

Plenary Session 1:

Welcome &

Conference Opening



Improving Your Hand in Care Management

May 4-7, 2008 - The Mirage - Las Vegas, Nevada

Goals of the Conference

- To introduce ACG users and non-users alike to methods and approaches relevant to population-based risk adjustment and predictive modeling.
- To help advance the technical state-of-the-art of risk adjustment and predictive modeling in general, and ACG applications in specific.
- To share Johns Hopkins ACG advances & developments with current users.
- To introduce new users to the ACG system.



Goals - *continued*

- **To provide a forum for communication:**
 - **Among attendees**
 - **Between attendees and JHU**
 - **Among users and DST and other support consultants.**

- **To have fun!**



Conference Attendees Represent Many Different Parties:

- From the US and from around the globe
- Health plans / provider organizations
- Support service companies (e.g., IT, care management)
- Consulting / actuarial firms
- State / province / government agencies
- Universities / Institutes



Conference co-located with DST's “HUG” (healthcare user's group)

- Shared social events, food, exhibit hall
- A shared plenary (today at 12:30 – re HIT)
- We will welcome HUG users to our sessions
- You may attend optional HUG session today at 3PM (on DC politics and healthcare)
- Please share your ACG success stories with HUG attendees



Something for Everyone

- **Session Levels:**
 - **Introductory / training**
 - **General**
 - **Advanced**
- **Content Areas:**
 - **Clinical:** Predictive modeling/case management, provider performance profiling, quality, and more
 - **Financial:** Capitation payment, actuarial assessment, pay for performance, and other financial exchanges



Great sessions will include:

- Many new ACG tools: RxPM, international versions and latest software release.
- Plenaries on:
 - The new Patient Care Cluster (PCC) performance assessment framework.
 - The emerging “multi-morbidity” paradigm
 - Health IT and the health care transformation
- Many sessions on care management and predictive modeling.
- Special international roundtable (US attendees welcome)
- Hands-on training workshops



Educational Resources

- **Conference packet (Additional presentation hard- copies as available)**
- **Web-site will have copies of all PP talks in future. (www.acg.jhsph.edu)**
- **Vendor Exhibit Area:**
 - **Many interesting exhibitors (mainly focused on products for health plans)**
 - **Be sure to visit DST's ACG information table**



Conference Staff/ Presenters

- **Special thanks to volunteer presenters from around the globe!!**
- **Please be sure to seek-out JHU and DST staff if you have special questions or needs.**



Tonight's Welcome Receptions



- Reception (with free drinks and food):
 - 4-5 PM ACG attendees only (Posters and discussion)
 - 5-7 PM ACG and DST-HUG session.
- Please wear your name tag at this and all events.
- “Business casual” dress at all events

Sponsorship:

- We gratefully acknowledge *support from:*
 - *The Johns Hopkins University ACG Royalty Fund*
 - *DST Healthcare Solutions Inc.*

Additional Sponsors:

- *Plan Data Management Inc - TriZetto (NYC)*
- *Johns Hopkins Healthcare (Baltimore)*



We Value Your Input

- Both about this conference and future directions for ACGs.
- Please be sure to complete the evaluation/feedback forms in your packet and attend “evaluation” prize drawing on Wed at 10:30 AM.
- Please share your thoughts directly with Johns Hopkins and DST ACG team members.



Risk adjustment and predictive modeling: The state-of-the-art in 2008 & the current state of ACG development

Jonathan P. Weiner, DrPH
Professor and ACG Team Leader



Improving Your Hand in Care Management

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Goals of the presentation

- Provide overview of the dynamic risk adjustment / predictive modeling environment
- Update on the current status of ACGs, touching on:
 - *Philosophy*
 - *Risk measurement technology*
 - *Applications and users*
- Discuss R&D portfolio and future trajectories



The Johns Hopkins ACG mission; today, and over the coming decades

- Advance the art and science of population risk and predictive measurement.
- To provide active ACG client support and ongoing leading-edge research and product development.
- To accomplish this in partnership with providers, health plans, corporations, academics, and government agencies around the globe.

