality and slowing the rate of health care spending. At the core of the forum's report are two interrelated proposals to fundamentally change how health care services are financed and delivered. The first entails a major shift toward the use of global budgets, which would be adjusted for the underlying health of patient populations. Payments would also be partly tied to quality of care and patient satisfaction measures to ensure that high standards of care are maintained.

INEQUALITY IN PRIVATE HEALTH EXPENDITURE IN ISRAEL: TRENDS IN THE PAST DECADE AND THE CASE OF EXEMPTION FROM CO-PAYMENT

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Background: The main guideline in the formulation of the National Health Insurance Law in Israel in 1995 was financing according to capability and services according to needs. Various studies that examined inequality in health care showed that for up to about a decade after the implementation of the law, the share of private health expenditure out of total health expenditure rose, as did inequality in such expenditure. One of the components of private health expenditure is co-payment for visits to the doctor and for purchasing medicines from the basket of services. In 2011, the income from co-payments amounted to about NIS 2.5 billion for the four sick funds. Co-payment is difficult for low socio-economic status, and the present system of discounts and exemptions does not optimally achieve its aims.

Study question: The research aims are: to examine private health expenditure over the past decade, the inequality trends according to the development of health "out of pocket" expenses, and the entitlement to a discount in co-payment: There may be additional groups of a low socio-economic status who should receive a discount but do not.

Methods: The Household Expenditure Survey of the Central Bureau of Statistics of Israel (CBS) provides data on private health expenditure as well as on the income levels of families, and the administrative files of the National Insurance Institute (NII) enable the examining the economic status of sick fund members (files on wages and employment and NII benefits).

Conclusions: The research is still being conducted.

Health policy implications: Cancellation of co-payment as one measure towards increasing equality in private expenditure will require the State to find alternate sources of financing the health basket. On the other hand, at a lower cost, the system of discounts to weak groups may be expanded so that the phenomenon of giving up on essential medication may be significantly reduced.

HEALTH AND HEALTH CARE DEMAND EFFECTS OF DOUBLE COVERAGE

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Background: Measurement of moral hazard effects on the demand for health care faces different challenges in countries where a National Health Service prevails. The Portuguese health system has a particular feature: the existence of mandatory health insurance schemes, known as *health subsystems*, based on professional occupation, in addition to a NHS said to be universal, comprehensive and almost free at the point of health care consumption. Supplementary health coverage is essentially exogenous, as people do not select a particular job position because of the associated health insurance.
Study Question: The largest health subsystem, ADSE, is for civil servants, for whom job security is the main issue. Health subsystems provide a natural testing ground for moral hazard effects, as selection is not a major concern (Barros, Machado and Sanz-Galdeano, 2008, Journal of Health Economics; Moreira and Barros, 2010, Health Economics).We measure the impact of this extra health insurance on the health of the population. From these questions, a direct policy implication emerges: should ADSE be nurtured or simply dismantled?
Methods: A three-equation model is estimated, one related to health status (self-reported health) and the other two related to use of resources (probability of using pharmaceuticals and number of visits to the doctor). The health equation and the pharmaceutical use equation contain latent variables. Use of pharmaceutical products is subject to prescription (for the most relevant treatments), and it may reflect physicians' moral hazard while visits to the doctor are mostly patient initiated. We estimate the model by a full information maximum likelihood.
Results, Conclusions and Health Policy Implications: Our results show that health insurance double coverage generates additional utilisation of health care without an effect on health. Under the Memorandum of Understanding of the financial rescue of Portugal, the ADSE should evolve to become complementary health insurance. Our results contribute to this current discussion.

ON THE CALCULATION OF THE ISRAELI RISK ADJUSTMENT RATES

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Objective: The Israeli risk-adjustment formula, introduced in 1995 and serves for the allocation of the health budget among the sickness funds, is exceptional, compared to countries with similar national health insurance system, in that it is not calculated on the basis of actual cost data of the sickness funds. The present article aims to evaluate the Israeli methodology.

Methods: The article examines the validity of the Israeli methodology used to set the 2004 risk adjustment rates and compare these rates with the "correct" ones which are derived from the 2004 internal relative cost scales of the sickness funds.

Results: The Israeli methodology is based on aggregating "quantity scales" of selected health services. It assumes constant unit cost across the sickness funds, an assumption which is implausible. Consequently, the actual rates are incorrect. Comparing the actual and the "correct" rates, it turns out that the actual rates over-compensate all the sickness funds in ages 0-14, and under-compensate them for insurees aged 55+. In age 0-4, the over-compensation per capita is about NIS 1,500 while the mean under-compensation in age group 75+ reaches NIS 2,000.

Conclusions: The current risk-adjustment formula distorts the intended completion on good quality care among the sickness funds, and turns it into a competition on good risks. After 17 years of using incorrect rates, the Israeli risk-adjustment rates should be calculated, as is common in other systems, based on individual cost data from the sickness funds.

HOW CAN REGULATORS MEASURE RISK SELECTION IN COMPETITIVE HEALTH INSURANCE MARKETS?

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Background: Many health-care systems are moving towards regulated competition, implying that insurers and providers of care are given instruments for efficiency (e.g. selective contracting and freedom to negotiate on price and quality) while the regulator sets certain rules to achieve public objectives (e.g. affordability, accessibility and quality of care). Most of these systems rely on 1) open enrolment and premium regulation to make health insurance affordable for the chronically ill and 2) risk equalization to reduce incentives for risk selection. Recent studies, however, indicate that current risk-equalization models do not reduce incentives for risk selection completely, while risk selection is a threat to the public objectives. If regulators want to take action against risk selection they first need to measure it.

Study Question: How can regulators measure risk selection?

Methods: We use a three-step procedure to answer our research question. First, we define risk selection in the context of regulated competition. Second, we make an inventory of all potential forms of risk selection. Third, we discuss how regulators can measure whether there is risk selection, and if so, to what extent.

Results/conclusions: We find that there are many different forms of risk selection. For example, all insurers' instruments for efficiency are also instruments for risk selection. Although there are many signals of risk selection, it is difficult for a regulator to proof definitively that risk selection takes place. For the interpretation of these signals it is crucial that regulators know the quality of the risk-equalization model in terms of under/overcompensation, e.g. for the chronically ill.

Health policy implications: We recommend 1) regulators to permanently monitor the extent of under/overcompensation by the risk-equalization system, 2) to relate the outcomes to the observed behavior by consumers and insurers in the market, and 3) to invest in relevant datasets to measure risk selection.

USING WAITING TIMES AS A TOOL FOR RATIONING CARE IN A MANAGEMENT CARE SETTING: IS IT A GOOD IDEA, AND IF SO, FOR WHOM?

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Background: Managed care is a broad term refer
ring to health plan strategies to affect utilization and quality other than demand-side cost sharing. Internal rules for approval based on "medical necessity" are one form of managed care.

"Moral hazard" is a predictable response of a rational consumer to the reduction of a price; the insurance causes the out-of-pocket price to fall when medical care is purchased. The price response by consumers is somewhat of an *unwanted* side effect of insuring against the risks of health loss. The theory suggests that by rationing care, a health plan can resolve the moral hazard problem. A central way to rationing care is by implementing the gatekeeper model (i.e. the patient must see a primary care doctor before seeing any specialist).

Study Questions:

1. To examine the use of waiting-times as a second phase tool to gatekeeper for rationing care by Israeli health plans;
2. To learn about the tension between the consumer demands for care in a full health insurance setting and HPs rationing care by waiting times.

Method and research tool: We analyzed the 2012 Brookdale Survey on waiting time in the Israeli community healthcare system, which had a sample of 2,850 persons and a response rate of 70%.

Results: The patients' assessment of their waiting times for (non-urgent) ambulatory services reveled that waiting times were experience differently, according to whether or not there was a doctor's referral and the degree of perceived urgency of the event.

Conclusions and health policy implications: By using differentiated waiting times as a tool for rationing care, a health plan can reduce the effect of the moral hazard problem. However this could results with unwanted side effects which affect health care consumers. Identifying the advantages and disadvantages of this tool, and considering perspectives of the demand, supply and expenditures could enhance the efficiency of health care system.

LESSONS FROM THE PENETRATION OF LONG-TERM CARE INSURANCE IN ISRAEL

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Background: Caring for the elderly and for people with disabilities constitutes a major challenge for the health and social services all over the world. Long-term care (LTC) is very costly both to the public system and to the elderly and their families. LTC insurance (LTCI) is one of the main privately financed LTC options available to individuals. However, this alternative is evidently not yet the most popular worldwide, as the percentage of people who purchase it is small. In contrast to other countries, Israel has an outstandingly high LTCI ownership rate: at the end of 2011, altogether 5.27 million people – 67% of all residents of Israel including children (about half of all adults aged 22+) – had some form of LTCI. Most policyholders (95%) were insured with a collective policy (through organizations or health plans (HP) – almost all through the health plans (around 80%).

Study Question: How did the Israeli LTCI market overcome the supply-and-demand barriers of penetration and became widespread?

Methods: Application of a conceptual health economics model using supply data (financial data and policies) and demand data (surveys of insureds), as well as legislation and regulation documents regarding the Israeli health and LTC insurance market.

Results: The most purchased LTCI in Israel is the collective LTCI offered by the HPs, which is an inexpensive, non-prestige alternative to the commercial LTCI. The supply side barriers of high prices caused by administrative costs and adverse selection are reduced, since the group is big enough to allow cross-financing. Demand side barriers such as false perception of the future need for LTC are averted due to the way this insurance is marketed, which is linked to the supplemental insurance. Moreover, insureds who were automatically enrolled tend not to cancel a policy when they learn that they own it. Barriers linked to care preferences are dealt with by regulation that stipulates that LTCI has to include a compensation benefit for LTC at home and to cover mental frailty.

Conclusions and health policy implications: Bearing in mind all the

disadvantages on the one hand, and the increased risk of financing LTC on the other, it is worth considering the efficiency of an inexpensive and low-coverage LTCI product, such as the collective LTCI marketed by HPs.

WHAT HAVE WE LEARNED ABOUT HOSPITAL PAY FOR PERFORMANCE: LESSONS FROM MEDICARE'S P4P HOSPITAL QUALITY INCENTIVE DEMONSTRATION (HQID)

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Background: Hospital pay for performance (P4P) has recently been initialed for Medicare patients in the United States. Nevertheless, many worry that P4P will lead providers to avoid offering surgical procedures to the sickest patients; that hospitals caring for indigent populations will be at a disadvantage; and that P4P will be ineffective in stimulating quality improvements.

Methods: We used data from Medicare claims and the Hospital Quality Alliance to study the impact of Medicare's 2003–09 P4P Hospital Quality Incentive Demonstration (HQID), the model for the program Medicare adopted. We examined: 1) changes in rates of coronary artery bypass graft surgery (CABG) among "high risk" patients with acute myocardial infarction (AMI) admitted to HQID hospitals and controls; 2) changes in process quality at HQID hospitals caring for a high proportion of indigent patients versus controls: and 3) changes in process quality and risk adjusted mortality at HQID hospitals and controls. We also report findings outcomes from a program similar to the HQUD in England.

Results: We found no evidence of problems in access as assessed by lower rates of CABG or slower improvements in quality at hospitals caring for higher proportions of indigent patients. Process quality initially increased overall after 3 years under P4P, but subsequently the improvements attenuated. There was no impact on risk adjusted mortality in the HQID, but the program in England showed a reduction in pneumonia mortality.

Conclusions: We found no evidence of problems in access or quality improvement at hospitals caring for indigent patients. While process quality initially improved, the impact attenuated over time and there was no improvement in mortality outcomes. Nevertheless the study of P4P in England suggests that outcome improvement is possible. The recently introduced US system of P4P may require further modification for it to be effective in improving quality of care.

UP-CODING IN A NHS

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Evidence from the US pointed out, over the years, to the existence of upcoding in management practices. Upcoding is defined as classifying patients in DRG codes associated with larger payments.
The incentive for upcoding is not particular to private providers of care. Conceptually, any patient classification system that is used for payment purposes may be vulnerable to this sort of strategic behavior by providers.
We document here that upcoding can also be present in a National Health Service where public, Government-owned and managed, hospitals have their payment (budget) tied to the classification of treatment episodes. Using DRG data from Portugal we find evidence that suggests upcoding is present.

PAY-FOR-PERFORMANCE IN MACEDONIA: BETWEEN A GOOD TITLE AND A BAD REFORM

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Background: The Ministry of health of Macedonia introduced pay-for-performance (P4P) system in all public hospitals. Three months after the implementation the reform created enormous frustration and distress among the great majority of specialized doctors who went on a general strike for 42 days. This was the first general strike of doctors over health policy reform since the independence of the country in 1991.

Study Question: To assess doctors' attitudes towards the proposed P4P model around four main issues (fairness, team work, relationship with patients, and delivery of services).

Methods: In total 1863 specialized physicians employed in all public hospitals are included in the Pay-for-Performance model in Macedonia. The questionnaire was distributed via email to 500 randomly selected doctors. In total 310 physicians who participate in the Pay for Performance responded to the survey and answered all questions. Exactly 89 emails returned due to wrong email addresses, full email boxes or other problems, thus not reaching the recipient.

Results: Overwhelming majority of the surveyed doctors or 95.2% (N=295) expressed concerns that the P4P as implemented is unfair and does not put justice to their work. Great majority or 88.3% of the doctors when asked "*How does it reflect over the teamwork at your department*?" choose negative options. Over 70% of the surveyed doctors stated that the project generates production of unnecessary diagnostic procedures. Finally, 61.4% of the surveyed doctors consider that project may have negative impact over the doctor/patient relationship.

Conclusions: Macedonian doctors resumed their work, but found no agreement with the Ministry of health to modify the pay-for-performance system. The reform has deepened doctors' frustrations and increased their job dissatisfaction.

Health Policy Implications: The most serious negative policy implication of this reform is that it forces doctors to migrate to private hospitals or to look for other employment opportunities abroad.

IMPLEMENTATION OF DRG REIMBURSEMENT SYSTEM FOR CHF DIAGNOSIS IN INTERNAL MEDICINE DEPARTMENTS IN ISRAEL; CLINICAL, FINANCIAL AND OPERATIONAL CONSEQUENCES

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Background: Congestive heart failure (CHF) is one of the most common diagnoses for hospitalization in internal medicine. There are about 86,000-100,000 CHF patients In Israel. An Israeli study of CHF patients demonstrated average length of 6 days stay and mortality of 4.7%. The use of DRG reimbursement for CHF diagnosis in the world shows reduced length of stay without harming the quality of care or increased mortality.

Study Question: The influence of DRG reimbursement for CHF diagnosis in internal departments in the following aspects: average length of stay, operating metrics and economic indicators.

Methods: CHF diagnosis was defined by DRG reimbursement in 4 departments of internal medicine ("intervention departments"). Additionally, 4 control departments remained rewarded by the system of per-diem payment as currently acceptable. During a period of six months, data from 287 cases were collected in the following aspects: average length of stay, quality measurements of process and costs associated with hospitalization.

Results: No significant differences were found between the two kinds of departments in aspects of: age, period of arrival to the hospital and CHF diagnosis and Charlson score. Average length of stay was 4.3 ± 3.3 days and 4.6 ± 3.6 days in the intervention and control departments, respectively. No significant correlation was found between the presence of patients in intervention or control departments in aspects of: readmission rates after 7 days and 30 days, mortality during hospitalization or after 30 days and the correlation between admission rates and discharge diagnosis.

Hospitalization pricing costs that included: menpower, drugs, imaging tests, consultations, visits in medical institutes and perishable equipment- showed no significant differences between groups.

Conclusions: The lack of difference between readmission indicators and

mortality, emphasizes that DRG reimbursement of CHF does not affect the quality of care, and does not increase hospitalization costs.

Health policy implications: In face of the short length-of-stay at departments of Internal medicine in Israel, it is impractical that DRG of diagnosis would further shorten the length of stay, albeit other diagnosis groups should be evaluated.

REIMBURSEMENT CONDITIONED BY TIME OF HIP FRACTURE SURGERY CAN DECREASE LONG-TERM MORTALITY OF ELDERLY PATIENTS

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Background: In April 2004 the Israeli Ministry of Health decided to condition DRG payment for hip surgery by time between hospitalization and operation, giving a fine for every day's delay beyond 48 hours. An evaluation study performed two years after the reform has shown the positive influence of the reform on patient's survival in the hospital.

Study Question: This study evaluates the impact of the reform on the longer-term mortality of patients.

Methods: A retrospective study based on data from the national trauma registry for the years 2001-2007, with surveillance on two-year survival through data of Ministry of Internal Affairs. The study population includes patients aged 65 and above with an isolated hip fracture following trauma. Mortality curves and Cox Regression were utilized to compare the influence of different parameters on long-term mortality.

Results: Earlier surgery had a significant positive impact on survival through the whole study period. In the period after the introduction of the new reimbursement system for hip fracture surgeries, a significant decrease in the longer-term mortality was observed up to 6 months of follow-up, even when adjusted by patients' age, gender and the receiving hospital. Females had lower hazard ratios than males, while receiving significant preference in waiting time for surgery and access to rehabilitation care. The influence of gender on survival decreased with the length of follow-up.

Conclusions: The reform appears successful in decreasing the long-term patient mortality after hip fracture through influencing surgical practice. Future research should concentrate on the influence of patients' age and gender on the relationship between waiting time for hip fracture surgery and survival.

Health policy implications: The evidence suggests that as a result of reimbursement reform, hospitals may change their policies of prioritizing patients for treatment, while trying to find a balance between the preference for earlier surgeries and the clinical contra-indications for such surgeries.

HOSPITAL EXPENDITURE SERVICES IN ISRAEL COMPARED WITH THE OECD - IN TERM OF PURCHASING POWER PARITIES (PPP)

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Background: Israel spends one third of the overall health care expenditure on hospital services, 35% in 2008, similar to the OECD average (36%). The health spending per capita is lower compared with OECD countries.

Study Question: To compare the spending for various medical and surgical hospital services by type of service in Israel with the OECD countries.

Methods: The comparison is based on data from the OECD questionnaire on discharges, LOS and quasi-prices from 26 countries by type of service for 2009, which were standardized to PPP in US dollars. The measures were collected for six medical cases (AMI, angina pectoris, cholelitiasis, heart failure, bronchus and lung cancer, pneumonia, normal delivery) and 26 surgical procedures (including colorectal resection, CABG, hip replacement, hernia). It includes data for inpatients that discharged alive, stayed overnight and the LOS was not greater than 1.5 standard deviations above the average for that service. Israel data are based on the general public hospitals as was reported to the National Hospital Discharges Database in the Ministry of Health. The price estimate per service is based on the DRG or per diem tariff.

Results: For most of the medical and surgical services, the average LOS in the public hospitals in Israel is lower compared to the OECD countries, as were the average quasi-prices (PPP).

Conclusions: The lower average costs for the cases studied in Israel compared with other OECD countries, are consistent with the lower overall total health spending per capita in Israel.

Health Policy Implications: It is important to maintain a responsive reimbursement plan to improve the care and decrease the costs in the hospital setting by adding more DRG's for specific services.

BECOMING POOR AND THE CUTBACK IN THE DEMAND FOR HEALTH SERVICES IN ISRAEL

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Background: Income inequality is only one aspect of inequality and in recent years important emphasis has been given to health inequalities. There is often also a strong link between income poverty and poor health.

Study Question: This paper checks whether individuals facing the threat of poverty are curtailing their consumption of various goods and services in a given order and if, among the expenditures that are cut back, there are also health expenditures. The location of individuals in this order of cutback is then used to derive the degree of their deprivation and the factors that affect the extent of this deprivation.

Methods: This order of curtailment of expenditures is obtained on the basis of an algorithm originally devised to derive the order of acquisition of durable goods. Having found the order of curtailment of expenditures on the basis of the 2003 Israel Social Survey we then estimate an ordered logit regression whose latent dependent variable is assumed to measure the individual degree of deprivation.

Results: The results of this estimation show that, other things constant, the individual latent level of deprivation increases with the size of the household, first increases and then decreases with the age of the individual, is higher when the individual has children under the age of five, has a low educational level, a low income, and when he/she is separated or divorced. Finally deprivation is found to be lower among individuals with a good health.

Conclusions: Discovering the order of curtailment of expenditures, including health expenditures, of individuals facing economic difficulties can hence become an important policy tool.

Health policy implications: Finding the determinants of the extent of such a deprivation should help policy makers focusing their attention on the population subgroups most likely to curtail their health expenditures when facing economic hardship.

THE CHANGING ROLE OF COMMUNITY NURSING: MANAGERIAL PERSPECTIVES IN NURSING AND MEDICINE

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Background: The profession of community nursing has been changing in recent years, among other things because of the changes in morbidity and the shortage of medical manpower. Community quality-measurement (QM) programs have induced the profession to look more at treatment, patient management, and system-wide care. The transformations affecting the nursing profession influence the entire system of community care. Israel is unique in that all community nurses are salaried employees of a health plan.

Study Question: The study examines the transformation of the nursing profession in recent years and the perspectives of community health managers on both it and the envisaged future changes.

Methods: A literature review examines the transformation of the community-nursing profession in Israel and abroad.

