THE STATE OF THE DEPARTMENT OF PUBLIC HEALTH

FY2011-12
Topics

- Research Contributions and Directions
- New and Noteworthy
- By the Numbers: people, $’s, growth
Research Contributions

A partial (but illustrative) list:
Cost-effectiveness ratio for on-site testing for HIV in SA Rx settings $60,300/QALY

Pre-exposure HIV prophylaxis is cost-effective when expected incidence is >2%

Bup/nx for clinically stable patients has a CE ratio of 35,100/QALY

Close to 40% of elderly home care patients on potentially unsafe medications

>53% of total joint replacement patients have higher expectations than their surgeons, often driven by high-level activities; more realistic in those who get pre-op education
Research Contributions (OER)

- Public reporting and P4P have not improved hospital mortality or quality; redesign needed
  - Mortality trends for AMI, HF, pneumonia unaffected by Hospital Compare
  - Phase II of Premier demonstration less effective than Phase I
  - In Mass. payments 5x higher, but no effect
  - Payments to disadvantaged hospitals better in Phase II, but still an issue

- P4P in physician practices needs restructuring
  - Only 20% of ambulatory visits incentivized
  - No effect on quality
  - Majority feel that incentives are too small to have an effect

- Improvements in process resulted in >20% improvement in outcomes for DM, CAD, and stroke
Newer metal-on-metal hip implants are less effective and safe; coordinated post-marketing studies are needed.

High failure rates of hip resurfacing especially in women and smaller men point to need for improved device regulation.

Collaborative research registries for device evaluation needed and feasible.

Impact of H1N1 on the US hospital system.

Complex Systems Analysis: advancing health systems design.
Quality of care is better in practices that use EHRs and even better in practices that achieve patient-centered medical home recognition

- For every 100 patients seen by an EHR physician, 26 more will receive appropriate medical testing such as cancer screening or HgbA1C testing for diabetics

- Electronic prescribing in the ambulatory setting improves medication safety 7-fold

- Access to a community-wide patient record results in 30% fewer admissions to the hospital from an emergency department

- New York State healthcare is more wired than other states
  - More patients (11%) in NYS use personal health records than the national average
Research Contributions (Bio)

- New statistics & Stata package for multivariate meta-analysis
- Hospital mortality rates for bilat TKR decreasing 10% per year; pneumonia, pulmonary embolism, and cardiac complications unchanged
- Regional safer than general anesthesia for simultaneous bilateral total knee arthroplasty
- Metabolic Syn associated with higher risk for major TJR complications
- 60% of elderly hypertensives not actively engaged in their care; self-management support needs to address depression, health literacy and/or hearing impairments
Research Contributions (Ethics)

- Ethical study design suggested to study treatment in rare, fatal diseases
- Caution about rapid decision making in patients with brain injury
- Nearly 90% of physicians in Qatar inform cancer patients of their diagnosis. ~66% make exceptions depending on patient characteristics
- Lip reading “interpreters” useful in ventilator dependent patients
- New standards advanced for credentialing clinical ethics consultants
Research Contributions (P&HB, C&PHP)

- Early self-control is protective of high-risk behaviors in adulthood
- Widespread clinical application of translational research findings requires removal of financial, regulatory, and communication barriers
Research Areas & Initiatives

- Clinical Health Services/Policy Research
  - Outcomes/Comparative Effectiveness
  - Medical Practice Organization
  - Quality of Care
  - Cost-effectiveness
- Medical Informatics
- Biostatistical Methods and Epidemiology
- Prevention & Health Behavior
- Medical Ethics
- Disease & Disaster Preparedness
New Programs and Program News

- **Education and Training Programs**
  - 3 new CER courses in MS in Clinical Investigation (began Fall 2012)
    - Decision Analysis in Health Care (Ghomrawi, Hupert)
    - Analysis of Patient Care Data (Johnson, Kaushal)
    - Study Design & Methods (Casalino, Ryan)
  - Healthcare Leadership Fellows (Casalino, Wolk)
  - Master of Science in Health Informatics (January 2013)
  - Software Tutorials for Faculty and Staff in Excel and Access