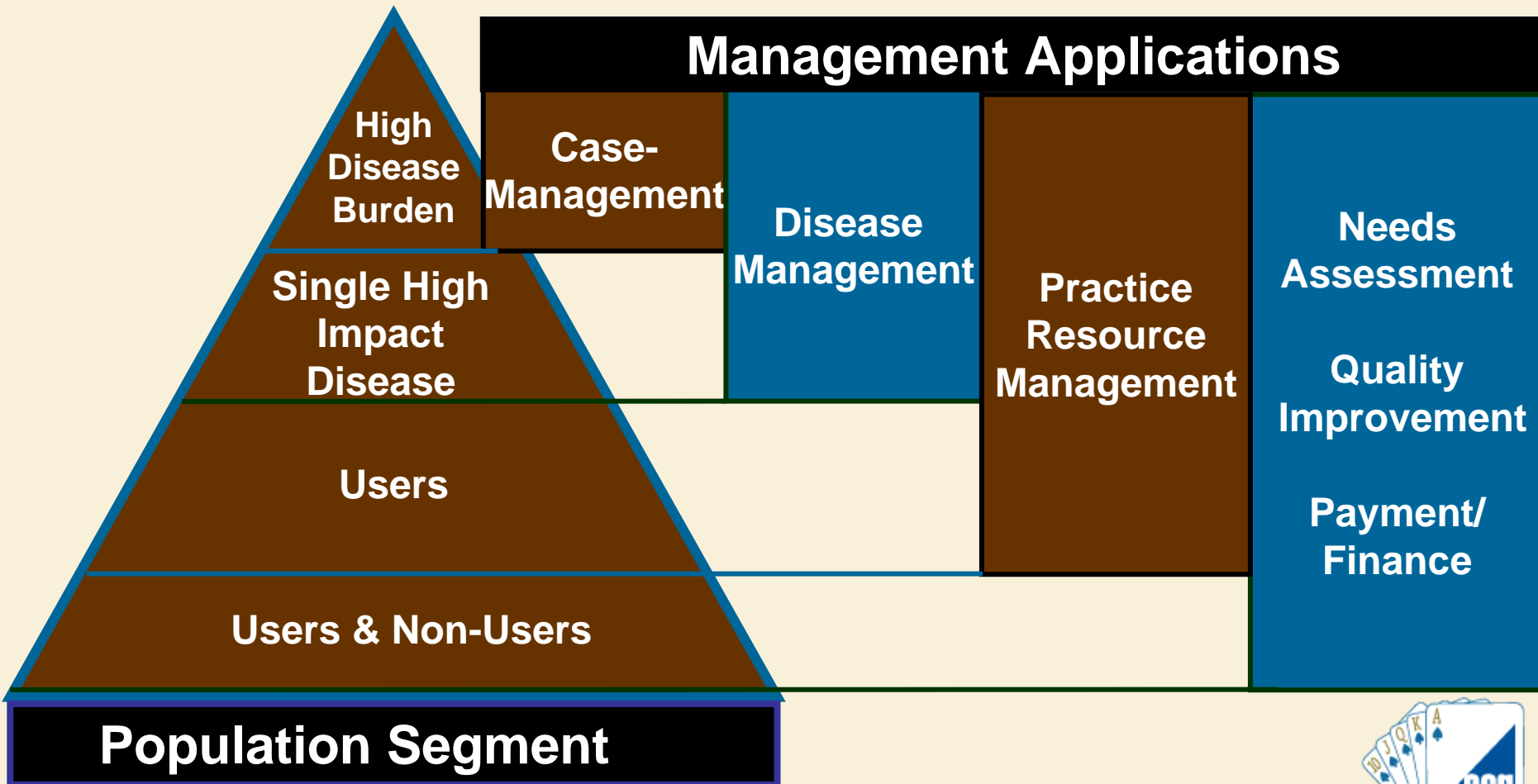


Johns Hopkins ACGs are unique

- **Johns Hopkins ACGs (Adjusted Clinical Groups):**
 - A comprehensive measure of a population's risk and disease burden.
 - A growing suite of state-of-the-art tools relevant to population based primary and specialized care.
 - Relevant to numerous case-mix / risk adjustment / predictive modeling applications.
 - Academic / medical organization home provides for an emphasis on clinical cogency, research & development and transparency.



The risk measurement pyramid



The Johns Hopkins ACG system version 8.0: *An expanding suite of measure and tools*

- **Diagnosis (Dx) based:**
 - **ACGs** - a single, mutually exclusive category capturing overall morbidity / illness burden.
 - **ADGs** - a limited number of clinically meaningful, but not disease-specific morbidity clusters.
 - **EDCs** - disease markers.
 - **Dx-PM** - (Previously known as **ACG-PM**) a “predictive model” of future risk and need based on ICD codes.
- **Pharmacy (Rx) based:**
 - **Rx-MGs** - innovative disease/ morbidity markers (of a person) based on drugs used.
 - **Rx-PM** - a predictive model of future risk and expected resources use based only on Rx codes.
 - **Dx-Rx-PM** - a predictive model based on both diagnosis and pharmacy information.



Some innovative uses of ACGs among the 300+ organizations worldwide that apply them

- Predictive case identification.
- State, provincial and private health plan payment and financial incentives to providers.
- Provider performance efficiency assessments.
- Financial management, planning and actuarial assessment.
- Hands-on care management / quality improvement.
- Cutting edge health care research, analysis and planning.



No system more fully tested by “real world” applications

- Billions of dollars per year are now routinely exchanged using ACGs.
- Healthcare of 60+ million patients is actively managed and monitored using ACGs on several continents.
- The practices of hundreds of thousands of physicians are now more equitably assessed on an ACG case-mix adjusted basis.