In-depth face-to-face interviews with some 70 nursing and medical managers in the community and leading figures in the field in Israel examine the conceptions about the future of the profession, and the barriers to its development.

Results: The study is still in the fieldwork stage. Currently, the managerial perspective appears to indicate a changing nursing role as regards managing illness, planned work, and QM where nurses have responsibility for some measures.

The main barrier mentioned is a fear that certain tasks would spill over into nursing from related professions.

There is difference between the health plans regarding their readiness to develop community nursing and grant nurses certain authorities.

Conclusions: The transformation of community nursing has found expression in different ways. In QM in particular and the improvement of healthcare, nurses are in a position to contribute significantly, strengthen measurement and optimize care.

Health Policy Implications: The developing role of community nursing may still be influenced and molded. Now is the time for policy makers to impact and institute changes, especially as regards nurses' responsibility in improving the quality of care.

THE IMPACT OF HEALTHCARE SYSTEM TYPE ON THE WEALTH-HEALTH GRADIENT: A COMPARATIVE STUDY OF OLDER POPULATIONS IN SIX COUNTRIES

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Background: Cross-national studies on health inequality have long demonstrated that economic well-being and health are positively associated, and that welfare states play an influential role in health outcomes.

Study Question: The principal goal of the present study is to provide a cross-national comparative analysis of the association between wealth and physical health in different healthcare systems of Sweden, the United Kingdom, Germany, the Czech Republic, Israel and the United States.

Methods: In addition to the descriptive statistical analysis (including Pearson correlation estimates), multiple regression equations were employed to predict health among the older population as a function of household wealth, while controlling for the sociodemographic and socioeconomic attributes of the respondents.

Results: In all six countries, without exception, wealth and health are positively associated. The findings also show that state-based healthcare systems produce better population health outcomes than private-based healthcare systems.

Conclusions: Based on this analysis and on increasing cross-national evidence that welfare states and healthcare systems play an influential role in public health outcomes, it appears that a country's healthcare system type produces variations not only in health outcomes, but also in the wealth-health gradient. Specifically, wealth has a more powerful effect on health in the United States than in the other five countries examined. The state-based and societal-based healthcare systems seem to mitigate the effect of wealth on health, by providing better and more equal access to healthcare services.

Health policy implications: The variations in the effect of wealth on health across healthcare systems allow the health-policy decision-makers to compare the efficiency of these systems. The United States, with its inefficient healthcare system and poor health outcomes, should serve as an example of what to avoid for other countries.

EQUITABLE RESOURCE ALLOCATION AND PERFORMANCE MEASEUREMENT: THE CASE FOR A COMPREHENSIVE RISK ADJUSTMENT MEASURE

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Background: Equitable assessment of healthcare performance and fair resource allocation according to need necessitate reliable and valid adjustments for the populations' health needs.

Study Question: We assessed the difference between allotted (based on the national capitation formula) and expected resource use according to the overall morbidity of Clalit's enrollees, and examined these differences according to socioeconomic area level characteristics.

Methods: The Johns Hopkins Adjusted Clinical Groups (ACG)® system was used to classify all Clalit enrollees (~4 million) into mutually exclusive morbidity categories, according to all diagnoses registered within Clalit's EMR systems during 2011. ACGs' classification is based on clinical and epidemiological characteristics of health conditions, their interactions, severity and duration. Standardized expected health care utilization was calculated based on morbidity burden using ACGs and compared with standardized rates of the Israeli National Capitation Formula (INCF). "Periphery" was defined according to definitions applied in the INCF.

Results: For each age-sex category there was a 25%-55% difference in expected resource use between enrollees from areas defined as "periphery" vs. all other regions (except for age 55-65 males where a reverse relationship was observed). Overall, expected resource use was 42% higher for patients from the periphery than from all other regions (much higher than the 5% higher rates set by the INCF). In all regions expected resource use was 5% higher in low socioeconomic areas, and 14% lower in high socioeconomic area as compared to the national INCF formula.

Conclusions: Similar to international studies (e.g., Canada), we show that performance of risk-adjustment according to an age based formula, even when adjusting for geographical area, provides an underestimation of needs in lower socioeconomic populations, and therefore is inequitable.

Health Policy Implications: Equitable risk-adjustment should be based on comprehensive morbidity measures, to ensure that appropriate resources are allocated to those who need them the most.

IS LONGER SURVIVAL MORE VALUABLE THAN BETTER QUALITY OF LIFE? ISRAELI PHYSICIANS' ATTITUDES TOWARD THE RELATIVE VALUE OF INNOVATIVE INTERVENTIONS IN CANCER AND CONGESTIVE HEART FAILURE CARE

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Study question: Willingness to pay (WTP) for innovative health technologies may vary between interventions that prolong patients' life-expectancy and interventions that only improve patients' quality of life (QoL), and among different types of disease. We determined how Israeli oncologists and family physicians value life-prolongation vs. QoL-enhancing outcomes attributable to cancer and congestive heart failure (CHF) interventions.

Methods: We presented physicians with two scenarios involving a hypothetical patient with metastatic cancer expected to survive 12-months with current treatment. In a life-prolongation scenario, we suggested that a new and innovative treatment increases survival at an incremental cost of $50,000 over the standard of care. Participants were asked what minimum improvement in median months of survival the new therapy would need to provide for them to recommend it over standard of care. In the QoL-enhancing scenario, we asked the maximum WTP for an intervention that leads to the same survival as the standard treatment, but increases patient's QoL from 50 to 75 (on a 0-100 scale). We replicated these scenarios substituting a patient with CHF NYHA Class IV instead of metastatic cancer. We derived the incremental cost-effectiveness ratio (ICER) per QALY gained threshold implied by each response.

Results: In the life-prolongation scenario the median cost-effectiveness thresholds implied by oncologists were $150,000/QALY and $100,000/QALY for cancer and CHF respectively. Median cost-effectiveness thresholds implied by family physicians were $50,000/QALY regardless the disease type. WTP for the QoL-enhancing scenarios was $60,000/QALY and did not differ by physicians' specialty or disease type.

Conclusions and Policy Implications: Our findings suggest that family physicians value life-prolonging and QoL-enhancing interventions roughly equally, while oncologists value interventions that extend survival more highly than those that only improve QoL. These findings may have important implications for coverage and reimbursement decisions of new technologies.

CHARACTERISTICS AND CLINICAL AND COST EFFECTIVENESS ASSESSMENT OF A COMMUNITY AMBULATORY SURGERY CENTER, COMPARED WITH A PUBLIC HOSPITAL

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Background: The growing healthcare costs and the introduction of new technologies enabled the shift of services to outpatients' facilities, in and out of hospitals. Zebulon Medical Center has 3 operating theaters in which operations, which do not require overnight supervision, are done for the last 10 years. Similar ambulatory operations are also done at Carmel hospital, a public hospital. The quality, adequacy (in terms of age, past of medical history and operative risk) and cost of both systems was not compared in Israel.

Study Question: To characterize Community Ambulatory Surgery (CAS) activities in terms of performed procedures and patients characteristics and co morbidities. To evaluate and assess the clinical outcomes including complications, hospitalization, need for re-operation patient satisfaction, and cost effectiveness of CAS compared with ambulatory surgery in a public hospital.

Methods: All individuals that came for an ambulatory operation, in both sites during 12 months, were interviewed on admission, and 4 and 24 weeks thereafter.

Results: 3315 patients were recruited [community: 2165, hospital: 1150], 85% of them completed 3 interviews as described above. Overall, there were no major differences between the two sites. Local anesthesia was used in 71% of the CAS operations compared with 50% in hospital. Most of the patients who were operated in the CAS and in the hospital will prefer the same site again. No major complications were observed in both settings, but CAS patients lost slightly more days from work. The major difference, that will be presented, is economical.

Conclusions: The low complication rates suggests that patient's selection for CAS or hospital was appropriate, thus contributing to a better use of resources considering the lower cost of ambulatory setting.

Health policy implications: Developing more accessible Community Ambulatory Surgery clinics will enable hospitals to focus on high risk patients, and to reduced health expenditures.

THE EFFECT OF THE NEW COLLECTIVE BARGAINING AGREEMENT IN ATTRACTING YOUNG PHYSICIANS TO THE PERIPHERY

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Background: Significant gaps exist between peripheral and central areas in Israel regarding the quality and availability of healthcare services, stemming, in part, from fewer specialists in the periphery. It is difficult to attract young physicians to train in peripheral hospitals, especially in certain specialties. The financial incentives included in the 2011 physicians' collective agreement for such physicians are expected to increase the number of residents in the periphery.

Study Questions: The paper examines whether and how the distribution of new residencies has changed in the wake of the new incentives [It is part of a larger study that seeks to assess the impact of the new collective agreement on the training preferences of young physicians].

Methods: Analysis of data from the Israeli Medical Association (IMA) Scientific Council regarding trends in the number of new residents per specialty and hospital from 2008–2013.

Results: Between the years 2000–2010 the number of residents in the southern and northern regions of Israel dropped more than 25%. Initial findings show that during 2011 their number increased significantly, by 120% (compared to 2010) in the full peripheral northern region, by 47% in the semi-peripheral northern region and by 17% in the southern region.

Conclusions: At this stage of research, the evidence indicates that financial incentives had a significant impact on medical graduates' residency preference, and enhanced their attraction to peripheral hospitals.

Health policy implications: Health care providers in the periphery need a sufficient number of well-trained physicians in order to provide quality services that are available and accessible. Information about the effect of the new agreement on attracting young physicians to the periphery can contribute to the promotion of beneficial healthcare policy and the reduction of national health disparities.

TRENDS IN THE CONCENTRATION AND THE PERSISTENCE OF HEALTH CARE EXPENDITURES IN THE UNITED STATES

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Background: Health care expenditures represent 18% of the US GDP, exhibit a rate of growth that exceeds other sectors of the economy, and constitute one of the largest components of the Federal and states budgets. Rising health care prices, the affordability of health care services and the ability to pay medical bills continue to stand out as major health policy concerns.
Study Question: The study aims to identify the factors that drive high health care expenses and the characteristics of the individuals who incur them.
Methods: The Medical Expenditure Panel Survey (MEPS) consists of 14,000 families and 35,000 individuals, who were interviewed face-to-face in their homes, using a structured questionnaire to produce health care estimates for the nation.
Results: In 2009, 1% of the population accounted for 21.8% of total health care expenditures, and in 2010, the top 1% accounted for 21.4% of total expenditures with an annual mean expenditure of $87,570. The lower 50% of the population ranked by their expenditures accounted for only 2.9% and 2.8% of the total for 2009 and 2010 respectively. Of those individuals ranked at the top 1% of the health care expenditure distribution in 2009, 20.5% maintained this ranking in 2010.
Conclusions: Relative to the overall population, those who remained in the top decile of spenders were more likely to be in fair or poor health, elderly, female, non-Hispanic whites and those with public only coverage. Individuals in the top tier of the healthcare expenditure distribution account for a large component of the health care expenditures associated with the treatment of high cost medical conditions.
Health policy implications: The Affordable Care Act was enacted with major provisions to expand health insurance coverage, control health care costs, and improve the health care delivery system. Studies that discern those factors associated with persistently high levels of medical expenditures are essential to the formulation of strategies that may yield cost efficiencies.

THE PARADOX IN TIMES OF AUSTERITY: A GROWTH IN NATIONAL HEALTH EXPENDITURES THROUGH ADDITIONAL HEALTH INSURANCE

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Background: Israel has one of the best national health services and a universal compulsory social National Health Insurance which entitles all citizens to a broad and uniform benefits package. Generally, health care in Israel is of high-quality and is delivered in an efficient and effective manner. However, during the last decade, Israelis are in pursuit of additional protection by purchasing all types of voluntary health insurance. Consequently, a large insurance market has developed with Israel ranking among the highest in the OECD countries.

Study question: To assess the public's attitudes and behavior in relation to additional health insurance.

Methods: A telephone survey was conducted among a representative sample of the Israeli adult population (N= 703).

Results: The leading reasons for supplementary insurance (SHIP) acquisition are: expectation of better treatment upon receiving care and desire to have a more extensive range of coverage. However, people acquiring SHIP have very low knowledge on the services and rights to which they are entitled. 41% of SHIP holders reported having used at least one service in the past year. Higher rates of use were observed in selecting specific caregivers.

Conclusions and Health Policy Implications: Acquiring SHIP became a default. A thorough independent assessment must be conducted in order not to acquire SHIP. Analyzing the leading reasons for SHIP acquisition reflects public concern that the basic health basket will not provide sufficient coverage when needed. A major economic crisis will either lead to a decline in the quality of services or increase the need to ration the national health basket. To compensate for this reduction, individuals will turn to private insurance. The private market will bloom, with dramatic changes in the public-private mix. Paradoxically, during times of austerity we may witness an increase in the overall health expenditure. This enigma will be the new challenge for policy-makers in health care.

CONTROLLING HEALTH CARE EXPENDITURE IN ISRAEL

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Background: Israeli Health National Insurance Legislation was passed in 1994 defining the system's finance sources, ensuring universal coverage, accessibility and a broad-based benefits package of health services.
The national health expenditure in 1995 was 7.6% of the GDP, almost the same in 2009 (7.5%), the fifth lowest among OECD countries. At the same time health care services and indices in Israel has improved.
Aim: To explain how Israel has controlled health care expenditure while improving outcomes.
Methods: Analysis of health care data from the CBS, the OECD, and a review of the literature. Leading senior managers were interviewed.
Results: Cost containment, side-by-side with improving health care delivery, can be explained by means of two main aspects:
FUNDING
Health care budget is allocated by capitation formula to the HMOs, which pay for services provided to the insured. Under a budget system, the HMOs are made to supervise expenditures (hospitals, primary health care, physicians).
The system is funded by the MOF general budget rather by parallel tax.
Payment based on Capping and local contracts between HMOs and hospitals.
RESOURCES
Managing the number of physicians. Declining ratio of nurses and hospital beds.
Primary health care providers as gate-keepers to specialists and hospitals.
The private sector plays an important role as a gateway to excess demands due to accessible complementary health insurance.
Most public discussion and pressure refers to controversial updates to the benefits package of health services, and not to other main health issues.
Conclusion: The efficient control of health expenditure leads to secondary side effects including: increase in private sector, inequities, rising out-of-pocket payments, vulnerability in public sector, accountability of hospitals decreases, investments and research and development in hospitals become minimal, shortage of physicians and nurses and waste of infrastructure in hospitals.

PALLIATIVE CARE PROVISION & THE CASE OF SABAR CLINICS: MUCH MORE TO THE STORY THAN MERELY COST-SAVINGS

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Background: Hospice emerged in the U.S. following the introduction of the 1982 Medicare hospice benefit, and inpatient and outpatient palliative care services have begun to proliferate in the U.S. over the last ten years. Israel has also enjoyed greater awareness of the issue in recent years, as exemplified by the 2009 Ministry of Health circular for addition of palliative care in the Essential Benefits package as well as the recent inclusion of palliative care as a medical specialty. Increased provision of palliative care to seriously ill patients is supported by numerous studies that have shown the cost-savings of targeted palliative care services, including hospice, inpatient and community-based offerings. Perhaps more than almost any other aspect of healthcare, however, palliative care provision depends greatly on various factors having little to do with quality or cost.

Study Question: Drawing upon U.S. experience and an Israeli case study in this area, what are the key considerations that affect provision of palliative care services?

Methods: This analysis will draw upon a combination of interviews with US palliative care stakeholders, experiences of California palliative care providers and existing literature. We also rely on a case study approach involving background and data from Israel's largest provider of hospice services, Sabar Clinics.

Results: The study develops a four-pillar framework for assessing the key considerations affecting provision of palliative care services. The four main pillars identified are: 1) Financial (reimbursement methods, monetary winners/losers); 2) Structural (workforce supply and training, facilities, technology); 3) Societal (religious, cultural, ethnic, caregiver); and 4) Logistical (clinical data availability, opioid access, prognostication capabilities, geography). It draws on examples and data from the U.S. and Israel to illuminate these considerations.

Conclusion & Health policy implications: The many studies on the topic have demonstrated that targeted provision of palliative care to seriously ill patients improves care quality and patient experience, while reducing costs

to the healthcare system. Nonetheless, we see a under-provision of hospice and palliative care services in the U.S. and even more so in Israel. Framing the key considerations that influence palliative care provision will facilitate the development of policies, approaches and practices to help increase access and adoption of such high-value care.

COST-BENEFIT OF INFECTION CONTROL INTERVENTIONS TARGETING METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS IN HOSPITALS

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Background: Infections caused by MRSA incur significant morbidity, mortality and costs.

Study Question: We aimed to evaluate the cost-benefit of infection control interventions to prevent spread of methicillin-resistant Staphylococcus aureus (MRSA) in hospitals and to examine factors affecting economical estimates.

Methods: Systematic review of studies assessing infection control interventions aimed at preventing spread of MRSA in hospitals and reporting intervention costs, savings, cost-benefit or cost-effectiveness. We searched Pubmed and references of included studies with no date or language restrictions. We used the Quality of Health Economic Studies tool to assess studies' quality. We report cost and savings per month in 2011 US$. We calculated the median save/cost ratio and the save-cost difference with interquartile (IQ) range. We examined the effects of MRSA endemicity, intervention duration and hospital size on results.

Results: Thirty-six studies published between 1987-2011 fulfilled inclusion criteria. Fifteen of the 18 studies reporting both costs and savings reported a save/cost ratio >1. The median save/cost ratio across all 18 studies was 7.16 (IQ range 1.37-16). The median cost across all studies reporting intervention costs (N=31) was 8,648 (IQ range 2,025-19,170) US$ per month; median savings were 38,751 (IQ range 14,206-75,842) US$ per month (23 studies). Higher save/cost ratios were observed in intermediate to high endemicity setting compared to low-endemicity setting, in smaller hospitals and with longer intervention duration.

Conclusions: Infection control intervention to reduce spread of MRSA in acute-care hospitals showed a favorable cost-benefit ratio. This was true also for high MRSA endemicity settings.

Health policy implications: Summarizing the cost-benefit of infection control interventions will assist infection control practitioners, hospital managers and other decision makers in the healthcare organization in allocating resources optimally that should be considered in Israeli hospitals as well.

USING THE DELPHI METHOD FOR SELECTING MEDICAL TECHNOLOGIES UNDER BUDGET CONSTRAINTS: A FEASIBILITY STUDY

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Study question: To examine whether the Delphi method can provide a convenient tool for selecting medical technologies for inclusion in the National List of Health Services (NLHS) in Israel under a pre-defined budget constraint.
Methods: The Delphi method was applied in two groups: medical specialists (oncologists and cardiologists) and observers in the NLHS committee. Participants in each group were anonymously asked to choose five of ten suggested technologies from the list of technologies submitted for inclusion in the 2012 NLHS and rank them according to importance. Subsequently, the participants repeated the experiment after receiving aggregated feedback on the relative ranking of each technology within the same group after the first round. Comparison of the results was performed using descriptive statistics and non-parametric tests.
Results: After two rounds of the experiment, observers and medical specialists reached agreement on four of the five highest ranked technologies in each field (oncology and cardiology) regarding their importance to be included in the NLHS. Three of these four technologies were indeed included in the NLHS for 2012.
Conclusions: The Delphi method is one of the best-known techniques to control group interaction and reach a consensus by utilizing the expertise of committee members. The study demonstrated the feasibility of the Delphi method for ranking technologies.
Health Policy Implications: The Public Advisory Committee responsible for recommending new technologies for the NLHS has to choose among competing medical technologies under budget constraints. The decision-making process must minimize individual interests of committee members and

reduce possible biases and faults while building up the best health portfolio available. The Delphi method may be used as a convenient tool for reaching a rapid agreement on utilization of resources of the healthcare system under budgetary constraints. Further studies are needed to explore this method with a larger number of technologies.

THE IMPACT OF EHR SYSTEMS ON REDUCING AVOIDABLE ASMISSIONS FOR MAIN DIFFERENTIAL DIAGNOSES

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Background: Emergency departments (ED) are characterized by over-crowding and time constraints. This may damage physicians' ability to make informed decisions. Therefore, the healthcare sector deals with problematic outcomes (e.g. redundant admissions). While, many hospitals have implemented electronic health records (EHR) systems, there is still limited knowledge regarding the contribution of EHRs to admission decisions.

Study Question: To assess the contribution of EHR systems to decision-makers at EDs by investigating whether EHRs has improved the admission decisions.

Methods: We used a track log-file analysis of ED referrals in several Israeli hospitals. Log-files provide an objective measure of system usage. We compared decisions on patients classified by several differential diagnoses (DDs), made with or without using EHR systems.

Results: A negative relationship between using EHR and redundant admissions was found. Among DDs, using EHRs was most impactful for gastroenteritis, abdominal pain, and urinary tract infection in reducing short-term readmissions, and gastroenteritis, abdominal pain, and chest pain in reducing single-day admissions. Additionally, we found that using external information (provided online by health suppliers) contributed more to this reduction than local files (available only in the specific hospital). Thus, external information produced larger odds' ratios (of the β coefficients) in reducing redundant admissions.