- **Clinical Programs**
  - PTSD program for combat veterans at Midtown Center
Special Recognition

- Bang, Edwards, Mushlin, Kern, others, ADA replaces its diabetes risk test with new algorithm
- de Melo-Martín, 2012 Philosophy of Science Assn. Women’s Caucus Prize: best work in feminist philosophy of science in past 5 years
- Finkel, Global Health Education Program honored as 1 of 3 exemplary programs by LCME
- Fins, Fellow of American Academy of Arts and Sciences
- Fins, Master of American College of Physicians
- Mazumdar, Memtsoudis, Ma, Chiu, Edwards, Sun, others, SCTS Team Science Award
- QMI grant is “exemplary story” in AHRQ video
New Institutional Appointments

- **Bishop**, Director of Quality Improvement Operations, Department of Medicine
- **Casalino**, Co-Director of Healthcare Leadership Fellows program
- **Finkel**, WCMC representative to Cornell University Internationalization Task Force
- **Griffin**, Acting Chief of Division of Prevention and Health Behavior
- **Kaushal**, Chair of WCMC Committee for CornellNYC Tech Campus
- **Simmerling**, Assistant Dean for Research Integrity
New External Appointments & Elections

- **Borden**, Senior Advisor, USDHHS Office of the Assistant Secretary for Planning and Evaluation
- **Casalino**, Board of Trustees of Health Research and Educational Trust of American Hospital Association (AHA)
- **de Melo-Martín**, Board of Directors of American Society for Bioethics and Humanities
- **Fins**, President of American Society for Bioethics and Humanities
- **Mazumdar**, Program Chair-Elect of the Section on Statistics in Epidemiology for the American Statistical Association
- **Mushlin, Sedrakyan**, reappointed to MEDCAC; **Sedrakyan** appointed Vice-Chair of MEDCAC
- **Schackman**, Secretary-Treasurer Elect of Society for Medical Decision Making (SMDM)
Teaching Awards

- **Finkel**, MPS 1 and Bruce Laine Ballard, M.D. Award for Excellence in Mentorship
- **Acres**, MPS III
- **Abu-Raddad**, Best teacher of pre-med curriculum/Qatar
- **Mahfoud**, Medicine, Patients & Society I/Qatar
New Faculty

- **Primary**
  - William Borden, MD, MPH, Assistant Professor/Laitman Clinical Scholar
  - Todd Loftus, MD, Clinical Assistant Professor
  - Ankur Pandya, PhD, MPH, Assistant Professor
  - Michael Pesko, PhD, Instructor/Walsh McDermott Scholar
  - Daniel Stein, MD, PhD, Assistant Professor
  - Mark Unruh, PhD, MS, Assistant Professor
  - Joshua Vest, PhD, MPH, Assistant Professor
New Faculty (cont.)

- Ithaca
  - Patricia Cassano, PhD, Associate Professor (Epidemiology)
  - John Eckenrode, PhD, Professor (Prevention)
  - Deborah Estrin, PhD, Professor (Computer Science)
  - John Paul Meade, PhD, Clinical Instructor (Medicine, IT)
  - Valerie Reyna, PhD, Professor (Psychology, Decision Sciences)
New Faculty (cont.)