The Johns Hopkins University ACG Team

• Faculty

- Jonathan Weiner, DrPH (“CEO”)
- David Bodycombe, ScD (“COO”)
- Barbara Starfield, MD
- Bruce Leff MD
- Cynthia Boyd, MD
- Jeanne Clark, MD
- Susan dos Reis RPh, PhD

• Staff

- Chad Abrams
- Klaus Lemke, PhD
- Huiyuan Zhang , MD
- Erica Wernery
- Tom Richards

• Our International Team

- Karen Siemens, PhD (Germany)
(Int. Director)
- Stephen Sutch (UK)
- Patricio Muñiz, MD (Chile)

• Consultants / PT Staff

- Christopher B. Forrest, MD, PhD
- Paulo Boto MD (Portugal)
- Clinical pharmacists
- Specialty clinicians
- Graduate assistants



Some 2008 ACG Milestones

- New release (8.1)
 - Enhanced reporting and user interfaces
 - Expansion of PM models
 - Reference benchmarks (in collaboration with Pharmetrics – a unit of IMS)
 - Expanded documentation
 - Web based updates
- Many new clients and applications with ACG RxPM
 - 21 organizations in US now actively using pharmacy based version
 - Evidence that 1-3 months data adequate for case finding
 - Development and beta testing of Rx-PM version that accepts international WHO “ATC” pharmacy codes



2008 Milestones – *Cont.*

- Growing adoption by Medicaid agencies (15 in total)
 - TN and SC have recently rolled out ACG payment
- ACGs integrated into DST's *CareAnalyzer* (gaps of care) and *RiskAnalyzer* (capitation management) systems
- Many new adopters internationally. Implementation spreading across Spain and initiated in Taiwan.
- Active pilots in UK, Malaysia, Germany and Israel
- New international version (with language modules) under development.



Related sessions at this conference

- Workshop 1: (today 1:45) Participate in benchmarking
- Workshop 2: (today 1:45) ACGs and screening
- Several sessions re Rx-MG and Rx-PM (including special PDM breakfast session)
- Special international session (tomorrow at 3PM)
- Visit DST's ACG booth in exhibit hall for demo of their new ACG-supported products



Key global health care challenges: Risk adjustment / predictive modeling are part of the solution

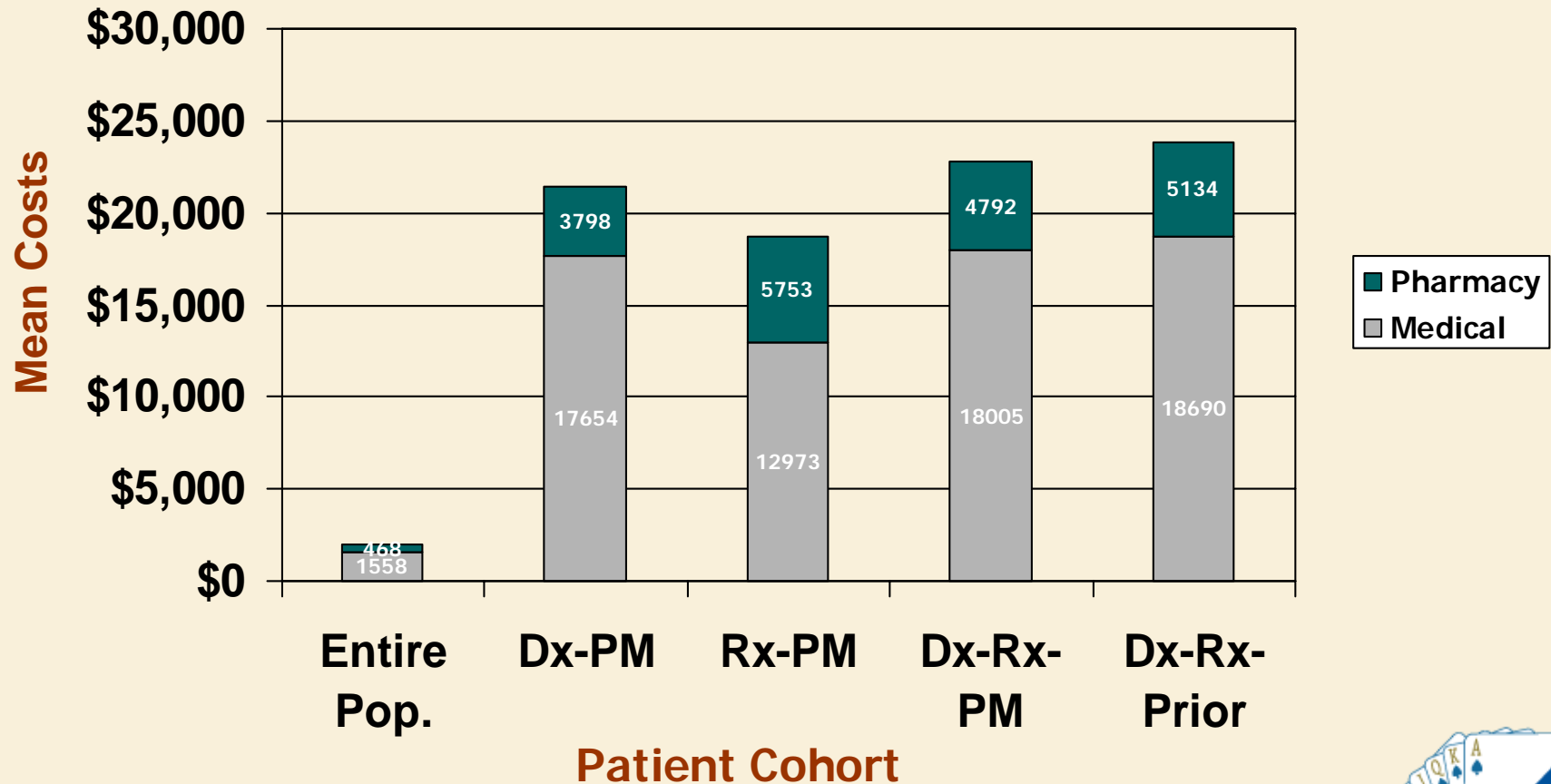
- Cost effectiveness / efficiency
- Care coordination and care improvement for those with chronic conditions / multiple morbidities
- Provider performance monitoring and decreasing inappropriate variation
- Improving access for special populations (disparities)
- Financial incentives for quality and efficiency (P4P)
- Transitioning to electronic / digital platform