Conclusions: Using EHR systems led to a reduction in short-term readmissions for all patients. Additionally, patients' external medical history may imply a thorough patient examination, eliminating unnecessary admissions. Nevertheless, in many instances, physicians did not use EHR at all, probably due to the limited time resources in EDs.

Contribution and Health policy implications: The findings can contribute to the fields of health economics and medical informatics by focusing on the relationship between using EHRs and more accurate admission decisions. The findings are relevant to both physicians and policy makers. This is a major advancement in reducing funds invested in redundant admissions.

SCREENING TO PREVENT EARLY-ONSET OF NEONATAL GROUP B STREPTOCOCCAL DISEASE: A COST-UTILITY ANALYSIS

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Background: In Israel, around 42 children are born annually with sepsis and meningitis as a result of Group B Streptococcal (GBS) disease. Israel currently only screens mothers with defined risk factors (around 15% of all births) in order to identify candidates for Intrapartum Antiobiotic Prophyhlaxis of GBS.
Study Question: Should Israel screen all mothers-to-be to prevent GBS?.
Methods: Standard Cost-Utility Analysis.
Results: Expanding culture screening from 15% to 85% of mothers-to-be, will decrease the number of GBS births from 42 to 17. The initial 2.9 million NIS incremental intervention costs are offset by decreased treatment costs of 1.9 million NIS and work productivity gains of 0.8 million NIS as a result of a decrease in neurological sequelae from GBS caused meningitis. Thus the resultant net cost of the intervention is only around 134,000 NIS. Culture based screening will reduce the burden of disease by 12.6 discounted Quality Adjusted Life Years (QALYS), giving a very cost effective baseline incremental cost per QALY (cf. risk factor screening) of 10,641 NIS. The data was very sensitive to rates of anaphylactic shock and changes in the percentage of meningitis cases that had associated long term-sequelae.
Conclusions: Culture-based GBS screening is cost-effective.
Health policy implications: Israel should adopt universal culture-based GBS screening.

EFFICIENT PRIVATE-PREVENTION AND PROGRESS IN CURING-TECHNOLOGY

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Summary: The medical costs associated with obesity, smoking and other non-healthy habits, which account for more than 20% health spending, are preventable. Hence, low levels of private-prevention result in a significant aggregate shift of spending, away from nonmedical-consumption and medical-care associated with competing medical risks. Such a shift in spending affects relative incentives to innovate in the different sectors, through market-size effect. As these aggregate effects on technological progress and bias are not internalized, private prevention efforts are inefficient even absent insurance distortions (i.e. Ex-Ante Moral Hazard).

Background: Recent studies have documented substitutability between the effectiveness of curing-treatment and private-prevention efforts. Namely, in light of significant improvement in curing technology, private-prevention effort decreases and consequently the prevalence of medical condition increases. See for example Lakdawalla et al. (QJE, 2006) and Peltzman (JHC, 2011), for the case HIV and Obesity.

In their recent contribution, Bhattacharya and Packalen (Journal of Health Economics, 2012) identify reversed causality: a higher level of prevention decreases demand for treatment and thereby hinders progress in medical technology. They show that private prevention efforts are excessive compared with the social optimum, and when applying this theoretical framework to obesity and its related severe medical conditions, they provide empirical evidence that subsidizing obesity is welfare improving policy.

The present study elaborates on Bhattacharya and Packalen (2012), by accounting for the effect private prevention on the relative incentive to innovate nonmedical-technologies, and medical-technologies for different medical conditions non-preventable. Furthermore it studies the efficient allocation of different private prevention efforts (reducing smoking and improving diet for example)

Conclusions and policy implications: Private-prevention may be insufficient or excessive, compared with social optimum which depends on the technological opportunities in the different sectors. Under symmetric technological opportunity private prevention is likely to be insufficient,

resulting in excessive medical spending and progress in curing technology for preventable medical conditions. In this case, subsidizing prevention is welfare improving. When facing multiple preventable diseases, private prevention efforts are biased toward the technological disadvantaged disease, compared with social optimum. This distortion can be corrected by corresponding differential subsidy for prevention.

NOW AND LATER: THE PROBLEM OF SELF CONTROL

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One of the challenges of human life is that what is good for us right now is often not what is good for us in the long term: Dieting for example is not so much fun now, but good for the future, saving is not fun now but good for the future… medical testing, procrastination etc. When we face such tradeoffs we often focus on the short term rather than our long terms goals and in the process get ourselves into trouble. But wait! There is hope. By understanding where we fall short, there are methods we can use to overcome our natural (and less than desirable) inclinations.

ABSTRACTS

ePoster Presentations

UTILIZATION OF DRUG ELUTING STENTS (DES) FOR PERCUTANEOUS CORONARY INTERVENTIONS IN ISRAEL

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Background: The use of DES for the treatment of patients with acute coronary syndromes has become a standard of care. DES implantation is associated with reduced rate of re-stenosis and re-intervention compared with bare metal stents (BMS). A national registry for heart catheterization has been established at the Israel Center for Disease Control (ICDC) since 2008.
Study Question: To examine the extent of implantation of DES use during Percutaneous Coronary Interventions (PCIs) in Israel.
Methods: Monthly reports are submitted to the ICDC from all the intervention cardiology units in Israel. The information includes the total number of primary and non-primary PCIs, diagnostic catheterizations and structural procedures. In addition the number of balloons, BMS and DES utilize is reported. All the reported procedures are according to ICD-9 codes.
Results: In 2011, 20,953 PCIs were performed and 19,060 stents were implanted. In 9,649 patients only BMS were implanted and in 9,411 patients at least one DES was implanted. On average, DES was implanted in 46.1% of all PCIs. This rate is similar to studies published in other countries. There was great variation between the different cardiology units, ranging from 25% to 82% of all PCIs.
Conclusions: There is a great variation in utilization of DES among the Medical Centers in Israel. Possible explanations are differences in patient characteristics, the center policy and the cardiologists' approach.
Health policy implications: DES utilization in relation to outcome endpoints should be evaluated to ensure optimal stent usage.

CESAREAN DELIVERY ON MATERNAL REQUEST: PERSPECTIVES ON POLICY

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Background: Cesarean Delivery on Maternal Request (CDMR) is performed in the absence of medical indications. The support for CDMR by obstetricians varies between medical centers (15%-80%) and may be explained by characteristics of the women requesting CDMR, physician's demographic characteristics and attitudes.

Aim: To assess the variability regarding policy towards CDMR in Israel and to determine the factors associated with physician's perspective.

Methods: Face-to-face interviews were carried out with the heads of the Obstetrics and Gynecology departments in 22 medical centers. Self-completion questionnaires regarding physician's socio-demographic and professional characteristics as well as attitude towards 20 cases of women requesting CDMR were completed by 222 obstetricians.

Results: According to the opinion of the heads of departments, there are no recommendations for CDMR. However, almost half of the respondents would agree to perform CDMR in specific cases. Only 2.3% of obstetricians would support a women seeking CDMR with no apparent reason. The likelihood to comply with her request for CDMR, increased with woman's age and complicated obstetrical history. Obstetricians who were older, and had more years of experience in the delivery room were twice as likely to comply with CDMR. Legal issues had no impact on their decision. A majority indicated that the procedure should be financed by the woman.

Conclusions and Health policy implications: Physicians in Israel demonstrate a relatively low support for CDMR. The inconsistency in the rates of compliance to CDMR may be a consequence of the individual physician's attitude towards the circumstances surrounding the woman's request and their own personal characteristics. Analysis of the considerations for the physicians' perspectives including funding, may provide a well- informed basis for determining uniformity and equality across the decision making process and health policy in times of austerity.

THE MYTH THAT ANNUAL ADDITION TO THE ISRAELI HEALTH "BASKET" INCLUDES DEVICE-BASED NEW TECNOLOGY IN THE PUBLIC HEALTH SECTOR

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Background: The Israeli National Health Basket of drugs and technologies (IHB) is updated annually to allow introduction of selected new drugs and device-based technologies. The Basket Addition Committee (BAC) process is professional one, based on its budget and upfront applications. The budget is allocated almost entirely to the sick funds (HMO's) while the hospitals are partially reimbursed for annual expenses by a process of updating reimbursements prices (increase and specific new pricing). Altogether, Israeli hospitals invest at least 62 million-NIS annually for new device-based technologies.

Study Question: Does the annual increase of the IHB allow full compensation for the increase hospital expenditure for device-based technologies?

Methods: Analysis of the IHB annual budgetary increases (2007-2013) according to: allocation for drugs, vaccinations, medical nutrients, genetic-related expenses (screening and treatment), in-hospital device-based technology, ambulatory technology (not mandatory in-hospital) and separately the devices costs for HMO's.

Results: The average IHB addition was 333 million-NIS. Of this, an average of 83% was given for new drugs (of which one-half were Oncological that might have a specific supplier-HMO reimbursement solution), 3.6% for genetic-related indications, 3.1% for vaccinations, 0.6% for medical nutrients. For non-drug 6.8% was allocated for the cost of devices, 1.9% for ambulatory technology, and only 0.6% of the budget (annual sum of 2 million-NIS for 2 technologies) was devoted for in-hospital device-based technologies.

Conclusions: The BAC makes a negligible difference and disproportional (3.2%) in respect to the rising costs of such technologies in hospitals. The explanation may be connected to opposition by the major pharmaceutical companies and might be better promoted by a good team of lobbyists that has thought out its ideas and presented them well.

Health policy implications: An adjusted method for reimbursing hospitals for new device-based technologies is needed. One possibllity is allocating a predestined portion of the annual IHB budget to be competitively awarded only for in-hospital technologies.

THE EFFECT OF INTEGRATED TELE-MONITORING AND DISEASE MANAGEMENT PROGRAM FOR CHRONIC HEART FAILURE PATIENTS ON CAREGIVERS' BURDEN AND QUALITY OF LIFE

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Background: Population aging and increased demands to care for complex chronic conditions highlight the important role of informal caregiver, as a source of support for the patient and a resource to the healthcare system.

Study Question: Measuring the impact of a chronic disease management program on the primary caregiver's (PC) burden, mental and physical health.

Methods: 450 pairs of Level III-IV CHF patients and their PC were randomly divided into intervention and control groups. Patients and PC were assessed at enrollment, 6 and 12 months using Patient Assessment of Chronic Illness Care (PACIC) for patients and a demographic questionnaire, a quality of life questionnaire (SF12) and Zarit Burden Interview (ZBI) for the PC.

Results: The ZBI score of the intervention group was significantly lower than the score of the caregivers in the control group after 6 months (5.59 and 8.49, respectively), and after 12 months (4.15 and 9.28 respectively). The PACIC sub-scales were significantly associated with a lower caregiver burden score after 6 and 12 months (β= -0.119 and β= -0.119, respectively), Multivariate analysis found a significant positive association between chronic care scores and primary caregivers' mental health scores ($p < .001$).

Conclusions: Caregivers of patients who participate in a disease management program experience a lower burden of care and report better long term mental health outcomes compared to PC of patients who do not participate in such a program.

Health Policy Implications: In an era of reduced budgets, declining availability of professional caregivers, supporting the PC is becoming increasingly essential. Integrative, comprehensive care in a disease management and remote monitoring program has a beneficial impact on the PC of chronic patients, manifested as a reduced experience of burden and improved health outcomes.

ANTIBIOTIC STEWARDSHIP IMPLEMENTATION AT TEL AVIV MEDICAL CENTER, ISRAEL: THE WAY FORWARD

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Background: Increases in antibiotic use in hospitals contribute to the development and spread of antibiotic-resistant bacteria. Infections with antibiotic-resistant organisms are associated with longer lengths of stay, mortality and costs. It is estimated that 30%-50% of antibiotic use in hospitals is inappropriate. In the past decade, hospitals worldwide have implemented antibiotic stewardship programs (ASP) to promote rational use of antibiotics.

Study Aim: To describe the results of an ASP pilot program in one internal medicine ward at Tel Aviv Medical Center from May-December 2012.

Methods: A multidisciplinary ASP team consisting of the deputy director of the hospital, an infectious diseases specialist, and a clinical pharmacist, conducted weekly reviews of all antibiotic prescriptions with the clinical team. For each patient, the team reviewed clinical and laboratory susceptibility data, and recommended either no change in antibiotic treatment, treatment de-escalation (e.g. stopping some or all antibiotics, changing from IV to oral therapy), or escalation (e.g. adding a drug, changing from a narrow-spectrum to a broad-spectrum agent). Antibiotic expenses during the study period were calculated.

Results: The ASP team reviewed 346 cases. The team recommended no change in antibiotic treatment for 201 patients (57%), de-escalation for 123 (35%), and escalation for 22 (6%). In November and December there was a modest increase in the proportion of patients requiring no change in treatment, which reflects improved prescribing practices. Antibiotic costs in the ward decreased from74,855 NIS in 2011 to 63,348 NIS in 2012 (-15%), with most of the decrease occurring after the ASP was in place.

Conclusions: The ASP intervened in over 40% of cases to optimize antibiotic treatment and reduced antibiotic expenses.

Implications for health policy: In 2012 the Israel Ministry of Health issued guidelines requiring all hospitals in the country to institute an ASP. Our experience demonstrates that such programs are feasible and can play a significant role in guiding treatment.

IMPROVEMENT IN BLOOD PRESSURE AWARENESS AND CONTROL IN THE CONTEXT OF THE QUALITY INDICATORS IN COMMUNITY HEALTH PROJECT IN ISRAEL

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Background: In the early 2000s, blood pressure (BP) documentation among the general adult population was adopted as one of the indicators of Israel's Quality Indicators in Community Health (QICH) project. BP documentation increased from 2003 to 2007, but data on change in BP awareness and control over this period are lacking.

Study Question: Have BP awareness and control improved since BP documentation was incorporated into the QICH project?

Methods: Participants (n=1,104, aged 25-74) were randomly selected from the Hadera district urban population, stratified by gender, age and ethnicity (Arab or Jewish). Socio-demographic, lifestyle, chronic morbidity, and drug therapy data were collected during 2002-2007. A subsample (n=764) also provided anthropometric and blood-pressure (BP) measurements. Hypertension was defined either as physician diagnosis, anti-hypertension drug therapy, or ≥140 systolic or ≥90 diastolic mmHg BP levels. Differences between those evaluated in 2004-2007 vs. 2002-2003 in BP stage (across JNC-7 categories, where a higher category indicates poorer BP control) and in hypertension awareness and control were evaluated in multivariate regression models.

Results: After controlling for possible confounders, the odds ratio (OR) (95% CI) of being in a higher JNC-7 category was 0.58 (0.38-0.89) for those evaluated in 2004-2007 vs. 2002-2003. Among participants with hypertension (n=335), 70% were aware, 44% of whom exhibited adequate BP control. In multivariate analysis, the OR (95% CI) of being "aware-and-uncontrolled" vs. "aware-and-controlled" was 0.43 (0.19-0.98) for those evaluated in 2004-2007 vs. 2002-2003. The OR of being "unaware-and-uncontrolled" vs. "aware-and-controlled" was 0.37 (0.14-0.96) for those evaluated in 2004-2007 vs. 2002-2003; but remained higher among Arabs than Jews (OR: 3.33; 95% CI: 1.35-8.22).

Conclusions and Health Policy Implications: Subsequent to the incorporation of BP documentation into the QICH project, BP awareness and control improved. Culturally-relevant interventions may be needed to reduce the disparity between Arabs and Jews in hypertension awareness and control.

Human factors engineering: Improving Blood collection process in emergency department

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Background: Blood collection is one link in the chain of events that is required in order to complete a diagnosis of a patient at the emergency room. Obtaining a good sample is crucial to the medical diagnosis process. Errors in blood collection vary from unlabeled or mismatched sample and patient identification failures, to providing wrong sample insufficient to complete the test.

Study Question: The study aims to examine the blood collection process at the emergency room, explore the main weak points in the process, and improve the process by using participatory ergonomics and other multidisciplinary tools.

Methods: Observations on 96 processes of blood collection were performed over a month at the emergency room of a large urban hospital. The observers documented every detail of the blood collection process during morning and evening shifts. Multidisciplinary work team developed an intervention program according to data analysis results, in order to improve the blood collection process.

Results: In 30% of the cases there was no patient identification, in 62% of the cases there was incomplete identification, only in 8% of the cases full identification was performed. In addition, only in 10% of the cases label verification and matching was performed. Most of the blood collections were performed incorrectly in terms of the order of the stages in the process, for example: in 32% of the cases the process started by performing the venipuncture instead of printing the tube label and identifying the patient.

Conclusions: the study revealed major problems in the process of blood collection which may have critical implications. Raising awareness among medical staff members along with improving the process performance is necessary to maintain quality and patient safety.

Health policy implications: Using interdisciplinary methods and developing participatory improvement programs can reduce quality and safety problems, more likely than enhancing regulations.

Factors affecting Length of stay in emergency department: a prospective observational study

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Background: Length of stay (LOS) is considered as a key measure of emergency department throughput, and from the perspective of the patient is perceived as a measure of healthcare services quality. Prolonged LOS can be caused by different internal and external factors.

Study Question: The study aims to examine LOS at the emergency room, explore the main factors that influence LOS and cause delays in patient care at the emergency room, and improve the process by using participatory ergonomics and other multidisciplinary tools.

Methods: Observations on 107 patients were performed over 3 months at the emergency room of large urban hospital. The observers observed every patient from the moment of entrance to the emergency department until releasing to home or to other department at the hospital. Multidisciplinary work team developed an intervention program according to data analysis results, in order to decrease and eliminate factors that prolong LOS.

Results: observations revealed general average total LOS of 7.18 hours at the emergency department. Significant differences in average LOS were found between patients that were released to home (4.8 h.) and patients that were transferred to hospitalization (9 h.). Average time from referring to hospitalization until leaving the emergency department was 3.2 hours. Shift exchange and hospitalizing department were found as significant factors which influence LOS.

Conclusions: the study revealed high average LOS which affected by several factors. High LOS may lead to crucial expenditures and may have implications on patient safety. Organizational change, communication improvement and time management may have positive effect on LOS.

Health policy implications: Using interdisciplinary methods and developing participatory improvement programs can reduce LOS, and improve the quality of health service at the emergency department.

IS THE CHANGE IN HEALTHCARE SERVICES ADEQUATELY FOLLOWED UP BY LEGISLATION? THE CASE OF THE ISRAEL NATIONAL CANCER REGISTRY

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Background: Reporting of cancer cases by **hospitals** to the Israel National Cancer Registry (INCR) has been mandatory by law since 1982. The state legislation was intended to ensure complete and timely reporting of newly diagnosed cancer cases, thus providing basic standards for quality, crucial for effective cancer surveillance. Other relevant sources of information which have evolved over the past decade outside hospitals were not addressed by that law. Case completeness of the INCR database has recently been evaluated in a national-level study.

Study Question: To estimate the completeness of the INCR database of 2005, both in accordance with the 1982 law and in light of the changes occurring in cancer healthcare services delivery in Israel.

Methods: Relevant cases from 41 medical institutions (MI) – 34 hospitals, 5 private pathology laboratories and 2 HMO community clinics – were independently collected. A computerized database was built for each of the MI and linked to the existing INCR database. Unmatched and also matched cases with discrepancies in primary site data and / or morphology codes were examined to identify missed reportable cases.

Results: Analysis of 1,852 cancer cases collected from 5 private pathology laboratories revealed a total completeness of 86.0%. However, preliminary analysis of the rest of the MI showed a completeness rate of 91.8%. In particular, a sub-analysis of public pathology laboratories from 2 hospitals showed a 91.7% completeness rate.

Conclusions: The incomplete reporting from private pathology laboratories highlights the need to review and change cancer reporting legislation, in view of the trend to outsource healthcare services.

Health policy implications: Based on these results, the 1982 law regarding cancer reporting was re-examined and changed (29/4/12) to regulate mandatory reporting from private pathology laboratories, as well as other potential sources not formerly included, such as primary physicians.

ISRAEL HEALTH LITERACY STUDY (HLS-ISR): MEASURING HEALTH LITERACY & ITS ASSOCIATION WITH HEALTH BEHAVIOR, SOURCES OF HEALTH INFORMATION AND NAVIGATION OF HEALTH SERVICES

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Background: Health Literacy (HL) is "the capacity to obtain, interpret and understand and use health information and services...to enhance health." Research indicates the strong association between HL and health outcomes, and cites HL as the most significant social factor influencing inequity and social disparities in health. While North American/European countries have national HL data, no national data have been collected in Israel.

Study Question: This study aims to assess and characterize the level of HL (HL-ISR) in the Israeli population according to socio-demographic factors, to study the association between HL and self-reported health, use of healthcare services and selected health behaviors.

Methods: Stage I included consensus/focus groups to develop and test the HLS-ISR measure adapting the European Health Literacy Survey (HLS-EU) tool. Stage II included home interviews among a national representative sample of 600 Jewish and Arab adults. Data were analyzed to measure HLS-ISR and based on variance and regression analyses to assess its associations with personal/social determinants, health behavior and use of health services.

Results: The average HL in Israel is 13.1 (range 0-16). High correlation was found between HLS-ISR and the STOFLA test supporting validation of the measure. Over 10% of the sample have poor or inadequate HL. HLS-ISR is significantly correlated with age, education and SES ($p<.001$). Low HL is significantly associated with greater use of health care services, low self-rated health, lower physical activity rates and high\low BMI scores.