- **Dual**
  - Abraham Aragones, MD, MS, Assistant Professor (MSKCC)
  - Lisa Diamond, MD, MHS, MPH, Assistant Professor (MSKCC)
  - Jessica Elder, PhD, Instructor (Burke)
  - Peter Goldstein, MD, Associate Professor (Anesthesiology)
  - Julia Landa, PhD, MS, Assistant Professor (Psychiatry)
  - Richard Lee, MD, Assistant Professor (Urology)
  - Jennifer Leng, MD, Assistant Professor (MSKCC)
  - Roger Longman, MA, Clinical Instructor (Courtesy/Real Endpoints, LLC)
  - Andrew Meltzer, MD, Assistant Professor (Vascular Surgery)
  - Stavros Memtsoudis, MD, PhD, FCCP, Clinical Associate Professor (Anesthesiology)
  - Ronald Riner, MD, Assistant Professor (Coutesy/Health Management Associates)
  - Mohammad Waseem, MD, MS, FAAP, Associate Professor (Peds ED/Lincoln)
New Staff, Fellows/Residents/Post-docs

- **Fellows, Residents, Post-docs**
  - Samantha Brenner, MD (Quality & Medical Informatics)
  - Diego Cuadros, PhD (Qatar)
  - Douglas Noble, MD, Harkness Fellow (Outcomes & Effectiveness Research)
  - Katherine Van Oss, MD (General Preventive Medicine)

- **Staff**
  - Zhengming Chen, PhD, MPH, MS, Research Biostatistician
  - Reyna Kahane, MSW, Counselor
  - Charles Li, MA, Research Biostatistician
  - Barbara Pohl, MA, Research Aid
Promotions

- **Faculty Promotions** *(primary appointment)*
  - Laith Abu-Raddad, PhD, Associate Professor/Qatar
  - Rainu Kaushal, MD, MPH, Professor/Frances & John L. Loeb Professor of Medical Informatics

- **Faculty Promotions** *(dual appointment)*
  - Ethan Basch, MD, MSc, Associate Professor
  - Larry Liu, MD, PhD, Associate Professor
  - Stavros Memtsoudis, MD, PhD, Professor

- **Faculty Change in Status**
  - Gilbert Botvin, PhD, Professor Emeritus

- **Staff Promotions**
  - Jayme Mendelsohn, MPH, Research Coordinator
  - Shangaza Walcott, Grants Administrator
PH Personnel as of 11/1/2012

Total # of Personnel

- Staff
- Secondary
- Faculty

Year


153 190 207 204 198 229

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2002: Staff 153, Secondary 67, Faculty 25
2004: Staff 190, Secondary 89, Faculty 34
2006: Staff 207, Secondary 98, Faculty 37
2008: Staff 204, Secondary 110, Faculty 41
2010: Staff 198, Secondary 123, Faculty 39
2012: Staff 229, Secondary 150, Faculty 45
Financial Summary: FY 2012

FUNDING SOURCE

Grants/Contracts $8,689,346
Clinical/Program $2,541,010
Institutional $3,020,246
Gifts/Endowments $552,792

Total Funding $14,803,395*  

*total QMI=$2.9M
Financial Summary: FY 2012

<table>
<thead>
<tr>
<th>FUNDING USE</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Salary/wage</td>
<td>$8,614,200</td>
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<tr>
<td>Fringe Benefit</td>
<td>$2,579,762</td>
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<tr>
<td>Total OTPS</td>
<td>$2,338,116</td>
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<tr>
<td>Indirect Costs</td>
<td>$1,271,317</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$14,803,395*</td>
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*Total QMI=$2.9M
Department of Public Health
Financial Growth

106% Increase

1999: 7.2m
2012: 14.8m
New Grants and Contracts

- Federal: 10
- New York State: 1
- New York City: 1
- Foundation: 8
- CTSC & Technion/Cornell Tech (seed): 3
- External Hospital or University: 2
- Industry: 2
- Qatar: 5 (4 QNRF; 1 WCMC/Q)
Department of Public Health
Research Increases

Total - 63 Grants

1999
Total - 5 Grants

2012
THE DEPARTMENT OF PUBLIC HEALTH’S ROLE IN TRANSLATIONAL RESEARCH AT WCMC
State of the Department 2012

Personalized Medicine:
A Discussion Amongst Colleagues

(or Laurel meets Belfer)