Some highlights of recent R&D
& sessions to be presented at
this conference

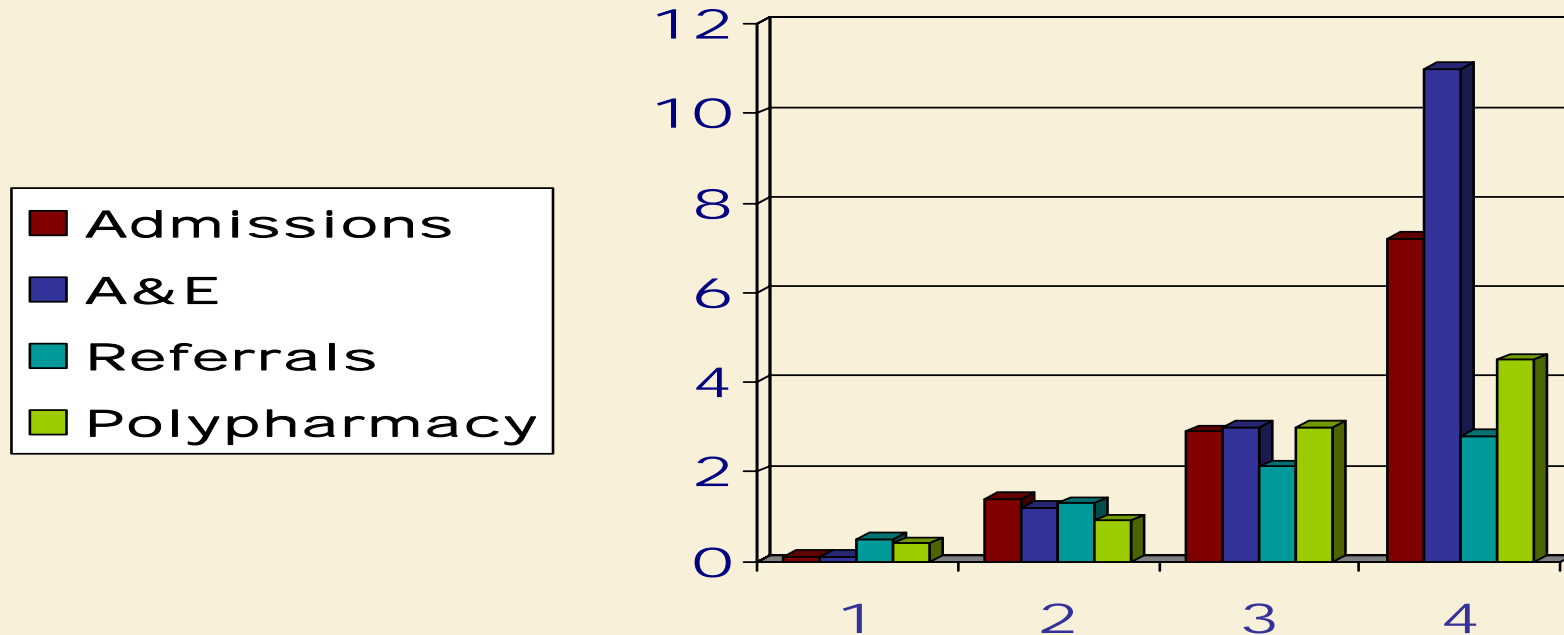


Comparing year-2 costs of "high risk" cohorts identified in year-1 with ACG predictive models



Relationship Between ACG “Morbidity Bands” and Annual Resource Use In Region of UK’s NHS