Conclusions: HLS-ISR offers a validated measure, identifying populations with greater needs and higher risk for less adequate HL-older, lower SES, education and self-rated health, higher health risk behavior and greater use of health services. These findings are similar and comparable to HLS-EU study results.

Health policy implications: The findings will facilitate international comparison, contributing to policy and planning of appropriate health services and health promotion intervention.

METABOLIC COMORBIDITIES ASSOCIATED WITH OBESITY AMONG ADOLESCENTS IN CLALIT HEALTH SERVICES

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Background: The relationship between obesity among adolescents and future metabolic disease is well-established in the literature. However, the clinical guidelines in Israel regarding follow-up tests for obese adolescents are equivocal.

Study Question: What are the rates of obesity among adolescents (ages 13-17)? What percentage of them had subsequent metabolic tests - blood lipids and glucose? And what are the rates of abnormal test results?

Methods: Adolescents with obesity (defined as being above the 95th percentile for age and gender, according to WHO standards) were identified in Clalit's data warehouse based on measurements of height and weight during 2007-2010. The proportion of this population who had four different metabolic tests performed within 2 years of the diagnosis of obesity, or one year prior, was generated. Glucose values of 100-125 and >125 mg/dL were defined as pre-diabetes and potential diabetes, respectively. Values >180 mg/dL and >130 mg/dL were defined as abnormal in triglycerides and LDL, respectively.

Results: We identified 21,209 obese adolescents (8.9%). Among them, 60% had a lipid blood test among which 11.9% had abnormal triglycerides results and 7.3% had abnormal LDL results. 61.6% had a glucose blood test among which 8.6% had results indicating a possible pre-diabetes condition. An abnormality in one or more of the above tests was detected in 22.7% of the cases.

Conclusions: Two out of five obese adolescents do not undergo a metabolic assessment despite close to one out of four, who underwent testing, having a metabolic problem. These findings indicate the need for guidelines to perform metabolic tests among obese adolescents.

Health policy implications: Early detection of metabolic disease can allow early health promotion and treatment, as needed, and may avert further co-morbidities in adulthood.

FACTORS AFFECTING DEMAND FOR ROUTINE DENTAL EXAMINATIONS FOR CHILDREN IN ISRAEL*

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Background: Routine dental examinations for children are important for early diagnosis and treatment of dental problems and can prevent costly treatments in the future. The results of a World Health Organization survey on dental health among 12 year olds in 188 countries indicated that the morbidity level among Israeli children is higher than the world average. A July 2010 reform of Israel's National Health Insurance law offers free dental services for children up to age 12.

Study Question: To examine the factors affecting mothers' decision to take their children for routine dental examinations; b) to check whether dental examinations for children have increased as a result of the 2010 reform.

Methods: A telephone survey of a representative sample of 620 mothers of children aged 6-18 from different population groups: Jews and Arabs, immigrants and long-time residents, residents of the center of the country and of outlying regions. The survey integrates the principles of the health beliefs model (HBM). Data analysis used regression analysis.

Results: The primary results show that since the 2010 reform children's dental examinations have increased among Jews, religious families and those aware of the reform. Regression analyses showed that five factors were significant in explaining higher frequency of children's dental examinations: higher income, being a Jew, higher level of confidence in family dentist, higher levels of perceived importance of periodic dental examinations and perceived seriousness of dental problems.

Conclusions: Mothers' decision to take their children for dental examinations is affected by socio-demographic status and by their health beliefs with respect to dental health. In addition, awareness of the 2010 reform affects the frequency of children's dental examinations.

Health policy implications: Increasing families' awareness of the 2010 reform and of the importance of dental health care for children (especially among low income families) could increase the frequency of dental examinations among children.

*The study is funded by the Israel National Institute for Health Policy Research and is still in progress.

SUCCESSFUL RECRUITMENT OF PHYSICIANS AND PATIENTS TO LARGE SCALE CHRONIC DISEASE MANAGEMENT TELEMEDICINE PROGRAM

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Background: Emerging evidence has demonstrated the potential for Telehealth systems to reduce unnecessary hospital admission and lower costs of care by assisting patients and healthcare professionals to manage chronic conditions more efficiently. Nonetheless, telehealth has not yet been widely adopted in any country.

Study Question: How can healthcare professionals and chronically ill patients be successfully recruited and become actively engaged in large scale deployment of chronic disease management using telehealth and what characterizes the recruited population?

Methods: Data-mining was performed on the Maccabi Healthcare Services data-base to identify chronically ill patients that are high users of healthcare services and resources and their primary care physicians who must approve his patients for participation in the program and agree to continue to be involved in their care.

Results: Patients diagnosed as having CHF (NYHA Class ii-iv), COPD, diabetes, need for wound care, stoma and home care patients were defined as the target population. The target number for inclusion is 10,000 patients. Within the first 6 months, 4400 patients were recruited, Both first onset diabetes and stoma patients are short term subscribers and many of them completed the program. As of February 1, 2013, 3800 remained telehealth subscribers. Telehealth center patients are elderly, (43% over the age of 75 years) and particularly CHF patients and home care patients (81% aged 75 years and older). The recruited population is more severely ill than the potential population with a significantly higher number of E.R. visits, hospitalization and GP visits.

Conclusions: Targeted recruitment of a clearly defined population with primary care physician support appears to be a successful strategy. Patients who are severely ill would appear to be more accepting of telehealth based disease management.

Policy Implications: Telehealth has the potential for providing more cost effective care for chronically ill patients. In order to realize this potenti, new and highly targeted methods for recruitment of patients along with their primary care physicians is essential.

LATE MORBIDITY IN ISRAELI HOLOCAUST SURVIVORS AND THEIR OFFSPRING

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Background: Previous research suggest that exposure to starvation and stress during critical periods of human development, i.e., the time between conception to early infancy may have deleterious effects on health later in life, termed FOAD (Fetal Origin of Adult Disease).

Aim: to determine whether exposure to the holocaust during the fetal period and early infancy affects chronic morbidity prevalence in adulthood.

Methods: This is a pilot study conducted on a convenient sample of 70 Europe-origin Jews born in 1940-1945 in countries under Nazi rule (exposed group), interviewed to determine starvation exposure during early life and current prevalence of chronic diseases. A control group of 230 Israeli-born subjects of the same decent, age and gender distribution was extracted from the Israel National Health Interview Survey (INHIS-2) (unexposed group). The prevalence of selected risk factors and chronic diseases was compared between the groups using chi-square and independent t-tests, as needed.

Results: The study group included 46% males. The mean year of birth in the exposed and unexposed groups was 1942.1±1.7 and 1942.9±2.2, respectively. The groups differed significantly with respect to chronic morbidity: dyslipidemia was reported by 72.9% of the exposed vs. 46.1% of the non-exposed ($p<0.001$); diabetes mellitus was reported by 32.9% vs. 17.4%, respectively ($p=0.006$). 62.9% of the exposed and 43.0% of the unexposed reported being diagnosed with hypertension ($p=0.003$). The respective proportions for osteoporosis were 25.7% vs. 16.5% ($p=0.063$), for anxiety/depression, 50.0% vs. 8.3% ($p<0.001$), and for malignancy, 30.0% vs. 8.7% ($p<0.001$).

Conclusions: These novel results are in accordance with previous studies but should be ascertained by further research on Holocaust survivors and their offspring. **Implications:** These results define a high risk group for chronic morbidity and call for early detection and intervention. On the scientific level, the results add support to the FOAD perception.

"WE'LL GLADLY HIRE ANYONE WHO WANTS TO WORS"- IS IT SO? THE STORY OF PERSONS WITH DISABILITIES IN THE LABOR MARKET

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Background: The literature is ambiguous regarding the receptiveness of the labor market to individuals whose health is worsening, so as the willingness of the labor market to hire persons with disabilities whose state of health is improving.

Study Question: The study aims to examine whether the worsening of health and the occurrence of disability in daily functioning reflected in a change in the affected individuals' labor-force patterns? Secondly, is the improvement in the health of a person with disabilities accompanied by a change in h/her labor-force patterns? Is the labor market willing to accept people previously defined as disabled and whose current health has improved?

Methods: Data from the Israel Central Bureau of Statistics social surveys in 2002-2008 were blended with data from the 2008 population census in a way that allowed us to monitor each individual at two far-removed points in time: when they were sampled for the social survey and when they were investigated for the census.

Results: Deterioration in a person's health is negatively reflected in h/her labor-force patterns and positively reflected in those of the rest of h/her household. The labor market's willingness to employ persons with disabilities whose health is improving is far from total; it depends on both the individual's age and the characteristics of h/her original disability.

Conclusions: Current health status is not an exclusive guarantee to the person's employment status. The labor market's willingness to employ persons whose health is declining or improving is not uniform.

Health policy implications: Developing more accessible labor programs for people whose health is worsen or improving. By doing so it may improve the health conditions and the labor-force patterns of the rest of the household members and effect on the household's economic standard of living, particularly regarding the health factor.

APPLICATION OF A COMPUTERIZED ALGORITHM FOR PROACTIVE IDENTIFICATION OF PATIENTS REQUIRING SPECIAL MEDICAL ATTENTION AND FOLLOW-UP IN A DISTRIBUTED PRIMARY CARE SETTING

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Background: Characteristics of the Israel Defense Forces (IDF) primary medical care system pose significant challenges on efforts to assure the quality of medical care. As a result, the IDF medical corps adopted strict regulations demanding unit physicians to closely follow up soldiers with suspected severe or "unusual" illness. A major challenge of unit physicians is to identify these special cases among the vast majority of benign every-day illnesses. The aim of the study was to evaluate the plausibility of harnessing the power of our central and fully deployed EMR to the task of pin- pointing those cases

Study question: Is computerized algorithm can identify patients that need special medical attention?

Methods: A computerized identification algorithm, which identifies unusual medical cases, was developed. The algorithm was applied to patients treated in 67 IDF primary care clinics. A list of potential unusual medical cases was produced for each clinic. These cases were then reviewed individually by primary care physicians that were instructed to mark each case as requiring particular medical attention or not requiring such attention. True positive cases were then compared with the manual "Unusual medical cases" lists of participating clinics.

Results: The computerized algorithm was applied to more than 30,000 patient records treated by participating clinics during a 6 months period. The application of the algorithm produced 600 potential UMCs (2%). Of these, 40% were marked as true positives by evaluating physicians.

Conclusion: The algorithm was able to identify a significant number of new patients deemed to require special medical attention and follow-up as well as identifying the majority of patients that had already been manually labeled as UMCs by physicians, thus offering an important clinical value.

Health policy applications: The application of a computerized selection algorithm shows promise in enhancing the quality of identification of patients requiring special medical attention and follow-up.

DIABETES PREVENTION PROGRAM: INDIVIDUAL OR GROUP THERAPY? AN EFFECTIVENESS EVALUATION

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Background: Following the success of previous individual interventions to prevent Diabetes including the American Diabetes Prevention Program (DPP), Maccabi health-care services, has implemented it's DPP as group and individual interventions.

Study Question: evaluate the effectiveness of two types of intervention: individual and group therapy to improve laboratory idiocies of disease progression.

Methods: 223 adults with pre diabetes were assigned to individual or group-therapy (GT) which included multidisciplinary team to modify life-style and reduce weight. Glucose; Total cholesterol; LDL HDL; Trygliserides and BMI were measured before (T1) after (T2) and post 18 months (T3) of the intervention. Mix linear-models and logistic-regression models were employed.

Results: Mean age was 51.9 and 55.4 (P=0.001) for the individual and GT respectively. No significant differences in time trends for all the clinical measurements for both groups were observed. However, reduction (-5.68 P<0.0001) in Glucose for the Individual-therapy GT between T2 and T1; reduction in total cholesterol (-12.5 P=0.001;-14.8 P<0.0001) in Individual and GT respectively between T1 and T3; HDL significant increase in both groups between T1 T2 T3; significant decline in LDL; Triglycerides and BMI values, in both groups between T2, T3 and T3. Out of the group and individual-therapy 39.3% and 38.7% respectively (P=0.933) developed type 2 diabetes during 6 years period. No differences in onset of the disease between the two groups.

Conclusion: For patients with pre diabetes, both types of intervention were effective in improving laboratory markers for disease progression. GT is recommended as it required fewer resources and therefore can be implemented for the benefit of larger population.

Health policy implications: Developing variety of health services to prevent Diabetes is crucial in times of massive obesity and pre-diabetes epidemic.

PHYSICIANS' BEHAVIOR FOLLOWING CHANGES IN LDL CHOLESTEROL TARGET GOALS IN THE QUALITY INDICATORS PROGRAM OF CLALIT HEALTH SERVICES

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Background: Clalit Health Services (CHS) is the largest health maintenance organization in Israel, serving a population of more than 4,000,000 with 52% market share. In January 2011CHS changed the LDL-Cholesterol target definitions in its' quality indicators program, from a universal target to values stratified by risk assessment based on ATP III criteria.

Study question: The aim of this study was to evaluate the effect of this change on achievement of LDL-C targets and on physicians' prescriptions of statins.

Methods: LDL-C target achievement and statin use were assessed among high, moderate, and low risk groups (according to the ATP III criteria), before and after implementation of ATP III stratification of LDL-C targets.

Results: 433,662 patients remained in the same hyperlipidemia risk groups throughout the study period (06/2010 through 06/2012); 55.8% were women; the average age was 53.0±10.3 years; 63.9%, 13.4%, and 22.7% were at low, medium, and high risk respectively. After implementation of ATP III stratification, the proportion of patients reaching LDL-C targets increased in all risk groups: from 58.6% to 61.6%, from 55.1% to 61.1%, and from 44.5% to 49.0%, in low, medium, and high risk groups respectively ($p<0.001$ for all groups). The proportion of patients treated with potent statins increased in all risk groups; from 3.4% to 5.6%, from 6.7% to 10.3%, and from 14.5% to 20.3% respectively ($p<0.001$ for all groups).

Conclusions and Health Policy Implications: Following implementation of ATP III guidelines, achievement of target LDL-C levels improved and potent statin use increased in all risk groups.

This study suggests that implementation of quality indicators that are consistent with current literature and prevailing guidelines can increase the achievement of treatment goals.

ATTITUDES OF JEWISH AND BEDOUIN INDIVIDUALS TOWARDS FAMILY PHYSICIANS' USE OF EMRS DURING THE MEDICAL ENCOUNTER

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Background: The deployment of electronic medical records (EMR) in Israel is universal. Yet there is very little knowledge about attitudes of healthcare clients regarding the use of EMRs by family physicians during the medical encounter. Especially lacking are studies of the impact of cultural background on attitudes towards EMR use by physicians, despite the fact that culture is known to impact expectations from medical treatments.

Study questions: 1. We examined differences between the attitudes of Jewish and Bedouin responders towards EMR use by their family physicians during the medical encounter; and how the respondents' background variables contribute to these attitudes.

Methods: 86 Jewish and 89 Bedouin visitors of patients hospitalized in a regional Israeli University Medical Center (Soroka) responded to a self-reporting questionnaire regarding attitudes towards EMR use by physicians. There were two versions, Hebrew and Arabic.

Results: In a linear regression analysis we found that ethnicity had only a marginal significance for attitudes ($p=0.054$). Bedouin respondents' attitudes towards EMR use were somewhat better than expected and similar to those of their Jewish counterparts. In the full cohort, self-reported health status, Internet and e-mail use and estimated physician's typing speed explained a total of 18.6% of the variance in the respondents attitudes ($p<0.001$).

Conclusions: Ethnicity was not significantly associated with attitudes towards EMR use by physicians. However, the physicians' typing speed, as reported by the participants, was the most significant factor associated with the respondents' attitudes.

Health policy implications: 1. Further studies should consider in more depth the potential impact of cultural and ethnic background on healthcare clients' attitudes towards EMR use by physicians. 2. Interventions to improve physicians' skills in operating EMRs and typing during the medical encounter will potentially have a positive impact on patients' satisfaction with physicians' EMR use.

THE IMPACT OF REGULATORY FOCUS ON TYPE 2 DIABETES PATIENTS' ADHERENCE TO SELF-CARE BEHAVIORS

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Introduction: Improving adherence of chronically ill patients to self-care behaviors is a challenge for clinicians aiming at improving health outcomes. Following Higgins' (1997) regulatory-focus theory, a promotion-focused individual pursuits a desired goal, whereas a prevention-focused individual retreats from an undesirable outcome. Little is known about the influence of self-regulatory focus on adherence.

Study Questions: 1. Is promotion focus positively related to adherence to self-care behaviors; 2. Is a "fit" between health-message type and self-regulatory focus will result in increased intention to adhere.

Methods: 1. An observational cross-sectional study was conducted among sample of 130 diabetic patients hospitalized in University-affiliated Soroka Medical Center. Participants completed a questionnaire that measured adherence to self-care behaviors, regulatory focus, self-esteem and demographic characteristics. 2. In addition, participants were asked to read a message taken from an interview with a diabetic patient, which was framed as either a promotion (e.g. "I try harder when I see health improvement") or a prevention (e.g. "I'm afraid of limb amputation") message. Then, participants indicated their intention to comply to self-care behaviors.

Results: 1. in a multivariable linear regression model, positive significant association was found between promotion focus and adherence to self-care behaviors (β=0.20, P=0.04). Self-esteem was also significantly related to adherence (β=0.27, P=0.004). 2. While a high level of promotion focus was associated with a high level of intention to comply in both message types (prevention-massage: r=0.49, P<0.001; promotion-message: r=0.37, P=0.003), a high level of prevention focus was associated with high intention to comply only in the presence of fitting message (prevention-message: r=0.46, P<0.001; promotion-message: r=0.16, P=0.22).

Conclusions and Health Policy Implication: Study results demonstrate an association between regulatory focus and adherence as well as the importance of fitting health messages to patients' regulatory focus. These findings may contribute to the development and design of tailor-made interventions adjusted to patient's personality characteristics.

HEALTH MANAGEMENT STUDIES: A GAP BETWEEN THE ACQUIRED KNOWLEDGE IN ACADEMIA AND THE REQUIRED KNOWLEDGE IN GRADUATES' WORKPLACES

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Background: This study examines the gaps between the acquired knowledge obtained throughout studies in the Health Management Department to the required knowledge in the graduates' workplace.

Study Questions: Are there any knowledge gaps (between the acquired and the required knowledge) according to the graduates' point of view? What are the potential changes in the graduates' occupation conditions or professional status following their academic studies? What is the contribution of the curriculum contents and skills obtained during the studies on the graduates' understanding, knowledge and integration within the healthcare system?

Methods: A structured, self-reported questionnaire was administered to 182 Health Management Department graduates, from 2005-2009.

Results: The majority of the graduates reported a knowledge gap (4.0 among males and 3.4 among females). Younger graduates reported significantly higher gaps (4.1) than older graduates (3.0). Most of the courses which ranked with the lowest mean of contribution were courses related to management, while half of the courses with the highest mean of contribution were related to health and the other half to management. According to the graduates' recommendations, in order to adapt the academic studies to job requirements in a better way, the addition of two components to the curriculum is required; management (95.5%) and computing systems (81.3%).

Conclusions and Health Policy Implications: This study suggests the need to adapt the curriculum to the working world's demands, to improve course content and to allow graduates to reduce the gap between the acquired knowledge in academia to the required knowledge in the workplace, and by doing so, to increase their ability to be effective and efficient members of the Health Management System.

LOWER LIMB AMPUTATION RATES AMONG DIABETICS - HAVE THEY DECREASED?

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Background: Non traumatic lower limb amputation among patients with diabetes, is considered by the OECD and all universal quality institutions as a measure of quality. While this indicator uses inpatient data, the focus is on measuring the quality of outpatient care.

Study question: Mortality and morbidity rates of diabetes have been decreasing over the past decade. Is the rate of amputation decreasing as well? Are there differences in the rate of amputation among different ethnic groups or in different geographic areas?

Methods: The study is based on the National Hospital Discharges Database in the Ministry of Health, which includes demographics, diagnosis, procedures, dates and wards for each hospitalization in the acute care hospitals. Using this database we studied to identify specific and adjusted rates of diabetic inpatients that underwent lower limb amputation in the last decade.

Results: Our findings show a steady decrease in the rates over the last 4 years. In addition, the age of the population undergoing amputation is steadily rising. This may reflect an improvement in diabetic care in the community and the utilization of a multidisciplinary approach when treating diabetic foot ulcers.

There remains a large variance in the rates between the Arab population and the Jewish one. In addition, different geographical areas within the state of Israel have differing rates.

Conclusion: There is a steady drop in the rate of lower limb amputation in the last four years with geographic and ethnic differences. These findings raise questions as to whether this is do to the quality of healthcare in these areas, i.e. the standard of care and access to care, or rather to the characteristics of the population in these areas, i.e. genetic heritage, diet, exercise, socioeconomic status and culture.

Health policy implications: In times of limited resources on the one hand and efforts to minimize inequality on the other, it is most important to determine where to focus our efforts. Further studies to control for each risk factor will allow us to make educated policy decisions where to invest these resources. More intense genetic studies might be warranted as well, to determine whether diabetic complications vary between ethnic groups regardless of the quality of care.

