

Population Health *Matters*

Quarterly Publication

GUEST EDITORIAL

Population Health and AHEOR at JSPH

Integrated delivery systems (IDS) are systems of care designed to enhance the health status of populations as well as individuals. Health care is evolving toward the IDS and away from the component (i.e. fee-for-service) approach where goods and services were applied and reimbursed individually, usually during a sick care episode. The health care industry is quickly moving to integrate health care delivery, measure the costs and benefits of interventions and strategies, and compare the outcomes across populations at risk. The assessment of value by the application of the evaluative clinical sciences (including data analytics, modeling, and patient-centered outcomes research) is central to achieving and maintaining the Triple Aim – the simultaneous improvement of population health, the patient experiences of care and per capita cost; stated more simply, better care with better outcomes at a reasonable cost.^{1,2}

The passage of The Affordable Care Act in 2010 has accelerated the push toward integrated delivery systems and value assessment. Healthcare now accounts for approximately one-fifth of the gross national product, all the goods and services that are bought and sold in the USA. It is not solely the amount of funds invested in healthcare that are of concern, but the lack of tangible outcomes that yield healthier populations. The basic premise of outcomes research is that yields (the return on our investment) can be improved

and that choices between alternatives must be made to promote efficiency without compromising quality of care.³

The determination of safety and efficacy remain essential to the application of evidence-based medicine, but increasingly the real-world effects, or effectiveness, of efforts to keep populations healthy are the focus of healthcare institutions, ranging from systems to patients. Applied Health Economics and Outcomes Research (AHEOR) is a discipline that considers the evaluative clinical sciences and the roles they play in the quest for a better value in the *health* system. The tools of AHEOR and IDS are care pathways and heuristics grounded in the convergence of evaluative clinical sciences, such as epidemiology, risk assessment, wellness, eHealth and informatics, evidence-based medicine, healthcare quality and safety, comparative effectiveness, patient-centered research, health-services research, and cost-effectiveness. Practitioners of AHEOR apply the evaluative sciences to actual practice settings by converting structure, process and outcomes systems' variables into strategies for more effective, patient-centered and efficient care. Once an institution commits to restructure for population health, many of the historical foundations of healthcare are challenged and changed.

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The scope of outcomes research tends to be broader than classic forms of clinical research and more applied to real world practice issues. Whereas traditional randomized clinical trials (RCTs) emphasize the biomedical perspective – the safety and efficacy of an intervention in a well-controlled experiment – outcomes research evaluates a wider spectrum of health interventions and consequences in usual care settings. Outcomes research-related disciplines (such as economics, epidemiology, and cost-effectiveness research) identify, measure, and compare the costs (resources consumed) and consequences (efficacy, safety, effectiveness, and quality of life) of health interventions. It may also consider patient-centered outcomes such as satisfaction and real world care outcomes.

A variety of tools and methods are employed in the conduct of outcomes research. Assessments using patient-administered validated questionnaires; patient-reported

outcomes assessments; multivariate analysis of non-experimental data from large observational databases; meta-analysis; decision analysis; discrete event simulation; and economic modeling, characterize efforts in outcomes research. It continues to draw on traditional areas of scientific research, including randomization where feasible, while incorporating techniques and methods of researchers in such disciplines as economics, epidemiology, health services research, operations research, pharmacy, psychology, psychometrics, and public health. Outcomes research is a discipline that studies the studies.

Outcomes research can provide decision makers with knowledge necessary to improve the efficiency of health care interventions while providing clinicians with data that can improve patient care. Payers, on the other hand, assess new technologies according to their cost-effectiveness; that is, whether the health benefits are commensurate with

the benefits from interventions of equal or lower costs. Thus, **AHEOR** facilitates the assessment of value to optimize population health consistent with the Triple Aim.

At JSPH, we have developed the AHEOR curriculum to equip health care professionals with the requisite concepts and skills to apply value assessments in real world settings. Many of our students are mid-career professionals who already possess advanced degrees, but want to know more about the science and the practice of value assessment. This skill set will be critically important as we work together to create a sustainable healthcare system with a focus on improving population health outcomes. ■

Joseph D. Jackson, PhD, MS
Program Director, AHEOR

For more information about the AHEOR program visit: <http://bit.ly/1sqDJ9R>

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Data Analytics in Population Health

Population Health Management relies on data – to identify the populations and the needs for care, to measure the care provided to these populations, and to help deliver the right care to the right people. Population Health Management (PHM) systems are the hottest item in health IT at the moment – there are high expectations, articles, conferences, papers, webinars. You probably get many emails about PHM systems. The market is frothy, typical for the early stage of a new trend: a new set of products, new vendors entering the market, and customers wondering when the time is right to enter this new market. This article reviews elements of PHM systems, and key trends in terms of companies entering this space.

The explosion of new offerings is caused by two intersecting trends, resulting in a perfect opportunity. The first trend is the availability of data: stimulated by the government’s **(HITECH) Meaningful Use¹** program, many hospitals and physician practices have moved

from paper medical records to electronic medical records (EMRs). As a result, data have become “liquid” – electronic, usable for reporting, for querying, for exchange between healthcare providers, and for analysis. Charge data and billing data has always been electronic and available for analysis – but clinical data is just recently becoming available electronically on a wide scale: problem lists, home medications, procedures, lab results, and the results of physical exams and doctor’s office visits. Having the data electronically doesn’t necessarily mean it’s easy to use for analysis, but at least it’s accessible, unlike data in paper records.