(Figures reflect relative ratios where average =1)



ACG- Morbidity Bands
(1- healthy, 4-sickest)

Results for a Primary
Care Trust region - 2005 data.
Joint Imperial College / JHU study



***A new ACG tool for assessing
patient centered efficiency and
quality / effectiveness:***

Patient Care Clusters (PCCs)



The current methods for assessing performance using “episode” frameworks are problematic

Percent of total denominator retained after standard episode exclusion criteria applied

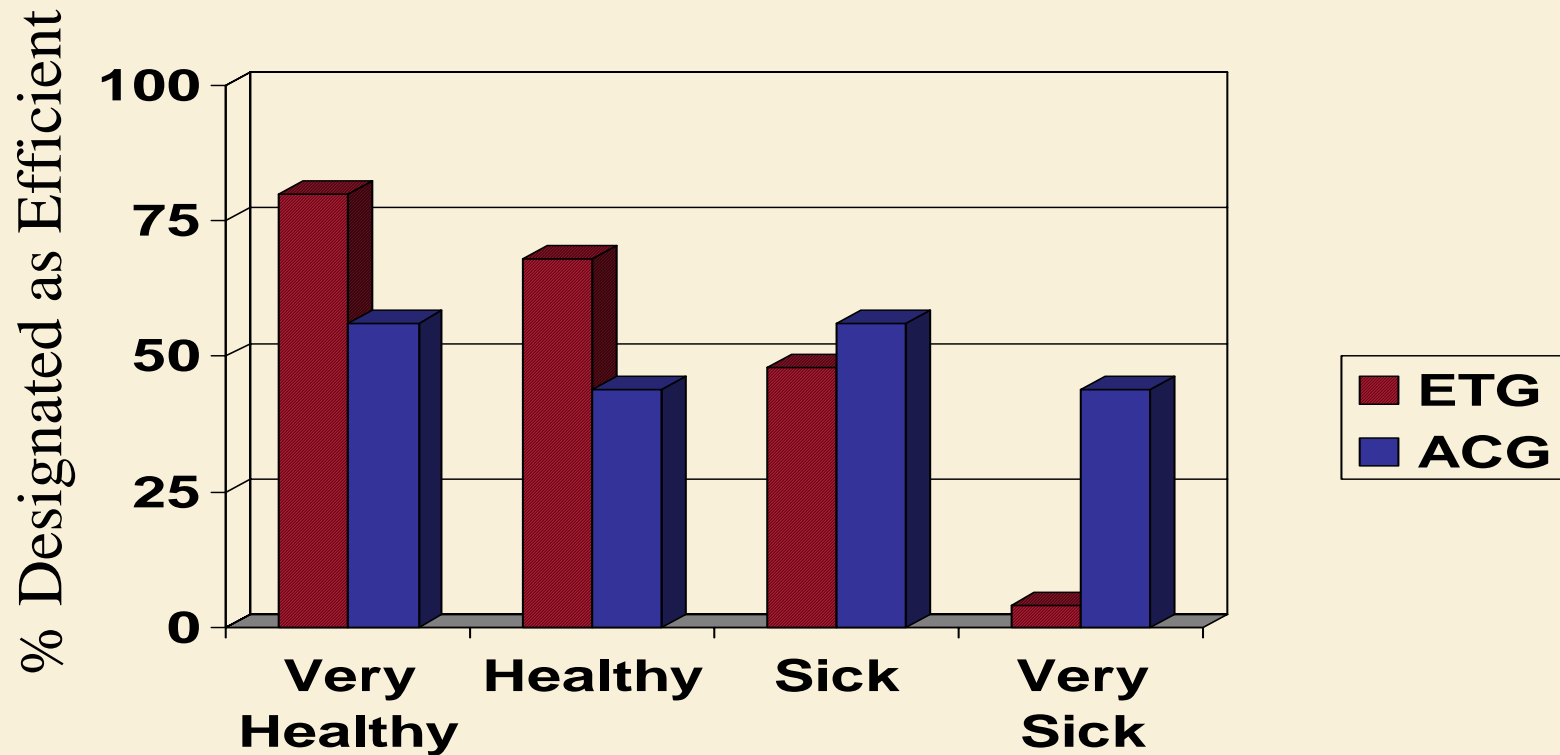
Patients	45%
Claims	19%
Costs	12%
Clinicians	11%

Data Source: based on 2002 claims data from a commercial healthplan database with 1.57 million covered persons receiving services over the year. Standard ETGs applied.



THE JOHNS HOPKINS UNIVERSITY'S 2008 ACG INTERNATIONAL RISK ADJUSTMENT CONFERENCE

The percentage of doctor groups that are “efficient” at different levels of morbidity: A controlled simulation of an episode vs. population based assessments



Based on 305K commercial enrollees with 1+ ETG assigned. Each column represents 25 simulated “doctor groups” with 3000 patients. Each pair of bars represents same “bootstrapped” group with slightly skewed rates of morbidity ranging from .43 to .92 chronic condition per patient (relative to population average of .68).