THE IMPACT OF ADHERENCE TO TIOTROPIUM ON HEALTHCARE UTILIZATION OF COPD PATIENTS

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Introduction: Previous studies had demonstrated association between Tiotropium therapy (once-daily inhaled anticholinergic), and exacerbations reductions, improvements in dyspnea and quality of life. Little is known about the influence of adherence to this therapy on healthcare utilization.

Study Question: If adherence to Tiotropium results in decreased health care utilization two years after treatment onset.

Methods: A longitudinal retrospective study was conducted among all COPD patients prescribed for Tiotropium 18 mg between April 2008 and January 2011 in the pulmonary clinic of the Soroka Medical Center. Adherence to therapy was defined as proportion day covered (PDC)≥80%. Adherent patients (n=78) were compared to non-adherent patients (PDC<80%, n=112). Measures of health care utilization from Clalit Health Services computerized database were analyzed 1 year before and 2 years after therapy onset. Comparison between years was analyzed using the Wilcoxon signed-rank test.

Results: Mean age of all COPD patients was 67.9±10.9 yrs, forced expired volume in one second (FEV1) was 41.8±13.0, pack yrs was 52.0±36.7 (39% stopped smoking), age adjusted Charlson comorbidity index (CCI) was 6.2±3.2. No significant differences were found between adherent and non-adherent patients with regard to smoking habits, demographical and clinical characteristics. Among adherent patients: compared to one year before therapy onset, hospitalization costs reduced by 26% in the following year (p=0.04) and remained unchanged in the second year after therapy onset (p=0.25). This trend was not found among non-adherent patients (p=0.58; p=0.86 respectively). No significant difference in total annual healthcare costs was found in the first and second year following therapy onset in both groups. In adherent patients, this result stem predominantly from increased medication and surgery utilization that offset the decreased hospitalization costs.

Conclusions and Health Policy Implication: Adherence to Tiotropium was associated with decreased hospitalization costs. Exploring reasons for high non-adherence (112/190) may optimize the use of hospital scarce resources.

USING ELETRONIC HEALTH RECORD DATA TO PREVENT 30-DAY READMISSIONS: A PREDICTION MODEL FOR EARLY IDENTIFICATION OF HIGH-RISK PATIENTS

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Background: A key challenge to preventing readmission is the timely identification of high-risk patients. Data availability and information flow capacity limit the applicability of prediction models in practice.

Study Question: We developed and tested a readmission prediction model based on data from Electronic Health Records (EHR) available prior to the index admission to target high-risk patients.

Methods: Multivairate analysis of EHR and administrative data was performed. Predictors included: morbidity, demographic and socioeconomic characteristics, resource use (inpatient and outpatient), cost, medication prescribing and dispensing, risk factors and disability. Data was retrieved for all first admissions between January - March 2010, and the 30-day follow up period. Derivation and validation cohorts were used in model development.

Results: A cohort of 26, 500 internal medicine admissions of Clalit enrollees age 65+ was studied. The model showed acceptable discriminatory power (c-stat = 0.70). This model is now used to derive an a priori risk score (transformed to a 0-100 scale) of each of Clalits' ~500,000 older adults. On a daily basis the risk scores, together with information on recent prior admissions, are transferred through integrated computerized systems to each of 25 hospitals in Israel. Additionally, upon discharge, risk scores are automatically communicated to each patient's own primary care clinic. Risk scores are used in hospital and community settings to target the highest risk patients for transitional care interventions.

Conclusions: Compared to other models reported in the literature, the model presents above average discriminatory power, and is unique in that it uses data only on preadmission risk factors.

Health Policy Implications: We present an approach that can potentially be used by health plans or insurers to streamline data on their enrollees' readmission risk, to guide both hospital and community targeting for transitional care interventions as early as possible.

ACADEMIC PARAMEDIC EDUCATION AS A BRIDGE TOWARD PEACE BUILDING AND BI-NATIONAL COOPERATION IN DISASTER PREPAREDNESS

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Background: Effective emergency and disaster response relay on the proficiency of paramedics, who constitute the backbone of many pre-hospital medical systems. Additionally, (and especially in large scale events) such a response may be enhanced if it is coordinated across borders (between counties, states or neighboring countries).

In 1998 Ben Gurion University (BGU) initiated a bachelor's degree program (also certifying its graduates as paramedics) in Emergency Medicine (EM). The idea of enrolling Jordanian students in the program was driven by previous successful collaboration between BGU and the Jordan Red Crescent (JRC), coupled with the JRC's need for academically trained paramedics. Both parties engaged in a joint academic training and disaster preparedness project.

Methods: Analysis of all project related documents written by program initiators and managers and personal interviews with relevant partners.

Results: in 2009 15 JRC students were enrolled into a three year EM program at BGU. Most of the study curriculum was held at the main BGU campus, with hospital rotations at Jordanian hospitals and EMS rotations on MDA (Israel's national EMS) units. After 3 years of training, 14 students successfully graduated and returned to Jordan. In parallel, a committee was established with Jordanian representatives recruited by the JRC, Israeli representatives from MDA, BGU and the Ministry of Health. The committee, met periodically, to draft a multilateral response plan for disasters. Its work was highlighted by a large exercise held near the joint border.

Conclusions: Collaborative training of medical emergency personnel and the building of collaborative disaster response plan can enhance response capacities. Such projects can be pursued across borders, even between former enemies. This collaboration was also meant to contribute to regional peace building.

CHARACTERISTICS OF THE MEDICAL SPECIALTY SELECTION PROCESS BY ISRAELI INTERNS: ISRAELI VS FOREIGN MEDICAL SCHOOL GRADUATES

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Background: During their rotating internship, interns in Israeli hospitals consider and choose specialties for residency and career. The selection process involves examining both professional interests and personal situations.

Study Question: What are the medical specialty interests and selection criteria of Israeli interns when selecting a specialty for residency?

Methods: A questionnaire was completed by a convenience sample of 417 interns, both Israeli and foreign medical school graduates, upon finishing their internships.

Results:

	Israeli: Female(n=105)	Male(n=117)	Foreign: Female(n=57)	Male(n=133)
Internal Medicine	33%	32%	20%	37%*
Family Medicine	20%	22%	38%‡	38%‡
Pediatrics	43%	40%	56%	48%
General Surgery	14%	24%*	26%‡	27%*
Plastic Surgery	11%	11%	16%	25%*‡
Orthopedic Surgery	5%	22%*	18%‡	31%*‡
OB/GYN	31%	22%*	46%‡	22%*
Time with Family	83%	79%*	73%‡	65%*‡
Operating Room Time	29%	34%	40%‡	49%‡
Controllable Lifestyle	75%	66%*	59%‡	62%
Interesting Specialty	91%	87%	85%‡	72%‡

Results are the proportion of interested/very interested responses on 5-point Likert scale queries; *-vs females ($P<0.04$) ‡-vs Israelis of same gender ($p<0.05$)

Conclusions: Significant differences were observed between the interests and selection criteria of Israeli and foreign medical school graduates. Female foreign graduates were more surgically oriented than their Israeli counterparts likely reflecting the character of those choosing to study for 4-6 years in a foreign country.

Health Policy Implications: Foreign medical school graduates were predominantly male resulting in a male predominance among junior physicians entering the workforce. Foreign graduates were more oriented to surgical specialties providing an opportunity to recruit them to surgical specialties with workforce shortages.

WORK PRACTICES AND THE PROVISION OF MENTAL HEALTH CARE ON THE VERGE OF REFORM: SURVEY OF MENTAL HEALTH PROFESSIONALS

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Background: Israel is preparing to transfer responsibility for mental-health care to the country's four competing, nonprofit health-plans. Introduction of managed care is seen as crucial to containing costs, in light of the expected growth in demand and the system's resource constraints.
Study Questions: On the verge of the reform, what are the patterns of service delivery and practice of mental health professionals? What are their views and perceptions concerning the reform's effects?
Methods: Interviews with mental-health professionals and a self-report questionnaire mailed to a random sample of psychiatrists and psychologists.
Results: Substantial differences were found between psychiatrists' and psychologists' personal and professional characteristics, work patterns, and treatment provision. Most of the psychologists work mainly in the private sector, while most of the psychiatrists in the public sector. Those working in the public sector and those reporting practices associated with managed care, e.g. short-term treatment, compliance with monitoring procedures, and emphasis on evidence-based treatment, expect, to a lesser extent, changes in the provision and quality of care after the reform. A high percentage of the psychologists have no knowledge of evidence-based care, and it is not a consideration for them when devising the care plan. They do not expect an improvement in the quality of care or in its accessibility and availability following the reform.
Conclusions: Our study identified a gap between some of the professionals' perceptions and the demands of a managed-care environment. Efforts to assimilate work practices and an appropriate approach to care in an era of managed care should focus on this group.
Health policy implications: In order to recruit the experienced, skilled professionals to health plans, it is recommended to create recruitment pathways to the public system contributing to socialization for work with the health plans. It is advisable to implement this process during training and specialization.

SHORTAGE OF REGISTRATED MEDICINES IN ISRAEL

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Background: Article 29 of the Pharmacists' Regulations (Products) – 1986 (the regulations) details the cases where product registration does not apply, subject to the consent of the Director of the Ministry of Health (the director). Article 29 does not detail, however, the conditions set out by the director, to give his consent. The quality of the medicinal products marketed via this path is less controlled.

Study Question: This study aims to compare the consumption rates of unregistered medicines in Israel during the years 2007–2011, and to describe the categories of these medicines: included or not included in the Israeli medicine basket, as well as their pharmaceutical & clinical indications.

Methods: Data from the databases of the Pharmaceutical division, Israel Ministry of Health, was collected including amounts and total expense.

Results: The medicine consumption rate in Israel during those years was with a definite upward trend. Furthermore, medicine consumption increased substantially in Israel from 32,245,074 units in 2007 to 71,100,441 units in 2011.

Conclusions: There is high consumption and a large variety of medicine quality in Israel, as well as a constant increase in consumption during this time period.

Health policy implications: There is a worrisome increase in consumption of questionable quality medicines, without sufficient control.

Our aim to cope with the above-mentioned status is by reducing legal/ regulatory barriers for renewal of medicines registry and improving the supervision of the importation of unregistered medicines.

A SIMPLE WAY TO IMPROVE HOSPITAL MEDICAL CARE FOR HIP FRACTURE PATIENTS: TESTING PROTEIN LEVELS

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Background: Hip fractures cause significant morbidity and mortality in older people. The orthopedic POSSUM score (OPS) is widely accepted for the evaluation of mortality and morbidity risks in orthopedic patients, but it does not take malnutrition parameters into account. Low preoperative albumin and protein levels, a marker for malnutrition, could be of major importance in the management of these patients. There are no guidelines in Israel for testing protein levels in patients presenting with hip fractures, nor are these tests routinely performed.

Study Question: To compare the impact of protein levels with that of the physiological OPS and its components on the mortality and morbidity risks of patients with hip fractures.

Methods: Files of 2269 consecutive patients undergoing surgery for hip fracture in our medical center between 2008 and 2011 were retrospectively evaluated. OPS parameters were available for 1770 patients. Albumin and total protein levels had been tested in only 387 (17.1%) and 279 (12.3%) patients, respectively. The relative impact of protein levels and the components of the physiological OPS was compared by multivariate logistic regression models for mortality and composite outcome (peri-hospitalization or peri-operative mortality, additional surgery during hospitalization, 7-day hospital readmission, transfer to intensive care, peri-hospitalization deep vein thrombosis, myocardial infarction, and pulmonary or systemic embolism). The Charlson co-morbidity score, provision of intra-operative transfusion and time from hospital arrival to surgery were also assessed. The area under the curve (AUC) compared the predictive value of the OPS to that of models with and without protein level data for mortality.

Results: Pre-operative albumin and total protein levels were inversely associated with mortality in multivariate models (albumin g/L OR=0.89, p=0.009; protein g/L OR=0.92, p=0.009) and with composite outcome (protein OR=0.94, p=0.014). The AUC for the prediction of mortality by the OPS (n=1770) was 0.632 (95% CI: 0.580-0.684, p<0.001), while a model including protein levels (n=279) performed better [AUC=0.742 (p<0.001, 95% CI: 0.649-0.834)].

Conclusions: Lower pre-operative protein and albumin levels are strongly associated with an increased risk for mortality and poor outcomes in patients operated for hip fracture.

Health policy implications: Protein and albumin levels should be included in the routine laboratory tests for patients presenting with hip fractures. Protein supplementation should be provided when indicated.

ISRAEL'S NEWEST MEDICAL SCHOOL'S STRATEGY FOR SOCIAL ACCOUNTABILITY: PROJECT "RAPHAEL"

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Background: Israel's newest medical school was established in the Galil with an aspiration to improve health and minimize health inequalities in the region. In line with the WHO consensus on medical school social accountability, "Project Raphael" was designed to galvanize innovative action in the sphere of public health. It aims to create true partnership with local organizations and actively address the region's health needs.

Study question: Given the opportunity to partner with a medical school, do local organizations see health as a pressing issue and what solutions do they propose?

Methods: "Raphael" offers academic support, weekly contact and $5,000 seed funding for innovative proposals. Key criteria for funding were potential for impact, generalizability and sustainability. Proposals were analyzed and presented to an advisory group of local community leaders prior to allocation of five awards.

Results: Thirty-nine organizations applied: NGOs (26), municipalities (8), health sector (3) and academia (2). Their focus was lifestyle and mental health (12), chronic conditions (12), child development/disability (5), environment (4) and health services (6). Five targeted Arab, 15 Jewish and 19 mixed populations. Interventions were imaginative and varied, with 18 located in the community and 7 in medical settings. Eleven were rated by the medical team and advisory group as highly innovative with significant potential for impact on health inequalities in the Galil. Five were selected.

Conclusions: Local organizations welcome the opportunity to partner in implementing innovative solutions to what they deem as most pressing health needs.

Health policy implications: The Raphael concept offers a way that medical schools, with their limited but special resources, can connect to the perceived health needs of their local population and meet their responsibility for social accountability. Evaluation is underway to ascertain Raphael's impact on health and well-being in the region.

CONTINUITY OF CARE: PLANNED DISCHARGE FROM HOSPITAL INTO THE COMMUNITY

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Background: The increase prevalence of chronic diseases and the complexity of health services have raised the importance of continued care in the transition from the hospital into the community. "Planned Discharge" is a program unique to Clalit Health Services led by the head nurse. It is based on a model that ensures continuity of care from hospitalization into the community, while creating team responsibility in effort to promote patient health. The program has been operated for over a decade.

Purpose: To ensure continuity of care from hospital into the community.

Methods: The program was initiated in 1999, based on BRASS model, which nurses assessed patients' needs upon their admission to the internal departments, in order to prepare a head for completion his needs after discharge. Thus, communications channels were set up, and the hospital nurse send information to the community nurse in order to prepare all requirements for the patient before discharge. Five years later the program was expanded and criteria were added. Meanwhile, a central information system was built for follow-up and the evaluation of the sending and receiving of information.

Results: The program operates in internal, surgical and geriatric departments and in hundreds of community clinics. Over the years, the number of letters sent from hospitals has increased, and now covers 25% of patients admitted into internal departments. This result indicating that the program's goals have been met. Most letters read by community nurses within 48 hours of receipt.

Conclusions and Health Policy Implications: The Planned Discharge program and the computerized medical records make a direct communication and improve the continuity of care, as well as the quality and quantity of information that is being transferred. In light of the contribution of the program, it is important to expand it into other fields such as rehabilitation, premature infants.

IN-VITRO FERTILIZATION CYCLES AND OUTCOMES IN MACCABI HEALTH SERVICES, ISRAEL, 2007-2010

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Introduction: While Israel is by far number one in the world in in-vitro fertilization (IVF) treatments per capita, detailed information about the outcome of these treatments is not available.

Study Question: To describe IVF activity during the years 2007-2010 in Maccabi Health Services, an independent health provider that reimburses IVF treatments.

Methods: Data on IVF cycles and live births were obtained from the Maccabi Health Services registry of females with fertility problems and were analyzed by year and age at cycle start.

Results: During study period, the average age of IVF patients has risen from 35.1 to 36.2 years. The number of IVF treatments increased by 50%, while the "live birth" rate fell from 18.8% in 2007, to 14.8% in 2010. A drop in success rate was noted in patients>35 years of age, and more so in patients>40 years of age. Beyond 43 years of age, success rate was in the low one digit per cent range. The estimated cost of a single live birth in this age group is 399,000 NIS.

Conclusions: The clinical results are not encouraging relative to IVF outcome in Europe and the USA. Surprisingly, and against worldwide trend, success rate in Israel decreased during the surveyed years. Study results suggest that the main reason is that many IVF treatments are conducted in patients that *a priori* have very low chance of success.

Health policy implications: Changes in the demographics of Israeli women undergoing IVF, as well as current medical practice, necessitate a bold re-appraisal of the current Israeli policy for IVF reimbursement.

HOSPITALIZATION OF PATIENTS WITH SCHIZOPHRENIC AND AFFECTIVE DISORDERS IN ISRAEL: TRENDS DURING THE LAST TWO DECADES

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Background: In the last decade the Ministry of Health implemented two major inter-related reforms: a "structural reform" to reduce the number of psychiatric beds and the "Rehabilitation of the Mentally Disabled in the Community Law", which allocated funds for a variety of residential and vocational programs in the community for these patients.

Study Question: The objective of the study was to examine the impact of the two reforms on the hospitalization of schizophrenic and affective patients by tracking the patterns of their inpatient care during the last decade.

Methods: Data on all psychiatric admissions during the period 1990-2011 were extracted from the Israel Psychiatric Case Register to examine changes in the rate of admissions, length of hospitalizations, total inpatient days and tenure in the community.

Results: During the observed period, the total decrease in the number of psychiatric beds was 52%, resulting in a bed ratio of 0.45 per 1,000 population. The total decrease in number of inpatient days for first-in-life patients with schizophrenia was 52%. Rates of admission for first-in-life patients with schizophrenia declined from a peak of 0.53/1000 to 0.32/1000. And the proportion of short [< 30 days] first in life episodes went up from about 40% in the early 90's to about 70% in 2010.

Conclusions: An increasing percentage of patients with schizophrenia do not need to be admitted to psychiatric wards at all and an increasing percentage of those who are admitted can be treated during a shorter, once in a lifetime episode.

Health policy implications: The change is probably due to the rehabilitation reform which enabled the structural reform to be implemented without harmful consequences. The results should be used to recommend further expansion of rehabilitation facilities in the community.

THE NUMBER OF SICK INDIVIDUALS PER HOUSEHOLD AND ITS RELATIONSHIP TO SOCIO-DEMOGRAPHIC FACTORS

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Background: It is already well established that inequalities in health outcomes reflect among other things inequalities in socio-economic status of the individuals. At the household level, inequality in health outcomes is probably related to the total income and the number of sick members in the household. Yet, so far studies on health inequality overlooked this variable.

Study Question: The objective of the study was to check whether differences between households in the number of sick individuals per household were related to socio demographic and economic factors.

Methods: Data from the CBS health survey of 2009 was used to check differences between households in the number of sick individuals per household [number of sick/ number of household members] by age of household members, population groups, socioeconomic strata and residency in Periphery vs. Center locations [add "ratio"].

Results: Inequality between households was evident only among "Old" households defined as those where all family members were older than 49 years. In these households the ratio of number of sick people to number of household members, decreased significantly as the total household income increased. Inequality in health was also observed between Jews and Arabs. Conclusions: The number of individuals who are sick within a household is correlated within known socio-demographic variables.

Health policy implications: The number of individuals who are sick within a household should be taken into account in future analyses of health inequality between sectors.

IS DISEASE PREVALENCE FROM MULTIPLE CAUSES OF DEATH DIFFERENT FROM UNDERLYING CAUSES?

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Background: Most data published on death causes is based on the coded underlying cause. In recent years in Israel, all causes of death mentioned on death certificates have been coded. With the prospective entry of more automation of coding, this will be continued.

Study question: Does disease prevalence found in multiple causes of death (MCOD) differ from that of underlying cause (UC), and what can be learned about comorbidity from MCOD? Can MCOD be used to assess quality of filling in death certificates and choosing underlying cause?

Methods: The number of causes mentioned on death certificates was analyzed by age and UC. Age-adjusted death rates were calculated for causes mentioned anywhere on the death certificate, and compared with rates for UC.

Results: In 2007-2010, the average number of causes mentioned on death certificates increases steadily with age after age 15-24, and is highest for UC of diabetes (5.2), followed by gallbladder disease (5.1), anemias and viral hepatitis (4.9), heart disease (4.6) and liver disease (4.5).

Age adjusted rates for MCOD were higher for heart disease than cancer, the opposite of the ranking of UC. The third MCOD was septicemia, eighth UC, followed by hypertension, kidney disease and diabetes.

Amongst leading natural MCOD, cancer is most likely to be chosen as UC. Heart disease and cerebrovascular disease are mention 2.5 times more than they are chosen as UC, and septicemia, hypertension and anemias are least likely to be chosen as UC.

Conclusion: MCOD data highlights the high contributory causes to death of septicemia, hypertension, kidney disease and diabetes and the high comorbidity of these causes with leading UC, cancer and heart disease. UC of death does not reflect the full mortality picture.