Joseph J. Fins M.D., M.A.C.P.
The E. William Davis, Jr., M.D. Professor of Medical Ethics
Chief, Division of Medical Ethics
Professor of Medicine, Professor of Public Health & Professor of Medicine in Psychiatry
Weill Cornell Medical College

Director of Medical Ethics & Attending Physician
New York Presbyterian Weill Cornell Medical Center

Adjunct Faculty & Senior Attending Physician
The Rockefeller University & The Rockefeller University Hospital
We’re entering an era where it’s going to be very important for the bedside clinician to understand the concept of personalized or precision medicine and to know which technologies are available to offer the patient the best care.

Dr. Laurie Glimcher
The term “personalized medicine” traditionally refers to health care that is tailored to the individual but recently, it has been used to refer specifically to genetically-based health care.

The Hastings Center
Centrality of Personalized Medicine

- Translational Efforts
- Bring advanced individualized care to patients and their specific disease
- Move from phenotypic diagnostics to more precise genomic based assessment
- Better targeting of biological vulnerabilities
- Address variable responses to treatment
- Best historical example is the revolution in sub-typing Acute Myelogenous Leukemia
- Acute Promyelocytic Leukemia (AML FAB 3)

- NCI: “The characteristic chromosomal abnormality associated with APL is t(15;17). This translocation involves a breakpoint that includes the retinoic acid receptor and leads to production of the promyelocytic leukemia (PML)-retinoic acid receptor alpha (RARA) fusion protein.”
  Rx w all-trans retinoic acid (ATRA) => “overcome the repression of signaling caused by the PML/RARA fusion protein at physiologic ATRA concentrations. Restoration of signaling leads to differentiation of APL cells and then to postmaturation apoptosis…”
- 80% survival rates…
Personalized Medicine

• Vital to medical school and medicine writ large
• Challenges in current health care context
• Contraction versus discovery
• Success of Belfer initiative correlates to success of WCMC
• Role of Department of Public Health in aiding the basic science initiative
• Briefly provide a PM perspective from Ethics
• Then broaden the discourse/agenda beyond the science
• Ask each of the Division Chiefs to respond and add their view…on the questions to ask, not the answers….
• Ultimately with a view to how the Department can pool its talents and respond to what is an historic change in how we practice medicine and develop new knowledge…
Personalized Medicine: A View from Ethics

A Broader Definition

- Gratified that Dean Glimcher’s quote mentioned technologies not just drugs for best available care
- So first point, is we need to broaden the definition beyond genomic based interventions
- Appreciate that I have been engaged in a venture in personalized medicine that has not been genomic but based in systems neuroscience -- the use of deep brain stimulation -- specific placement in injured brain…
- Highly personalized/surgical approach based on a generalized circuit theory
- Probative biology by treating a patient one can find generalizeable results: mesocircuit and consciousness
- New methods of assessment: bootstrap analysis for effect, but how to do outcome studies?
- Questions: markets and economic feasibility when N=1 (at least initially); heterogeneity to homogeneity
- Impact of new technologies on context of care, LOS, ill-fitting care settings; need to change structures of care to accommodate new survivors or in case of cancer innovation, survivorship issues
- Intellectual property issuse and Bayh-Dole reform
Many Questions: Lots of Resources

Therapeutics
- All Phase I research: promise versus peril
- Therapeutic misconception

Prognostics
- Paradoxical Loss of control, not empowerment
- Autonomy paradox: Biology as destiny
- Susceptibility comes obligations
- Predestined choices, molecular versus atomistic
- NIH road map become a dead end??

Data Management
- Confidentiality
- Genotype/Phenotype: Biobanks
- Issues of consent for future use

Systems of Care
- Personalized Medicine
- Impersonalized Systems of Care and Medical Home
- Future of Dyadic Medicine and doctor who doesn’t know you but knows your genome very well …