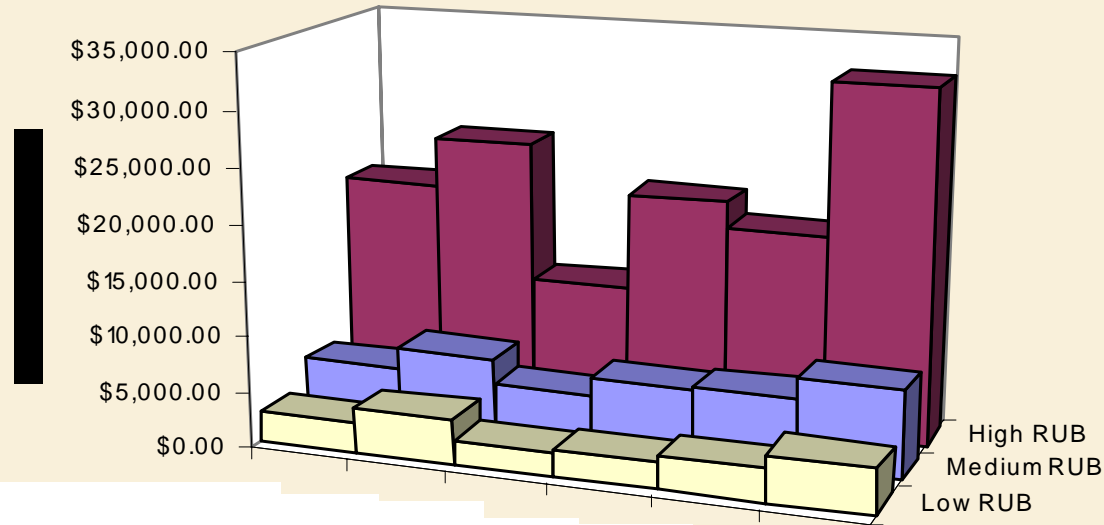
Overall Goal of Patient Care Cluster (PCC) Framework

- Develop a person-oriented framework for clinical performance assessment and care management:
 - Built on a multi-morbidity perspective
 - Fosters an intelligence in evaluating quality
 - Encourages coordination of care and care teams
 - Values both generalists and specialists
 - Useful at all levels of the care delivery system
 - Provides a framework for future development based on expanding HIT platforms



PCC-based provider cost performance analysis adjusted for diabetes complexity factors and co- morbidity