Health policy implications: Efforts should be made to lower septicemia prevalence, and control hypertension and kidney disease.

BETTER SURVIVAL AFTER CANCER DIAGNOSIS AMONG PATIENTS WITH HIGHER INCOME AND EDUCATION: POPULATION BASED STUDY

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Background: In recent years, the 5 year survival following cancer diagnosis is about two thirds. Among patients with various chronic diseases, improved survival is known to be associated with higher income and education.

Study Question: The aim of the current study is to assess the influence of income and education on survival following cancer diagnosis in Israel.

Methods: Retrospective cohort study, using baseline measurement from the 1995 census conducted by the Central Bureau of Statistics in Israel. Cancer data were obtained from the Israel Cancer Registry. Cox proportional hazards ratios were calculated for mortality among cancer patients and adjusted for age, sex, religious, income and education years. The first model excluded cancers associated with early detection (breast, prostate, colorectal and cervix), and a second model excluded also lung cancer in order to control for smoking which is common in lower socioeconomic status.

Results: A total of 3712 cases of cancer and 1252 deaths were reported during the study period. Higher income (HR=0.985 per 1000NIS, approximately 330$ in 1995's value, p=0.016) and education (HR=0.957 per year of education, p<0.001) were associated with decreased risk of death after cancer diagnosis. Jews had better prognosis than non-Jews following cancer diagnosis (HR=0.62, p<0.001), while males (HR=1.54, p<0.001) and age (HR=1.036 per year, p<0.001) had been associated with worse prognosis. The association between higher income and education was not changed in a model which excluded lung cancer.

Conclusions: Higher income and education are associated with improved survival after cancer diagnosis.

Health Policy Implications: In the light of current study, further studies are needed to depict the variation in cancer incidence, stage at diagnosis and treatment disparities related to socioeconomic variables.

IMPROVING RATES OF INFLUENZA VACCINATION AMONG NAZARETH HOSPITAL WORKERS

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Background: Health care workers (HCWs) bear the risk of both contracting influenza from patients and transmitting it to them. Although influenza vaccine is the most effective and safest public health measure against influenza and its complications, and despite the recommendations that HCWs be vaccinated, influenza vaccination coverage among them in Israel remains low.
Study question: The study examines the effectiveness of the intervention strategies on the influenza vaccination coverage in an Arab hospital in Israel.
Methods: 1. Based on previous study, an anonymous self-administered questionnaire was distributed among 386 employees in the Nazareth Hospital involved in patient care in the winter of 2004-2005.
2. Collecting data about staff who received vaccination through face to face interview during vaccination process.
The results: The immunization coverage rate was 16.4% in 2004-2005, similar to that reported in other hospitals in Israel.
During the latest years, key effective interventions such as providing more educational information for HCWs, emphasizing leadership role i.e. management commitment to the program, motivated by the hospital vision and values was implemented.
In the winter of 2012 – January 2013, the rate of influenza vaccination coverage in the Nazareth Hospital was 63%, (68% physicians, 60% nurses, 43% paramedical, 81% administration) and it is higher than the average rate among other hospital staff in Israel, that it is considered low.
Conclusions: The intervention strategy to emphasize the influenza vaccinations for HCWs should include: enhanced education program; emphasizing leadership role and commitment of the management of the hospital to support the process of vaccination among hospital staff, and strengthening the moral obligation of the HCWs to prevent the spread of influenza among of their patients.
Health policy implications: The benefits of mandatory vaccination should be considered, also vaccination rate as one of the measures of hospital quality indicators can increase the rate of influenza vaccination among HCWs.

LOW-COST OBESITY PREVENTION INTERVENTION AMONG LOW SOCIOECONOMIC PRESCHOOLERS: A RANDOMIZED CONTROLLED TRIAL

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Background: Few interventions were designed to address obesity prevention among low socioeconomic status (LSES) children. School based intervention may be instrumental in overcoming barriers public health professional experience.

All interventions were performed by professional personnel. Family data were obtained by parental interviews and children's pre- and post- data were obtained by games and observations, weight and height were measured. Statistical analysis included Generalized Estimating Equations models.

Results: Children in the intervention group improved their nutritional knowledge by 38.9% from baseline ($p<0.001$). In addition in this arm, there was a 45.4% increase in the variety of the foods consumed ($p<0.001$), a 37.9% increase in daily fruit and vegetables consumption ($p=0.001$), a 44.0% increase in habitual water drinking ($p=0.02$) and 31.4% decrease in sweet drink consumption (0.05). BMI z-scores decreased by 0.1 points in both intervention and control groups.

Conclusions: NEHLM delivered by trained professionals resulted in significant positive changes in both nutritional knowledge and health behaviors of LSES preschoolers. In the short-term NEHLM did not show beneficial effect of weight reduction. Additional research need to evaluate the long term effects.

Health Policy Implications: Obesity prevention can be achieved in the short term by physical activity lessons among LSES preschoolers. However, given the low-cost of NEHLM and the beneficial long-term effects of nutrition and eating behavior changes, full implementation of the model should be considered by policy-makers.

ISRAELI ONCOLOGISTS' AND FAMILY PHYSICIANS' VIEWS ON ACCESS TO CARE, COVERAGE DECISIONS AND VALUE FOR MOMEY OF CANCER AND CONGESTIVE HEART FAILURE INTERVENTIONS

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Study question: Previous studies suggest that cancer-related interventions are valued more favorably than interventions for other medical conditions. We compared oncologists' and family physicians' views on various aspects of cancer and CHF treatment costs, cost-effectiveness, patients' access to care, and health policies relating to coverage and reimbursement decisions for these treatments.

Methods: We administered a web-based survey to 300 family physicians and 156 oncologists. The questionnaire included 24 statements and physicians were asked to indicate their level of agreement with each statement on a 5-point Likert scale, ranging from *"strongly agree"* to *"strongly disagree"*. Where relevant, physicians were asked to express their views on both interventions for cancer and CHF.

Results: Response rates were 39% and 36% for family physicians and oncologists, respectively. Participants expressed similar views on cancer and CHF care and no significant differences were found between medical specialty; >85% believe that inclusion of a treatment in the National List of Health Services (NLHS) strongly affects their patients' access to care; >80% suggest that more use of comparative-effectiveness and cost-effectiveness analysis is needed in coverage decisions and the vast majority suggest that assessment of value-for-money should be made by an independent (academic) institution or the national committee responsible for recommending coverage decisions; >70% believe that treatments not included in the NLHS should be included in supplementary health insurance programs; only a small minority of respondents believe that cancer-related interventions should receive higher priority than non-cancer interventions in coverage decisions.

Conclusions: Our findings suggest that both oncologists and family physicians value cancer and CHF interventions equally. We could not find evidence for a "cancer premium," as implied from previous surveys and analysis of coverage decisions in various countries.

Health Policy Implications: Views of physicians and the general public should be considered when payers make coverage decisions on new and innovative interventions.

THE MACCABI GLAUCOMA STUDY: EPIDEMIOLOGY OF GLAUCOMA AND PERSISTENCE TO THERAPY IN A LARGE ISRAELI HMO

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Objective: To investigate the epidemiology of glaucoma and its treatment and adherence patterns in a large health maintenance organization (HMO) in Israel.

Methods: A population based retrospective cohort study, conducted using the electronic medical databases of Maccabi Healthcare Services (MHS). The study population consisted of all patients with 2 diagnoses of definite glaucoma by December 2010. Collected data included personal characteristics, purchases, relevant surgical procedures, and comorbidity until December 2012.

Results: A total of 15,708 prevalent definite glaucoma patients were identified, with a point prevalence of 20 cases per 1000 among 40+ years old active members of MHS. Prevalence ranged from 3 cases per 1000 at age 40-50 to 92 per 1000 at age 80+. The 5 main prevalent pathologies were open angle glaucoma, pseudo exfoliation, unspecified glaucoma, angle closure and low tension glaucoma with prevalence rates of 1.61%, 0.20%, 0.17%, 0.11% and 0.06% respectively. We identified 4,960 incident glaucoma patients who were initially diagnosed between 2003 and 2010. The observed incidence density rate among 40+ years old members was 1.4 new cases per 1000 person years. Median age at diagnosis was 64 years old. During a mean follow up time of 5.5 years, 14% of these incident cases were non-adherent with therapy (medication coverage<=20% of the follow up time), 61% were poorly adherent (20%<=coverage<80%) and 25% highly adherent (coverage>=80%). Female sex, older age and higher socio-economic status were associated with higher adherence. At the end of follow up 26% of the patients were uncovered by any drug, 28% by one class of drugs, 20% were using 2 classes of drugs simultaneously and 25% were using 3 or more classes simultaneously.

Conclusions: The high prevalence of Glaucoma has important economic implication for health authorities. The current population-based study demonstrates the use of automated medical databases to characterize this chronic disease.

TRENDS IN OBESITY AND SMOKING AMONG THE CLALIT POPULATION

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Introduction: Health risk behaviors are among the key drivers of increasing burden of chronic disease over the past two decades. To date, descriptive data on key measures such as obesity and smoking are derived mainly from surveys. Recent electronic medical record (EMR)-based data allow more accurate surveillance of actual trends for promoting more appropriate public health interventions.

Research question: What are the rates of smoking cessation and weight loss among obese members (aged 25-74) of Israel's largest healthcare organization?

Methods: Measures were defined to assess the following rates among obese members (BMI>30) between 2009 -2012: current smokers, transition from current to past smoking status, and reduction of BMI to <30 (non-obese).

Results: Among Clalit members diagnosed as obese (23.4%), 16.5% were current smokers in 2009-2010. Among them, 68.6% had had their smoking status recorded again in 2012, and 14.1% quit smoking. Cessation rates were highest in Jewish males (15.6%), followed by Jewish females (15.1%), as compared with Arab males and Arab females (9.8% and 12.8%). Cessation was highest among ages 65-74 (19.4%). Among the obese in 2009-2010, 20% were non-obese in 2012, with Jewish males (22%), Arab males (21.3%), and the younger (25-34) (23.2%) most likely to become non-obese. Furthermore, only 2.7% both stopped smoking and lost weight.

Conclusions: Among obese members, males and the youngest adults have the highest weight loss rates with slowly declining smoking rates. Jews and the elderly show the highest rates of smoking cessation.

Health policy implications: EMRs enable sustained observation of health behaviors as a basis for intervention. Smoking cessation interventions must be promoted among obese members, focusing on Arabs and younger segments of the population. Sub-groups with clustered risk behaviors are at an even elevated risk for chronic disease; interventions should take into account the complex interplay between these conditions.

OPPORTUNITIES FOR FAITH-BASED PROGRAMS TO ADDRESS JEWISH IMMIGRANT HEALTH NEEDS IN THE U.S. IN A TIME OF AUSTERITY

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Background: At a time of rising health costs and austerity, untapped opportunities may exist to take advantage of motivated volunteers and leaders in a trusted context to improve population well-being, especially for vulnerable populations such as immigrants. In particular, health-related initiatives through synagogues may be a cost-effective method to promote congregants' health. Recent Jewish U.S. immigrants present an interesting example of this but inadequate research exists about such initiatives for this and similar populations.

Study Questions: 1) What are the health needs of recent Jewish immigrants in the U.S. and how do these needs vary by home country and compare to non-Jewish immigrants? 2) What is the potential for faith-based interventions as a cost-effective method to address these health needs?

Methods: This was a mixed methods study. 105 Adult Jewish immigrants were surveyed as part of the random-sample New Immigrant Survey data set. Measures of physical health mental health, health behaviors and access to care were included. Descriptive analyses were performed, including comparisons by groups. 15 key informant interviews with community leaders were then conducted to understand potential for faith-based interventions to address health needs.

Results: Needs were assessed for a wide range of health and demographic characteristics for Jewish immigrants and problems identified including inadequate access to care and poor health-related behaviors. Opportunities for potentially low-cost faith-based interventions integrated into synagogue life were identified by the interviews. Variations by key immigrant and religious subgroups were found.

Conclusions: Opportunities may exist for faith-based health interventions among immigrant Jews by leveraging the social and religious capital in this understudied community. Efforts to target Jewish immigrant needs by faith communities and take their varying characteristics into account are important.

Health policy implications: Involvement of committed volunteers and religious leaders through systemic faith-based initiatives can be a low cost way to improve population health both through prevention and through illness coping support.

PRETERM BIRTHS IN ISRAEL 2008-2010

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Background: Preterm birth is the predominant cause of neonatal morbidity and mortality. Beyond the neonatal period, infants born preterm constitute the largest group of children at risk for developmental and physical disability. Previous reports on preterm births in Israel have been based on live births only. Since stillbirths are part of a single continuum with preterm births. It is important to include them in the analysis of risk markers.

Study Question: What are the populations at risk for preterm births in Israel?

Methods: The birth records from the Ministries of Interior and Health were merged with records of stillbirths reported to the Ministry of Health. We examined the risk for birth before 37 weeks, 34, and 28 weeks. We performed univariate and multivariate analyses with maternal age, educational level, number of fetuses, nationality, country of birth, marital status, number of children, interpregnancy interval, gender and major congenital malformations as explanatory variables. Because of the strong association between multiple gestation and preterm birth, a separate model examined the risk indicators for singleton births.

Results: Multiple gestation is the strongest predictor of preterm birth. The adjusted odds ratio for preterm birth with multiple gestation, controlled for educational level, significant congenital malformations and the other variables were an order of magnitude higher than other effects. In the multivariate analysis preterm birth was most strongly associated with previous preterm birth and the presence of a significant congenital malformation. Preterm birth was also associated with Arab nationality, older maternal age, low educational attainment, marital status other than married, male and mother born in Ethiopia. An interpregnancy interval of more than 6 months until less than 5 years was protective.

Conclusions and Health Policy Implications: Identifying populations at risk for preterm birth constitutes the first step in identifying those risk factors amenable to intervention. Early stillbirth is part of the continuum that constitutes preterm birth and should be included in the monitoring and analysis of preterm births. Further research is necessary to examine the reasons for the findings of excess risk of preterm birth among Arab and Ethiopian born women. Expanding birth records by including more information regarding clinical and other risk factors could improve our ability to understand the determinants of preterm birth and thus reduce this important cause of infant and childhood morbidity and mortality.

THE EFFECTS OF NON-WORK/WORK CONFLICT AND PERCEIVED SOCIAL SUPPORT ON SUSTAINING HOSPITAL-PHYSICIANS' PERFORMANCE

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Background: One of the most significant and crucial aspects of health care services is physicians' performance at hospitals, which should be sustained effectively at times of austerity as at all times. The variance in physician's performance could be explained by various effects that might impair or improve it.

Study Question: What are the effects of non-work/work conflict and perceived informal social support on hospital-physician's performance?

Methods: 428 physicians answered an internet based questionnaire[1], distributed by 27 hospitals' physicians' mailing lists[2].

The questionnaire consisted of measures of physician's performance, non-work/work conflict and social support and background variables. Distinctions were made based on source and nature of the social support. The effects on performance were examined also on its two comprising dimensions.

Results: a) A significant negative effect: the more non-work/work conflict experienced by physicians the lower their performance at the hospital; b) A significant positive association (though weak and doesn't apply to all sorts of social support) i.e. the more supported the physicians perceive themselves the higher their hospital- performance. c) "Emotional-evaluative support" and "support from non-physicians" are partial mediators of the conflict's effect on physician's performance only among residents and specialists males. d) Gender and hierarchy status don't moderate the conflict's effect on physicians' performance at the hospital.

Conclusions: Non-work/work conflict was found to explain a significant percent of the variance of physician's performance at the hospital, whereas social support was found to have only a minor effect.

Health Policy Implications: Physicians' lives beyond work and its negative interface with work should be taken into strategic consideration. It is recommended to support and help physicians find coping strategies to reduce the non-work/work conflict. In addition, it is recommended to encourage emotional- evaluative support, and the positive interface between nurses and physicians.

1 While these responses are not a representative probability sample, they constitute a large enough sample to allow statistical analyses to provide some initial and tentative results.

2 The questionnaire was submitted to and approved by Helsinki Committee for Research Ethics.

MAPPING OF MENTAL HEALTH CLINICS FOR CHILDREN AND ADOLESCENTS IN ISRAEL: GEOGRAPHIC AND STRUCTURAL DISPARITIES

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Background: The Israel Survey of Mental Health among Adolescents showed a prevalence of mental disorders of 12% for all Israeli adolescents but a treatment gap of 50% among Jewish adolescents and 90% among Arab/Druze adolescents. No in-depth research has been done to examine the reasons for the lack of service use among Arab/Druze adolescents. A mapping of existing Mental Health Clinics for Children and Adolescents is a necessary first step to explain the treatment gap differences, which may have structural and/or cultural correlates.
Study Question: The study aims to describe the geographic distribution, accessibility, staff/patient ratio, professional staff/catchment area population size and to discuss the impact of the present status and propose possible solutions.
Methods: All directors of the Mental Health Clinics for Children and Adolescents in Israel were approached and asked to answer questions regarding number of actual professional positions, number of patients received in 2011, catchment area, accessibility, languages spoken by staff, maximum waiting time. Forty three out of the 48 clinics approached provided data. Geographic Information System (GIS) was used to show the location of clinics, their size in terms of professional mental health positions, distance to the clinic from various cities and towns and over and under-served areas.
Results: The mapping clearly shows the great difference between center and periphery and the great lack in service provision for children and adolescents living in the Galilee area.
Conclusions: Several models are proposed to overcome the lack of services in peripheral areas, particularly those serving the Arabic-speaking population.
Health policy implications: This is the first effort made to map existing services in such detail. The Mental Health Reform, which will go into effect in 2015, requires that the HMOs extend their ambulatory mental health services in a very significant way. This mapping will serve as a basis to plan services for the population groups most in need, taking into account needs for cultural and language literacy.

UNWARRANTED USE OF BROAD-SPECTRUM ANTIBIOTICS IN GENERAL PRACTICE IN ISRAEL: CALL FOR ACTION

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Background: We previously showed a worrisome increase in consumption of broad-spectrum antibiotics (Ab), mainly co-amoxiclav and fluoroquinolones, paralleled by a reduction in narrow-spectrum Abs.

Study Question: To assess the proportion of Upper Respiratory Tract Infection (URTI) treated by GPs with Co-amoxiclav, and Urinary Tract Infection (UTI) treated with fluoroquinolones, both considered to be largely unwarranted by current practice guidelines, and compare population subgroups for differential treatment patterns.

Methods: This cohort study included all Clalit members' visits to 4300 clinical practices during 2011. Rule-based algorithms were used to classify multiple primary care visits into discrete URTI and UTI events and link these with Ab prescriptions. Event and antibiotic prescription rates and differences in distributions across districts and population subgroups were tested. Prescribing ratios for UTI, the ratio of prescribing Fluoroquinolones vs. Nitrofurantoin (narrow-range Ab of choice) were calculated.

Results: 6.5 million visits for infectious diagnoses were registered among 4 million enrollees of Clalit. Almost 75% of the co-amoxiclav dispensed was used for treatment of URTI, with 6% of URTI events treated with co-amoxiclav. Over 75% of fluoroquinolones dispensed were used to treat UTI, with 23% of UTI events treated with fluoroquinolones. Variability between districts in use of co-amoxiclav for URTI ranged between12%-23% in adults and 5%-21% in children. 20% of physicians were co-amoxiclav "users" with high rate of URTI events treated with co-amoxiclav (10%-38%). Treatment of UTI events with quinolons, varied between 19%-52%. The proportion quinolons\ nitrofurantoin prescribed ranged between 1.4(1.3-1.5) to 6.2(5.5-6.8) in each district.

Conclusions: Rates of utilization of broad-spectrum antibiotics in the community are higher than expected and show wide variability which may suggest the need for intervention.

Health Policy Implications: Studies have demonstrated that accurate information supplied to clinicians is a vital component of reducing inappropriate antibiotic use. Targeted interventions must be considered in view of the study results.

REGULATING THE RELATIONSHIP BETWEEN PHYSICIANS AND PHARMACEUTICAL COMPANIES IN TIMES OF AUSTERITY: THE ROLES OF STATE REGULATION AND SELF-REGULATION

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Background: The relationship between physicians and pharmaceutical companies raises concerns about potential conflicts of interest. These concerns become all the more acute in times of austerity, since industry marketing practices to physicians may lead to overmedication, prescribing of more expensive patent-protected drugs and ultimately to rising health-care costs. In 2007, the NHI law was amended to require reporting of donations to medical organizations. This legislation joined the existing self-regulatory instruments both at the industry and company level.

Study question: To examine the normative and practical impact of the legislation on different stakeholders in the health system (pharmaceutical companies, physicians, HMOs and patient organizations), vis-à-vis the self-regulatory measures adopted by the industry both in Israel and abroad.

Methods: 70 in-depth interviews with representatives of all the above stakeholders regarding the effects and extent of the legislation and industry self-regulation.

Results: There have been major changes in the nature of the pharma-physician relationship over the past decade; in particular, over-hospitality and the more flamboyant aspects of industry marketing practices were significantly reduced. Interviewees claimed that these changes cannot be credited to the 2007 legislation, but rather are due to self-regulation initiatives of the multinational pharmaceutical companies as a result of more global forces. Still, there is some disagreement about the scope and impact of these changes on more essential aspects of the relationship.

Conclusions: The development of industry self-regulation in this field relates to a much broader global trend of promotion of corporate social responsibility and governance models that turn private actors into responsible partners in the regulatory process.

Health policy implications: Looking forward, this study's findings raise the issue of whether Israel can and should rely primarily on industry self-regulation and the global forces that promote it as a means of regulating the pharma-physician relationship.

MEDICATION ADHERENCE AND ITS ROLE IN DIABETES CONTROL

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Background: Medication adherence is a critical element in the long-term management of patients with diabetes. It is well established that among diabetics of long duration poor control is prevalent however, the role of medication adherence in this relationship is unclear. This study assesses the importance of adherence in those with long disease duration in a large population using an objective medication adherence measurement.

Study question: Does medication adherence mediate the inferior glycemic control seen in patients with diabetes of long duration?

Methods: We identified all adult (age 25+) diabetics diagnosed by 1.1.2010. Adherence was calculated for two years among patients on oral hypoglycemic agents and the A1C measurement taken closest to their last prescription was included. Patients were categorized as having "good" (>80%),"intermediate" (50-80%), or "poor" adherence (< 50%), and having or not having very poor control ($\geq$9). Disease duration was grouped as 0-2 years, 2-5 years, and 5+ years. Adjusted models were stratified by disease duration.

Results: 220,225 patients met study inclusion criteria. Among them 46.4% had good, 28.5% intermediate, and 25.1% poor adherence. Good adherence rates increased with longer disease duration (41.0%, 43.6%, and 48.6%) while glycemic control was worse. There was a strong inverse association between measured adherence and poor control (OR = 2.58; CI = 2.50-2.66); an association which remained stable when the model was stratified by disease duration.

Conclusion: While strongly associated with glycemic control in all disease durations, oral hypoglycemic drug adherence does not mediate the poorer glycemic control seen in diabetics with longer standing disease; these patients generally have better medication adherence.

Health policy implications: More than half of Clalit diabetic patients have sub-optimal adherence to medications requiring further intervention. Physicians must be aware of the importance of medication adherence in patients of long as well as short duration.

UNDER AUSTERITY - A USEFUL LEAN MANAGEMENT TOOL FOR HEALTHCARE SYSTEMS

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Background: Like healthcare systems globally, Israel's healthcare system is going through challenging times. Austerity, as well as shortage in health professionals, requires health systems to do more with fewer resources. The need to increase care efficiency and overall performance has led many healthcare systems to try adopting industry-born process improvement methodologies such as Toyota's LEAN. Clalit has been testing the implementation of a PPC (=Perfecting Patient Care) LEAN methodology in 5 settings within the organization.

Study Question: Can the A3 tool, invented in Toyota as part of LEAN methodology and embedded in the PPC health-specific LEAN methodology, be successfully implemented in hospitals and community services in Israel.

Methods: Teams were trained with PPC methodology and learned the use of the A3 tool. Each team worked during their daily working environment on a pre-chosen problem. Teams worked with a PPC mentor, helping them conduct observations on processes, collect data, analyze it and bring creative solutions to their problems.

Results: All teams involved reached impressive results by using A3 tool. Patients' waiting time in one project decreased by 57%, another project helped significantly reduce excess inventory in local warehouse of a department -i.e. some items were ordered 3 times more than actual consumption, Cardiac rehabilitation project in community services was able to increase patients participation from 30% to 80% and decrease waiting time to rehab centers by 70%.

Conclusions: A3 tool can and should be implemented in healthcare systems as part of the ongoing strive for excellence. This simple and yet powerful tool can bring visible improvements in healthcare system performance and effectiveness.

Health policy implications: Healthcare systems require today easy-to-use tools with clear impact for quality improvement. By implementing wide use of industry-born tools such as the A3, healthcare systems will be able to better use their scarce resources in time of austerity.

PALLIATIVE CARE SERVICES IN ISRAEL: WHERE, WHEN AND FOR WHOM?

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Background: There is a growing belief that palliative care is the most appropriate type of care for people with incurable diseases but it is not widespread enough in Israel.

Study Question: What are the quality of end-of-life care and the unmet needs of malignant cancer patients and of people with advanced dementia.

Methods: Personal interviews with family members of 193 deceased cancer patients, 120 family members of advanced dementia patients living in the community, and about 30 health fund and Ministry of Health stakeholders.

Results: only 10% of deceased cancer patients received home-hospice care. Compared to non-home-hospice patients, many more of them received opiate medications, were treated for anxiety, received explanations on their rights, wrote advance directives, died at home rather than in hospital and decided to forego curative medication earlier. The average cost of care of home-hospice patients during the last two month of life was 42% lower than for non- home-hospice patients and hospitalization contributed 64% of their total expenditure. Almost no dementia patients received home-hospice care. Their average symptom-management score was 29 (range 0-45, higher score is better), 76% were fed by tube, 36% suffered "all the time" with pain, and 36% had pressure sores. Only 15% of caregivers discussed advance care planning tools with the medical team.

According to stakeholders, despite regulations instated three years ago mandating the expansion of palliative services, they have been slow to develop and there are no clear criteria regarding eligibility.

Conclusion: The quality of end-of-life care for people with incurable diseases in Israel is quite poor, and palliative care could provide a critical contribution.

Health policy implications: there is a need to expand and develop tailored palliative services for incurable patients with a broad range of diseases.

BURDEN OF FALSE POSITIVE BLOOD CULTURE RESULTS IN INTERNAL MEDICINE DEAPARTMENT

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Background: Blood culture tests are considered as the "gold standard" for diagnosing bacteremia. However, they are characterized by up to 8% false-positive rate, due to contamination of the blood sample. This may lead to unnecessary use of antibiotics, pharmacy charges, a prolonged hospital stay and laboratory charges.

Study Question: The study aimed to elucidate the prevalence of the phenomenon of false positive blood cultures and to identify factors associated with contamination.

Methods: A 6-year retrospective study of 38,359 blood cultures from internal medicine wards at the Soroka Medical Center. Positive cultures results were classified as either contamination (false-positive [FP: 1355 cultures, 3.5%) or true positive (TP, 2251 cultures, 5.8%). The positive likelihood ratio was calculated as TP/FP. GEE and Poisson multivariable analyses and time series analyses were used in order to characterize the distribution of FP and TP over time .

Results: A FP/All rate of 3.5% was found, within the acceptable published range. A ward specializing in infectious diseases differed significantly from the other wards with a higher TP/All rate (6.75% compared to 4.5% to 6.34% in the other wards) and the highest likelihood ratio (2.01 in this ward compared to 1.16 to 1.73 in the other wards), adjusted for case-mix and temporal trends.

Conclusions: The highest positive likelihood ratio and TP/All rate observed in a ward specializing in infectious diseases might indicate that medical staff in this ward are more experienced and proficient in the technique for drawing blood for cultures. .

Health policy implications: When facing a positive blood culture, clinicians should take under consideration personal information of the patient's characteristics that are likely to increase the rate of true positive results. Future efforts for developing a blood drawing training program might help decrease the proportion of false positive results.

REPRODUCTIVE HEALTH AMONG ETHIOPIAN YOUNG ADULTS IN ISRAEL: CULTURE, KNOWLEDGE AND BEHAVIOR

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Background: Israeli population-based data reveal that Ethiopian-origin young adults aged 15-24 are three-four times more likely to have an abortion than their non-Ethiopian Israeli counterparts. Young women born in Ethiopia have even higher abortion rates than those born in Israel, and both higher than other Israeli women. It is imperative to understand the factors influencing these rates to minimize the barriers that influence their use of family planning methods.

Study Question: What are the cultural factors that contribute to the elevated prevalence of induced abortions among Ethiopian young women in Israel?

Methods: Eight focus groups were conducted with 18-24 year olds (6 with females, 2 with males) and 2 focus groups and 5 in-depth interviews with professionals. Semi-structured guides were developed separately for the young adults and the professionals. The social-constructivist approach guided data analysis assuming sexuality as culturally bound, opening the analysis to different contextual and cultural factors.

Results: Thematic areas that emerged included: 1) Attitudes and knowledge of contraceptive methods; 2) Culture barriers to a healthy approach to sexuality; and 3) Perceptions of abortions. Most of the young adults had minimal knowledge about contraceptive methods; many felt this was enough as long as they were not in a serious relationship. They perceive abortion to be a solution for single motherhood that may prevent stigma in the community. Three cultural barriers emerged: family honor as a powerful social force; Secrecy that prevents accessing care and information; Silence as a cultural expectation regarding sexuality.

Conclusions: Cultural factors highly influence contraceptive use and using abortions as a family planning strategy among young Ethiopians.

Health Policy Implications: Health professionals and policy makers need a more comprehensive understanding of these factors in order to provide appropriate information and promote programs to decrease risk behaviors and encourage positive sexual health in this sub-population.

INCIDENCE OF MYOCARDIAL INFARCTION AMONG DIFFERENT SOCIOECONOMIC GROUPS OF THE CLALIT HMO MEMBERSHIP IN 2011

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Background: Reduction of mortality from coronary artery disease has been a hallmark achievement of the past decades. Implementation of early intervention and attempts at prevention of acute myocardial infarction (AMI) are ongoing priorities. The present study was undertaken to assess the success of prevention efforts within different socioeconomic groups in Clalit.

Research question: Are there differences in the current incidence rates of AMI among groups of different socioeconomic status (SES) within the Israeli population? Have there been changes in these incidence rates in recent years (2008 versus 2011)? Are these changes similar in the different SES groups?

Methods: Recently developed and validated algorithms for monitoring the incidence of AMI within the Clalit database were applied to the entire adult population. Data were tabulated to reflect all events separated by 30 days. SES-specific rates were computed on the basis of this algorithm. Age adjustment was applied by the direct method according to the 2011 distribution in the Israel population.

Results: The highest incidence rate occurred among the low-SES group (age and gender adjusted rate=474/100,000) followed by medium-SES group (361/100,000) and high-SES group (430/100,000). Compared to 2008, a decrease in incidence was observed in all groups with relatively higher decreases in the low-SES compared to high-SES group.

Conclusion: Our data indicates the success of efforts to prevent AMI in all segments of the population. Despite this success some disparities persist, although a disparity reduction trend is evident.

Health policy implications: In order to maintain disparity reduction, specific prevention and intervention programs should continue targeting low-SES populations.

INFORMATION GAPS IN REFERRALS TO A PEDIATRIC EMERGENCY ROOM

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Background: Computerized systems aimed at information transfer, e.g. "OFEK" of Clalit Health Services, provide important information on medical history, treatments and tests. The value of such IT systems in bridging information gaps, especially in referral to emergency care, has not been tested yet.

Study Question: The study examines types of information gaps among three major sources- community physician's referral letter, patients' history taken at the ER and the patient's medical record in "OFEK". Additionally, we test information gaps in referrals of minority patients.

Methods: The sample included 170 medical records of enrollees of Clalit Health Services, treated in a pediatric ER, which met the inclusion criteria. The referral letter, patients' history and "OFEK" were reviewed for the content of seven key areas - information on lab and imaging tests, medical history, known allergies, recent treatments, medications and their doses, and vaccination status. We also tested information gaps according to parents' native language

Results: Completeness of data in all 7 areas, in referral letters, "OFEK" and patients' history was low (36%, 31%, and 48% respectively). Data available in "OFEK" that was missing in the other sources including: medication doses (37%) imaging tests (16%), and lab tests (8.3%). The completeness of information decreased from 61% to 46% in the presence of language discordance between ER staff and the parent.

Conclusions: All three information sources are relatively incomplete in reference to the key areas mentioned and in their extent. OFEK provides a potentially important source of data especially in regards to medication doses, imaging and lab test. In presence of language barriers between the parent and the ER staff, the information gaps are wider.

Health policy implications: Standardization, real time updating and integration of information sources can increase data completeness which can be detrimental in care transitions, especially in admission to a pediatric ER.

INTERNAL MEDICINE DEPARTMENTS IN ISRAEL - ARE HOSPITALIZATION PATTERNS CHANGING?

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Background: Parallel to increased life expectancy the number of elderly patients hospitalized in internal medicine departments is growing.

Study Question: To investigate demographic and hospitalization patterns, and annual cumulative length of stay (CLOS) focusing on patients with 10+ days.

Methods: The research is based on the Ministry of Health's Hospital Discharges Database. We analyzed the patterns of inpatients in internal medicine departments during 2005-2011. The data comprised 1.3 million patient admissions of 8.4 million days over this period. Trends by age, gender, hospitalization characteristics and morbidity are displayed.

Results: The percent of patients aged 85+ has grown from 11.7 in 2005 to 15.7 in 2012, an increase of one-third. The CLOS is 1.4 days higher than the LOS. Older patients had a higher CLOS; those aged 85+ had an annual CLOS of 9.0 days compared to 5.8 for those aged 55-64. Patients with 3+ admissions in a year had a CLOS five times that of patients with one admission, 20.9 compared to 4.0 days in 2011. Patients with 3+ Charlson index had a CLOS of 10.6 days in a year compared to 4.7 for those with 0 Charlson index. Patients who died in a hospital had a CLOS almost three times higher than those who were discharged alive. Logistic regression with patient length of stay 10+ days as the outcome was used to analyze the data. Many of the explanatory variables were found to be correlated.

Conclusions: The growth in the proportion of older patients increased the CLOS.

Health policy implications: To investigate strategies to improve the services offered by the healthcare system, especially for patients with chronic diseases, to minimize stays and improve comprehensiveness of care and overall health of the patient. To encourage preventative treatment in the community, particularly of populations found to have high risk factors.

FACTORS AFFECTING DECISION MAKING IN ADVANCED CANCER PATIENTS - SYSTEMIC REVIEW

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Background: News about cancer diagnosis leads patients and their families to emotional turmoil. Yet, through this stressful, emotional period, patients are asked to take active part in the decision process involved in medical treatment that should hopefully lead them to cure. As time is pressed, patients are forced to gather as much information as they can, from any available source, and make the best treatment choice. But the factors affecting their decision making process were not sufficiently studies.

Study Question / Objective: Provide a common model of the decision making process of cancer patients seeking treatment, based on current professional literature from Israel and abroad regarding the various medical, personal, social, informative and economic variables.

Methods: a systemic review following the writing techniques recommended by Wright et al. (Wright, et al. *Clin Orth Relate Res* **2007**; 455:23-29.). We plan to review between 50 and 100 articles, to be able to cover as many aspects of the decision making process as possible.

Data analysis methods: studies data will be analyzed according to abovementioned variables. Discrete variables will be coded to allow statistic analysis such as T-test, Chi-square test, Factor analysis and a-parametric tests. Continuous variables will be adjusted to fit a common evaluation scale that will enable the comparison of data from different studies.

Health policy implications: Our model would help the medical system to better shape the demand function for various cancer treatments - provide treatment related information, more appropriate for the patient's needs, help physicians support their patients in their time of need, and help medical system officers predict the demand for various treatments.

CREATING HEALTH SCALE FOR MEASURING THE LEVEL OF HEALTH OF THE IDF PERSONNEL

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IDF, Israel.

Preventive medicine and health promotion are main goals of health organizations aiming to enable people improved health control, minimize disease and its related complications and to elongate disease-free years.

The medical corps of the IDF has set a target to promote these issues among the army personnel. Strategically aimed to identify disease related risk factors and therefore reduce illness. As of 2012 a plan was formed aimed to measure the level of health of each army career. The health measuring outcome will be reflected in a numerical score.

Health care providers use intensively numerous health scales that usually describe one aspect of health such as BMI, NORTON, GLASGOW, etc.

Web search on Google demonstrates thousands of examples of Health Calculators, especially in fitness and well-being websites. Each scale defines health in a different manner. Part of them includes physical data such as BMI, test results such as blood pressure, and others refer to habits as nutrition, training, smoking, etc.

The medical corps has set a list of parameters aimed to measure the health level and score it. The overall score was named "BARAK SCALE".

The variables are matched to age and include BMI, Blood pressure, performing periodic health testing, Fitness Exam Score, and level of lipids in blood tests.

The scale range is 0-15. 15 demonstrate the optimal state. We performed a pilot study computing the "BARAK SCALE". It accurately reflected the Health Status of individual and military units in a single numerical score. We expect that medical intervention of primary care givers will improve the health score, based on one's needs. Furthermore, the average grade in each military base will provide numerical score of Health unitary level.

This will help us to further promote strategy of preventive medicine.

PHYSICIAN SHORTAGE IN ISRAEL: FROM CRISIS TO SOLUTION

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Background: The effect of the immigration from the FSU reached its peak in 1997 with the granting of over a thousand medical licenses.

Study Question: To examine Ministry of Health policies and their impact on the number of licensed physicians.

Results: The number of doctors per capita decreased from 3.7 per 1,000 in 1997 to 3.3 in 2011, a result of the drop in the number of new physician licenses granted. An increase in the number of doctors retiring aged 65+ also contributed to this trend. The percentage of doctors aged 65+ increased from 18% in 2000 to 24% in 2011, among doctors from the FSU the percentage increased from 11% to 25%, respectively. The number of physician licenses granted in 2012 was 922, a decrease of 11% from 1997 but an increase of 68% from 2007. Licenses granted to doctors studying in Israel grew by 102 from 292 in 1997 to 394 in 2012. Licenses granted to doctors who studied overseas grew from 231 in 2007 to 482 in 2011.

Conclusions: The increase in the number of new physician licenses since 2008 is a direct result of Ministry of Health policy. There has been an increase in medical school class sizes in all four schools.

Health policy implications: A new medical school was opened in Tzfat and Tel Aviv university medical school opened a program for BA graduates. This policy contributes to reducing health inequalities, particularly in the periphery, and corresponds to the Ministry of Health's work plan. Recent policy to ease the licensing requirements for overseas students will further increase the pool of new physicians in Israel.

SPEECH AND LANGUAGE PATHOLOGISTS IN THE ARAB SECTOR: NEEDS ANALYSIS

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Background: Research has shown that ethnic minorities are often at a disadvantage regarding health care in general and language pathology care in particular because of language difficulties and unfamiliarity of health service providers with their culture.

Study Question: Considering the difficulties that Arabs face as ethnic minority in Israel, can Arab Speech and Language Pathologists (SLPs) in Israel provide professional services that comply with the linguistic and cultural needs of the Arab population?

Methods: 133 Arab SLPs and a reference group of 59 Jewish SLPs participated in the study, recruited at clinics, child development centers, hospitals and via professional mailing lists. Participants completed a survey questionnaire relating to academic studies and continuing education, assessment and treatment tools and public awareness to communication disorders, by rating propositions relating to each area on a scale of 1(not at all) to 5(very much).

Results: Two-tailed t-tests revealed statistically significant differences between Arab and Jewish SLPs. Academic curriculum and post-graduate training programs were found to relate to the Arabic language and culture significantly less than to the Hebrew language; compared to Hebrew, assessment and treatment tools adapted to Arabic and standardized are almost non-existent. In addition, Arab SLPs face a greater burden of bureaucratic obstacles (e.g. low budgets, lack of equipment, etc.) than Jewish SLPs.

Conclusions: SLP services in the Arab sector in Israel suffer from lack in training programs and assessment and treatment tools that focus on the Arabic language and culture. Furthermore, bureaucratic obstacles are more severe for the Arab sector.

Health Policy Implications: Various measures are required to improve SLP services in the Arab sector in Israel to meet the needs of the Arab minority and hence provide qualitative service. These include promoting specialized training programs for Arab SLPs, developing assessment and intervention tools for Arabic and reducing bureaucratic procedures.

EXPANDED MEASURE OF PEDIATRIC INJURY

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Background: An accepted method of estimating the pediatric injury rate is to use the prevalence of emergency department (ED) visits. However, children may receive injury care in other locations.

Objective:

- Estimate the pediatric injury rate using both ED and community urgent care |centers (UCC) visits
- Compare injury, utilization and demographic variables between pediatric ED and UCC use

Methods:

- Estimation of the injury rate for two cities (Jerusalem and Maale Adumim) – defined as the number of resident children ages 1–17 who visited either UCC or ED (not both) due to injuries in 2009 divided by the number of pediatric residents multiplied by 10,000.
- Comparison of injury type, demographic and visit variables between ED and UCC.

Results: The "expanded" injury rate for Jerusalem and Maale Adumim was 729.3 and 1075.9 respectively. This "joint" value is 2.1 and 3.3 times higher respectively than the estimate by ED visits alone.

The percentage of males and average age were higher in the ED than in either UCC location. Percentage of ED use decreases with age.

There are statistically significant different in the types of injury among children who received care in the two different settings. Contusions and lacerations were more common in UCC and vehicular accidents more common in ED.

Significance: Injury rate calculation based on ED visits alone can lead to misconceptions. Proper estimation-of injury incidence requires also data from alternative sources of care.