Mean Total Costs of Care by RUB and Diabetes Stratification

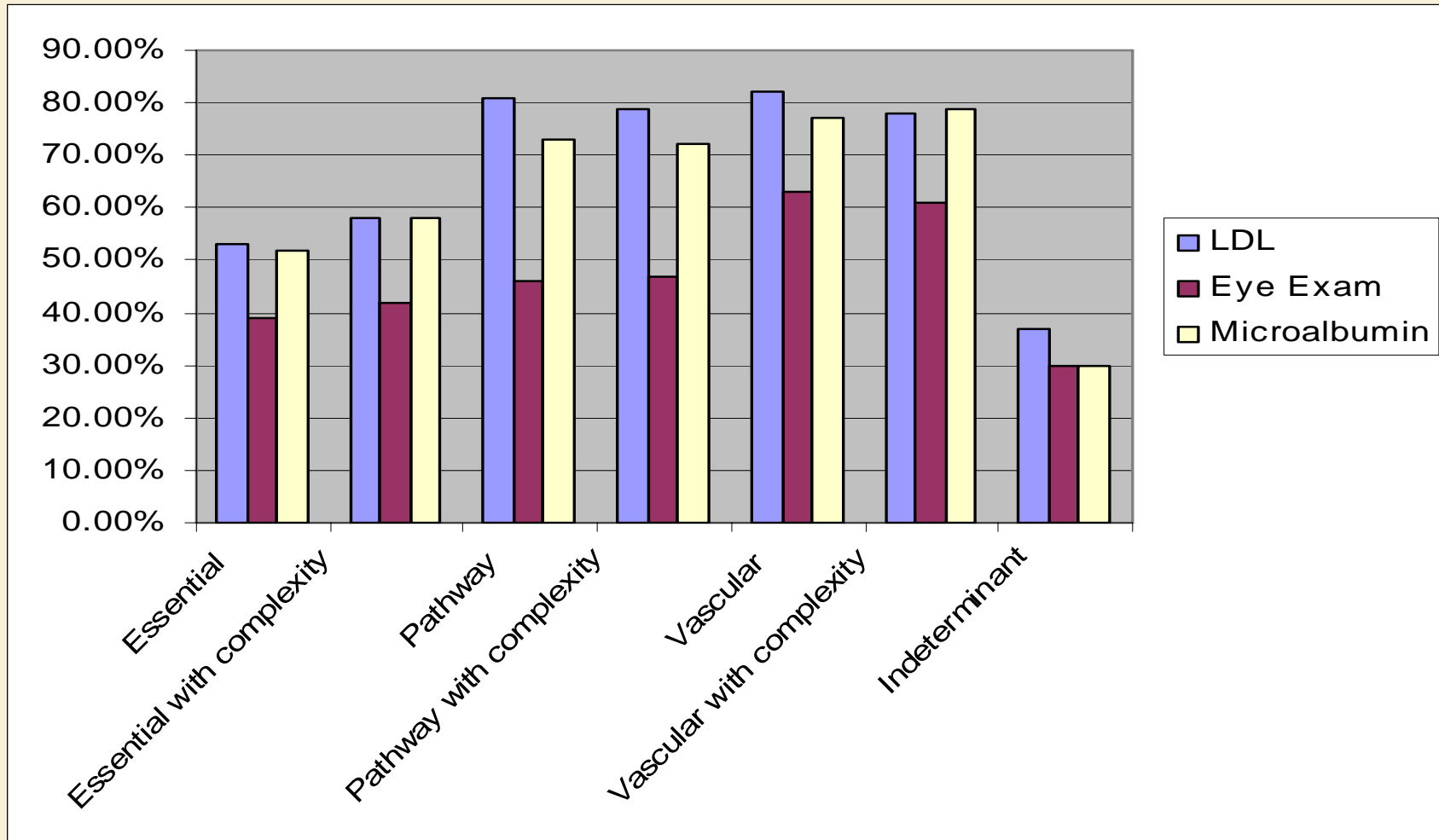


Based on
141K adults
in US
MCOs,
2004

DM ex
DM ex
DM com
DM com
DM vas
DM vascular with compl...

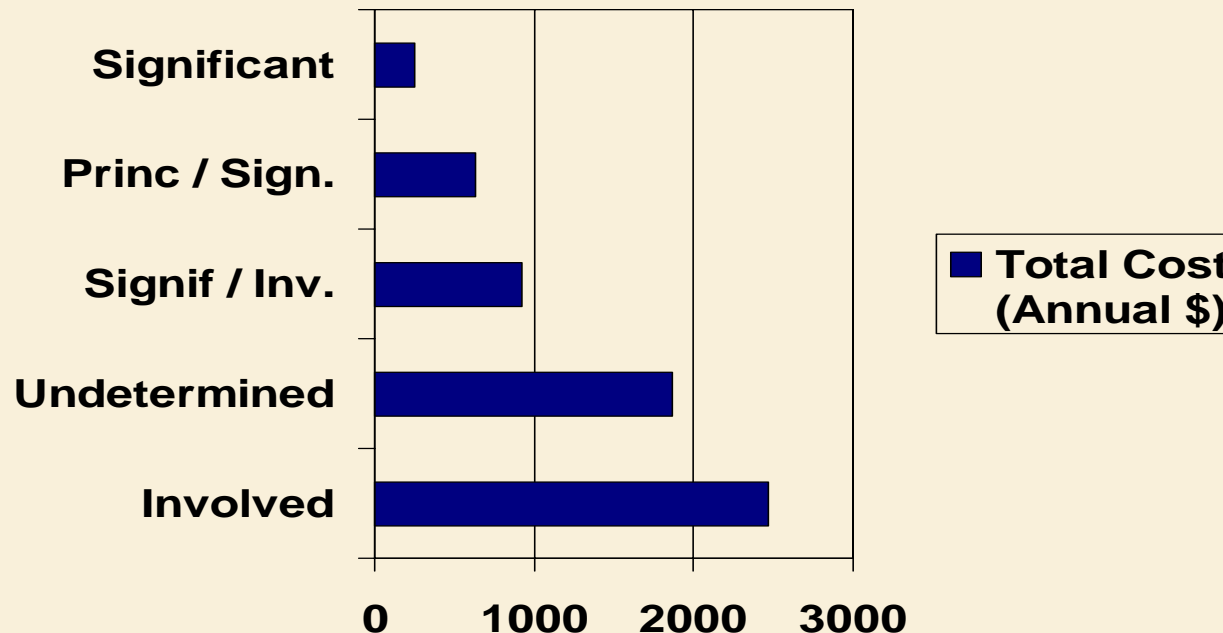


PCC-based provider quality performance analysis by diabetes complexity strata



Impact of provider attribution on costs for diabetes PCC

*Bars reflect estimates of increased annual overall costs relative to “principal” care only attribution after controlling for demographics, complexity and disease burden**



* Based on 141K persons with diabetes PCCs in commercial MCOs, in 2004, aged 18-75. Regression adjusted for factors including, age, gender, ACG/RUBs, PCC complexity factors.