SETTING PRIORITIES FOR REDUCING PUBLIC EXPOSURE TO ENVIRONMENTAL CONTAMINANTS IN TIMES OF AUSTERITY

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Background: Human biomonitoring (HBM), or assessment of human exposure to an environmental chemical via the measurement of that chemical, its metabolite(s), or reaction product(s) in human biological materials, has been widely used worldwide to demonstrate population exposure to environmental chemicals. This tool, which is relatively costly, may also serve as a tool to prioritize public health interventions. In Israel, the Ministry of Health Human Biomonitoring Study demonstrated that most adults in the general population in Israel have quantifiable urinary levels of a range of environmental contaminants, including organophosphate pesticide metabolites, bisphenol A, cotinine, phthalate metabolites, and polycyclic aromatic hydrocarbon metabolites.

Study Question: Given that the general population in Israel is exposed to a range of environmental chemicals with potential adverse health impacts, the study aims to prioritize these chemicals regarding importance of public health policy intervention and inclusion in a national HBM program.

Methods: We scored the environmental contaminants organophosphate pesticides, bisphenol A, cotinine, phthalates, and polycyclic aromatic hydrocarbons for relative importance of public health policy intervention using the following criteria: strength of evidence regarding adverse health effects, level of population exposure in Israel compared to other worldwide populations, and existence of relevant public health policy interventions in the US or Europe.

Results: Cotinine scored highest for strength of evidence regarding adverse health effects; organophosphate pesticides scored highest for level of population exposure in Israel compared to other worldwide populations; cotinine and organophosphate pesticides scored highest regarding existence of relevant public health policy interventions in the US and Europe.

Conclusions: It is possible to prioritize environmental chemicals in terms of relative importance of public health policy intervention.

Health policy implications: The results of the analysis will aid in planning a national HBM program in Israel (and in other countries) as well as public health policy intervention.

FEASIBILITY AND ACCEPTABILITY OF DEVELOPING AND DISSEMINATING A mHEALTH PROGRAM FOR SMOKING CESSATION IN ISRAEL

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Background: mHealth is being hailed as a promising way of disseminating health information and providing effective health promotion programs in times of austerity. SMS programs have been proven to promote smoking cessation in some countries.
Study Question: Is a mobile phone smoking cessation program feasible and acceptable in Israel?
Methods: We developed "iStopSmoke", an interactive SMS-based smoking cessation program for Israelis from the American SmokeFreeTXT program. The program includes 2-4 messages per day sent to the quitter up to 7 days before and 30 days after quitdate, with additional interactive features. During 2012, we conducted a pilot study among 40 Israeli smokers, who were interviewed face-to-face at 3 time points (0, 2 weeks, 4 weeks), using a structured questionnaire. In parallel, we interacted with key stakeholders in Israel, organized a professional conference and were involved in media activities.
Results: Participants' usage of keywords was high, with an average of 17 messages sent by each participant. Over two thirds stayed enrolled until the end of the program and 41% reported quitting smoking at the end of the program. 90% of respondents read all or most messages, 76% found the program helpful and 86% would recommend the program to a friend. The pilot contributed significant insights for the revision of the program for further development, evaluation and dissemination. The program received professional and public attention, and the pilot study was instrumental in gaining financial support from the Israel Cancer Association and Ministry of Health.
Conclusions: This is the first study to document that a smoking cessation program using mobile phones is feasible and acceptable to smokers in Israel.
Health policy implications: In times of austerity, mHealth programs could play a significant role in promoting health while reducing health costs.

Keywords: mHealth, Smoking cessation, Health promotion, Health Care.

SURVIVAL OF ELDERLY PATIENTS WITH SEPSIS ADMITTED TO THE ICU IN THE SETTING OF ICU BED SHORTAGE

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Background: Elderly people comprise a growing proportion of patients in the intensive care unit (ICU). However, ICU beds in Israel are scarce.

Study Question: The prognosis of elderly patients with sepsis admitted to the ICU.

Methods: Patients ≥65 years hospitalized in the ICU with a diagnosis of severe sepsis in 7 general hospitals in Israel (2002-2008) were studied, Demographic and clinical data were extracted from a computerized database, including diagnoses suggesting organ system failure and the Charlson's comorbidity index. The association between the patients' age and short- and long-term mortality was analyzed using multivariate models, adjusting for confounders.

Results: Of 5,155 patients with severe sepsis, 3,151 (61.1%) were >65 years. Older patients presented with a similar number of failing organs, and had similar ICU and total hospital stay. 28-days mortality for patients 65-74, 75-84, and ≥85 years were 42, 48 and 58%, respectively. The corresponding figures for 1-year mortality were 72, 79 and 86%, and for 5 years: 83, 89 and 96%. Adjusted for Charlson's comorbidity index and the number of failing systems, age was associated with increased 28-days mortality, (OR=1.31, 1.48 and 2.42 for patients 65-75, 75-85 and older than 85, respectively) and with increased one-year mortality among survivors, (HR=1.18, 1.58 and 1.53 for patients 65-74, 75-84 and ≥85 years, respectively). No significant temporal trend was observed in 28-day mortality for the study population during the study period after adjustment for confounders, in contrast with worldwide trends.

Conclusions: Elderly patients discharged from the ICU with a diagnosis of severe sepsis had a poor prognosis; older patients had higher short and long-term mortality. **Health policy implications:** In the setting of scarce ICU resources, realistic survival expectations, taking into account long-term prognosis, should guide allocation of beds. A future study regarding the cost-effectiveness of these admissions is underway.

CHANGING BEHAVIOR PATTERNS AMONG HEALTHCARE WORKERS THROUGH A SERIES OF INFORMATIVE NEWS FLASHES - A MODEL FOR IMPROVING QUALITY (EXAMPLE: PROMOTING THE INFLUENZA VACCINATIONS)

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Background: Medicine is a profession based on information that frequently updates. An overabundance of information makes it very difficult for medical teams to keep up-to-date.

Influenza, a disease bearing substantial morbidity, and a heavy economic burden, can be controlled with vaccination. Vaccinating medical teams can greatly increase the efficiency of healthcare systems. Fewer working days will be lost, and flu-related complications in patients can be prevented.

Low vaccination rate among healthcare workers is a grand challenge that medical policymakers face. The Ministry of Health invests a great deal of effort in trying to increase this rate, but has gained only partial success.

Objective: To motivate healthcare teams to receive vaccination against influenza, and equip them with the right tools and knowledge so that they can encourage patients to do so as well.

Method: A series of brief "information news flashes" that included comprehensive information on the disease and vaccinations were frequently distributed. The information was sent out via electronic mail to healthcare workers in a general hospital. The news flashes were based on the At@Glance® design and methodology.

Results: Within a period of 13 weeks, 711 health-workers were vaccinated (22% of hospital workers), vs team vaccination rates in other medical-centers: 9%-38%. Following INFORMATIVE-NEWS-FLASHES (INFs) 104 health-workers were vaccinated (15% addition, 9% more than the previous year). The responders reported that INFs revealed new data (12-34%), convincing them to be vaccinated (8-21%) and to recommend vaccination to others (patients, colleagues) (15-39%). More than half of the workers receiving INFs notified that this methodology is an effective pathway to spread information.

Conclusions and Implications: Distributing "fragments of information" in this way solves the need of medical healthcare workers to constantly stay up-to-date with multi-disciplinary information. Policymakers can wisely use the tool of disseminative knowledge for keeping up-to-date as their strategy for regulating the promotion of desirable medical policies.

THE RELATIONSHIP BETWEEN MULTIDISCIPLINARY TEAM MEMBER COMMUNICATION DURING HOSPITALIZATION AND THE QUALITY OF PATIENT CARE TRANSITIONS AMONG CARE SYSTEMS

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Background: Breakdowns in communication among members of the multidisciplinary hospital team can adversely affect the continuity of care for patients as they transition from the hospital to the community.

Study Question: Beyond the scope of discharge explanations, this study examined the relationship between team communication during hospitalization and the quality of the patient's transition between healthcare systems.

Methods: A prospective study of 120 patients discharged from a rural hospital. Patients completed a questionnaire about the discharge process, explanations given, communication among hospital staff and demographic characteristics at the time of discharge. Two weeks later, patients were contacted by telephone on the quality of hospital to community transitions using a valid instrument, the Care Transition Measure (CTM) (range 0-100). Communication, the main independent variable, consisted of items on experiences of duplications, omissions and contraindicated instructions provided by hospital staff.

Results: Patients assessed the quality of discharge as relatively low with a mean CTM score of 50.2 (SD - 16.6). Mean (SD) of the team- communication index was 3.7 (0.7) (possible range 1-5). A significant positive correlation ($r= 0.450$, $p< 0.01$) was found between communication among care providers and the quality of patient transition from hospital to community care (CTM score). This correlation was found regardless of the extent of pre-discharge explanations provided to the patient ($p<0.05$) and was also significant among different groups in terms of socio-demographic characteristics.

Conclusions: The study shows that good communication between the multidisciplinary team members (as assessed by patients) during hospitalization is associated with positive hospitalization outcomes, i.e.- the quality of transitional care.

Health Policy Implications: As health systems focus on reducing readmissions this study raises awareness to the importance of communication among the hospital providers during the hospitalization episode, as a means to reduce gaps in care and improve transitions.

DISTANCE LEARNING - AN ECONOMIC PERSPECTIVE

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Background: Every organization aspires to find a way to increase its employees' continuing education within a limited budget. Distance learning is known to have many advantages – accessibility, flexibility and the fact that it breaches the boundaries of time and location to enable learning anywhere, at any time. Along with the didactic and administrative advantages, distance learning also has significant economic advantages that can be measured via the numbers of learners, the number of courses and the resources invested.

Rationale for intervention:

Accessibility an unlimited number of learners.
Increasing the scope of the learning content/courses.
Reducing the number of work absences because of learning.
Staying within the budget.

Methods: Over six years a bank of 20 up-to-date and attractive online courses has been built for self-study in four categories: Gaining the authority to take action; patient safety and quality assurance; assimilating regulations and work processes; and clinical skills. In choosing which content to develop, great weight was given to economic considerations, such as the size of the learning population and learning content that could be re-used for staff competence. From an economic perspective it was found that operating a frontal course for 1,500 student's costs three times more than running the identical course online. Cost reductions stemmed both from the savings on the marginal cost and from the more efficient utilization of study time.

Health Policy Implications: Without exceeding the budget, more than 10,000 nurses are engaged in active learning in an online learning environment. The organization's learning program is made accessible to more nurses, in a wide variety of learning fields. Distance learning was found worthwhile not just from an economic perspective, but also in terms of content quality and learner's satisfaction. Feedback (N=3000) showed that 85% were satisfied with the learning program, and believe that online study should be further developed.

IDENTIFYING MAJOR OPERATIONAL CHALLENGES, CAUSES AND POTENTIAL REMEDIES FOR EMERGENCY DEPARTMENT OPERATIONS

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Objectives: Emergency Department (ED) overcrowding (OC) is plaguing EDs worldwide with grave implications on patient and caregiver comfort and quality of care. Many contributing factors have been cited and many approaches tried, without widespread success.

Focused Operations Management (FM) integrates novel managerial theories and practical tools {such as the Theory of Constraints (TOC), the Pareto principle, the complete kit concept and the Just-in-Time/LEAN approach} into a systematic approach. It has proved effective in the industry and service sectors, radically improving performance at little additional cost.. As an initial research phase, interviews with key stakeholders were performed to identify operational causes and potential operational remedies.

Methods: Major ED operational challenges, metrics and alleviating measures were extracted through a literature search. Semi-structured interviews with ED head nurses ED managers and hospital directors were conducted. The interviews centered on major operational challenges, causes and the potential utility of FM tools.

Results: A 1-6 scale was utilized. Major challenges included: over-crowding - 5.8 and prolonged waiting times for non-urgent patients - 5.1. Leading causes identified were: ED boarding - 5.6 and increasing patient load - 5.4. Regarding ED patient boarding, a significant difference was found regarding its rated importance between ED directors and head nurses - 6.0 and hospital managers - 4.9.

The FM tools assessed to be most promising were: the TOC methods to identify and alleviate bottle necks and to reduce "work in progress"- 5.5, the implementation of global performance measurement and managerial control - 5.2.

Conclusions: Improving ED operations is a critical health management issue. An important initial step towards charting possible alleviating measures, is mapping of the challenges and root causes, potential remedies and agreeing on a common language among stakeholders.

THE IMPACT OF A NOVEL ADHERENCE MEASURE TO IDENTIFY PATIENTS NON-ADHERENT TO STATINS

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Background: Traditional methodologies for measuring adherence rely only on sequential pharmacy data, and overlook patients filling one or no prescription. Identification and characterization of this subgroup of non-adherent patients prescribed statins is crucial to building appropriate interventions.

Research question: What proportion of Statin-prescribed patients does not fill prescriptions at all, who are they, and how does their LDL control compare to adherent and non-adherent patients identified by traditional dispensary-based adherence measures?

Method: Statin adherence in patients over age 21 was tracked for 2-years utilizing a new, validated algorithm based on both written and dispensed prescriptions and a traditional, pharmacy-based dispensed-only measure. Changes in LDL levels over the study period were tracked and subgroups analyzed.

Results: A traditional adherence measure identified 7999 patients as non-adherent. The new measure identified 18,917. Thus, 10,918 patients (1 in 6 patients prescribed statins) would be overlooked using existing adherence methodology. These patients were similar to those identified by existing methods, but different from adherent patients, as regards: age (52.0 ± 13.2 and 52.9 ± 12.4 vs 56.4 ± 12.6, $p < 0.001$), percent poor (51.0%, and 58.0% vs 45.1%, $p < 0.001$), percent Arab (26.1% and 31.0% vs 19.6%, $p < 0.001$) percent living in Israel's geographic periphery (15.7% and 16.7% vs 14.5%, $p < 0.001$) and drops in LDL level (11.9 and 14.1 versus 48.3 mg/dl, $p < 0.001$).

Conclusion: Use of written prescription- based adherence methodology exposes a large population of patients (16.1%) who are receiving statin prescriptions but not filling them at all. These patients do not achieve LDL reduction, and are younger, of lower social-economic status and more likely to live in the geographic periphery than adherent patients.

Health policy implications: The unique demographic profile of patients newly exposed as non-adherent makes them an appropriate target for interventions to increase adherence.

SURVEY RESULTS SHOW THAT ISRAELI ADULTS ARE WILLING TO PAY HIGHER HEALTH TAXES FOR A WIDER COVERAGE OF LIFE-SAVING AND LIFE-EXTENDING MEDICATIONS

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Study question: The Israeli List of Health Services (NLHS) offers a generous coverage for drugs and other technologies. However, not all approved drugs are covered under the basic health insurance and are frequently subject to out of pocket payments. We assessed the ex-ante willingness to pay (WTP) for a more generous public coverage for life-saving and life-extending medications.

Methods: We conducted a telephone survey among a representative sample of the adult population in Israel (n=502). We asked participants to indicate whether they will be willing to pay an increased health tax assuring that all life-saving and life-extending interventions will be covered and provided by health plans with no cost-sharing. In addition, we collected information on self-rated health, and other personal characteristics, including age, gender, income, education, and coverage of supplementary and private health insurance.

Results: Mean age of the study population was 51.7±15.9 years, and 51% were female. 63.5% indicated that they would be willing to pay an increased health tax. Respondents willing to pay were younger (49.3±15.0 vs. 55.9±16.4 years; $p<0.001$), reported a higher self-rated health ($p=0.001$), and WTP increased with respondent's income ($p=0.005$). Among all respondents (WTP set at zero for those unwilling to pay) the median extra monthly WTP was in the range of 0-25NIS. Among those willing to pay, this value was in the range of 25-50NIS.

Conclusions: Respondents are willing to pay extra health taxes (up to 7.5% of the current average health tax) to assure that all life-saving and life-extending interventions are included in the NLHS with no co-payment. Our findings are in accordance to a similar U.S.-based study.

Health Policy Implications: Respondents expressed a strong preference for a more generous coverage and the total WTP substantially exceeds the budget needed to cover all life-saving and life extending interventions. These findings should be considered in future financing decisions.

CONSUMPTION RATES AND REGULATORY BARRIERS TO THE ACCESSIBILITY OF STRONG OPIOID ANALGESICS IN ISRAEL AND ST. PETERSBURG

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Background: Relieving pain is one of the most important tasks for a clinician. Multiple factors can account for the consumption rates of strong opioid analgesics in a particular country or internationally. These include an increased awareness of pain, the availability of opioids, and regulatory barriers.

Study Question: This study aimed to compare the consumption of strong opioid analgesics in Israel and St. Petersburg over 2000–2008, and to describe the current regulations on opioid use in both countries. We hypothesized that differences between the countries with regard to prevalence rates of strong opioid drug consumption would be explained by respective differences in their regulations.

Methods: Data from the databases of the Israel Ministry of Health's Pharmaceutical Administration and the St. Petersburg Central Pharmaceutical Reserve were converted into a defined daily dose (DDD)/1000 inhabitants/day. Regulation was evaluated according to the WHO guidelines.

Results: The opioid consumption rates in Israel were substantially higher than those in St. Petersburg. The excess in DDD/1,000 inhabitants/day was for fentanyl +0.287 in 2000 and +1.206 in 2008, for morphine +0.245 and +0.122, and for pethidine/trimeperidine +0.035 +0.007 Oxycodone consumption increased in Israel from 0.31 DDD/1,000 inhabitants/day in 2000 to 0.46 2008, Methadone and buprenorphine consumption rose in Israel, whereas these drugs are not available in Russia. Conversely, omnopon consumption decreased in St. Petersburg from 0.0206 DDD/1,000 inhabitants/day in 2000 to 0.00304 in 2008, whereas the compound is not available in Israel. St. Petersburg differs from Israel with less opioid formulary availability and greater regulatory restrictions.

Conclusions: Strong opioid analgesics consumption in St. Petersburg is lower than in Israel, and the differences in opioid formularies availability and legal/regulatory barriers to opioids accessibility are responsible for the consumption discrepancies.

Health policy implications: Reducing legal/regulatory barriers for strong opioid analgesics in Russia.

TIMING OF DISCHARGE MAKES A DIFFERENCE: THE EFFECTS OF LENGTH OF STAY AND DAY OF DISCHARGE ON 30-DAY READMISSIONS

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Background: The evidence on the influence of timing of discharge on readmission risk is inconsistent, showing both that increased length of stay (LOS) as well as early discharge are associated with an increased risk of readmission.

Study Question: We aimed to test whether LOS and weekday of discharge (i.e., weekend vs. workdays) are associated with the risk of 30-day emergency readmission.

Methods: Data on first admission to internal medicine departments during January – March 2010 was retrieved from Clalit Health Services' data warehouse. Inclusion criteria: LOS of >= 2 nights, age 18+, readmitted to an internal medicine demartment or ICU. Predictors: LOS, ACG morbidity categories, age, socioeconomic status, and prior healthcare use. Logistic regression was used to model the effect of discharge day and LOS on 30-day emergency readmission, controlling for known risk factors.

Results: After adjustment for morbidity, clinical and demographic factors, there is an increased risk for 30-day readmissions associated with increased length of stay (OR=1.56 when LOS is 8+ days vs. 2-3 days, p<0.001). Focusing on 2-7 day hospitalizations, the same association recurs (OR=1.47 for LOS > 5 days, p<0.001). Being discharged over the weekend increases the odds of readmission by 11% (p=0.04), controlling for all known risk factors. Modeling for an outcome of readmission or death, or for a 7-day readmission outcome, resulted in similar findings.

Conclusions: Our study showed that contrary to some of the evidence, longer hospital stays were associated with increased risk of unplanned readmission. Being discharged over the weekend incurs mild additional risk for readmission, especially at shorter LOS.

Health Policy Implications: These finding suggest that despite short LOS in Israel, increasing LOS as a readmission reduction strategy may be ineffective, unless assuring the specific need and care content of these additional days.

CAN INTEGRATED MODELS IN HEALTHCARE BE CONSIDERED AS NEW HEALTH POLICY?

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Background: Studies have shown that human resources, processes and customer perceptions and expectations have a great deal of influence on business outcomes. While most of these studies were done in industry, more and more healthcare organizations are adopting methodologies adapted from industry with proven success.

Study Question: The study examines the implementation of integrated models in healthcare systems. It builds on industrial examples of integrated models such as the "Employee-Customer-Profit" model of the Sears and Roebuck Company and various process improvement methodologies such as lean sigma.

Methods: The study included, personal interviews, observations, training of healthcare staff, mentoring of improvement projects, employee satisfaction surveys and statistical data analysis.

Results: Improvement projects were launched by management and generated enthusiasm and high expectations. The topics dealt by improvement projects combined clinical importance with economic impact. Due to sabbatical leaves and job assignments a drop in management attention ws experiences. So far improvement projects were not completed but general lessons learned could be derived.

Conclusions: Employees are key element in organizations. Once being empowered and with a solid methodology, they can learn how to analyze their daily work and bring to management important recommendations for improvement. Such improvements aim at a potential of money saving, increase in effectivity and higher quality of work. The maturity and stability of an organization have an effect on the implementation of an integrated model, as well as management's seniority and openness to change.

Health policy implications: Using integrated models as an institutional governance strategy can bring healthcare systems to a turning point like the IHI foundation initiative in the US. By using the knowledge learned from processes, employees and patients, financial and economic strategies will be easier to determine and improvements in quality and performance will become an achievable task.

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