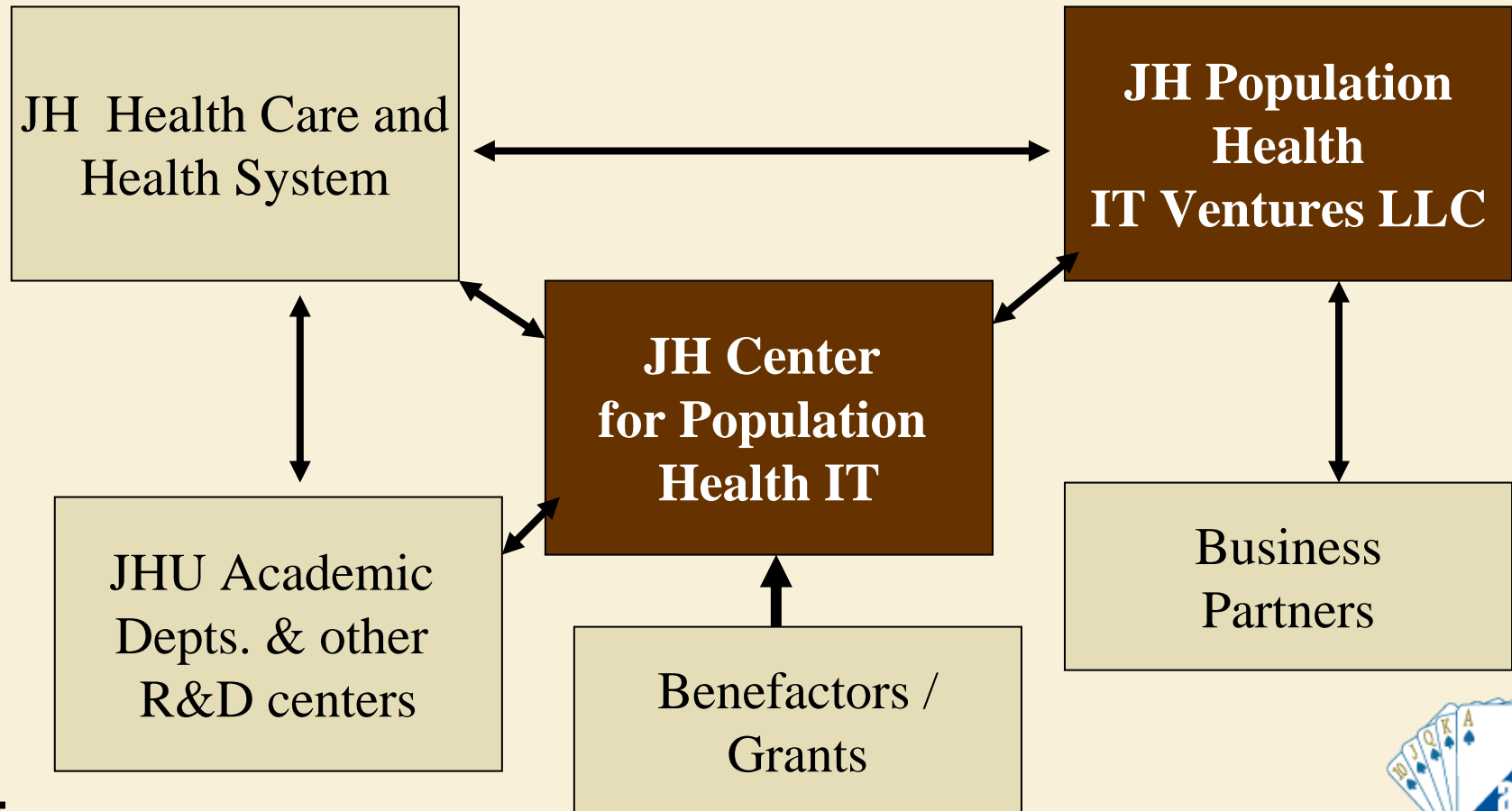
R&D frontiers: Priorities for ACG team

- Integrating risk measurement / PM and quality improvement; particularly related to care coordination.
- Developing alternative approaches for episode assessment that capture multi-morbidity, complex nature of care patterns while retaining holistic perspective.
- Incorporating risk measurement and other population based measures into EMR / “health information technology” (HIT) systems.



THE JOHNS HOPKINS UNIVERSITY'S 2008 ACG INTERNATIONAL RISK ADJUSTMENT CONFERENCE

To increase our capacity, the ACG team and colleagues at JH Health Care are planning major “population health IT” initiative



**Given the current EHR /HIT trajectory,
the Johns Hopkins' vision is to become
a pre-eminent global research and
development provider of knowledge-
ware to offer digital support for
population health.**

More on this vision at closing session.



Plenary sessions: Learn about ACG team perspectives and developments in frontier areas

- **Dr. Starfield – Understanding multi-morbidity**
 - (Today -10:15)
- **Dr. Forrest – EMR / HIT and care transformation**
 - (Today at 12:30)
- **Dr. Leff - Our new PCC methodology**
 - (Tuesday – 10:30)
- **Dr. Weiner – Risk & PM in EHR / HIT environment**
 - (Wednesday - 10:45)