The second of these intersecting trends is the emergence of new payment approaches, through the **Patient Protection and Affordable Care Act (PPACA)**, encouraging a shift toward population-based care, accountable care, and risk-sharing.² These are mechanisms to shift some risk from the payer to the

provider, and thus to incentivize providers to focus more on preventive care, on managing chronic conditions better, while preventing expensive acute episodes. To do this, they need detailed, accurate, and timely data on their patients, and their populations (Figure 1).

With more electronic data available for analysis, and a growing need for data to support population-based care, the market is ready for a new generation of “Population Health Management Systems.”

Population Health Management Systems have three tasks:

1. Gathering data from multiple sources, and transforming this data into a usable format.
2. Applying analytics to the data – metrics, reports, trends, graphs, work lists.
3. Managing the care for the population – work lists for care managers, alerts and

reminders for providers, postcards to patients, reminders to patients on their electronic patient portals.

The first step, gathering data, is the most difficult. Even though the data is now more electronically available than before, there are still many data challenges. Healthcare in the US is mostly provided by separate, independent providers: physician offices, hospitals, laboratory companies. Each participant has their own set of data on their patients – but often no one has the complete data. To lay the foundation for data-driven population health management, data needs to be integrated from multiple organizations: payers (claims), physician practices and hospitals (medical records). Data coming from multiple independent organizations needs to undergo transformations: formatting the data into a uniform structure, matching up terms and codes, and mapping patient and provider identifiers.

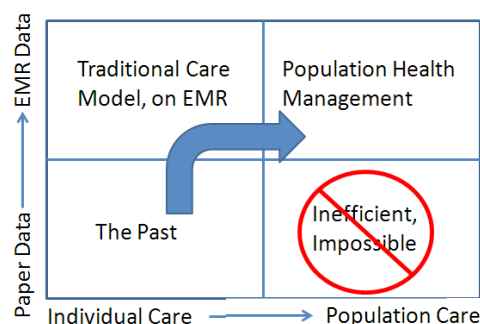
Data gathering and transformation lays the foundation for all subsequent steps, and it's important to get it right.

With a data foundation in place, Population Health Management systems apply analytics and reports to:

- *Define one or more populations:* patients with a chronic disease, patients under the care of a particular set of providers, or any other grouping.
- *Stratify Risk:* within each population, which patients (or members) are at high risk, and need to be the focus for better care management. Risk stratification is not just a financial exercise to identify which members cost the most or have the highest utilization – it's a clinical exercise to help understand which members have a chronic disease and are in need of better care management.
- *Generate Measures, Trends, Graphs, Work lists:* by applying standard quality metrics (for example, from the [National Quality Forum](#)³) – or by building organization-

specific measures, the Population Health Management system creates reports, trends, charts and work lists.

Figure 1. EMR as a Stepping Stone to Population Health



Some Population Health Management systems also include a Care Management component: software that generates work lists for patients who should be contacted for an intervention (such as a phone call, education session or a home visit), and tools to document the care provided to the patients.

As in any new market, there are many companies entering the Population Health Management space. We can distinguish three types of companies now active in this field.⁴ First, traditional Data Warehousing companies (Oracle, IBM, SAP) provide the databases required for large data management, and the ETL (Extract Transform and Load) tools to take data from multiple sources and bring it together into a large coherent base for analysis. These companies provide strong and sophisticated data management and analysis tools. However, the tools are generic, and usually do not include tools and components specific to Population Health Management.

The second type of companies are new, emerging firms that provide specific tools for Population Health Management, in each of the three areas listed above. Examples include: Advisory Board / Evolent, Covisint, i2i Systems, Phytel, and others. These companies create software specific to PHM – from the data gathering with healthcare-specific data

models, to the care management work lists.

Third, many of the traditional EMR companies (Epic, Cerner, eClinicalWorks, NextGen) are now entering the PHM field. While they lag somewhat behind the PHM-specific companies, the EMR companies have an advantage in that they are close to the data, and close to the users. Rather than building a separate infrastructure to manage population health, organizations would likely prefer to use their existing EMR systems to also take on PHM work. The question is whether these firms will be able to also manage the external data from practices, payers and other participants outside the health system.

Population Health Management is a new field, and the rules of the game are still changing. This is an industry in flux, a work in progress. At this stage in the development of PHM, it's not likely that one company will do everything and do it well. Organizations should plan on using more than one system to cover the variety of tasks -- for example, one system for data aggregation and risk stratification, and a different system for care management. They should plan to adjust as the rules develop and mature.

Most importantly, organizations should start by building a data foundation that is solid and comprehensive. If the underlying database is incomplete, or inconsistent, it will be impossible to deliver valid analytics and drive the care for a population.

There are many uncertainties in the new field of Population Health Management. The shift from individual care to population care will continue, and the PHM technology will continue to evolve and improve. Despite this state of flux, one thing will be certain – PHM is all about the data, from inside and outside the organization. This is the time to lay the data foundation and to start investing in PHM systems. ■

Harm Scherpbier, MD, MS
Chief Medical Information Officer
Main Line Health
Harm.Sherpbier@jefferson.edu

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Attendance Soars at the 14th Annual Population Health Colloquium

March 17-19, 2014

The Population Health Colloquium has always been JSPH's hallmark event. This past March marked the 14th anniversary of this national program, attracting over 600 attendees and 40 exhibitors. More than 70 experts presented on a variety of topics including management of patient populations, population health case studies, risk reduction in population health, population health improvement community interventions, and outcomes.

Pre-conference sessions focused on preparation for the first year of ACA implementation; outcomes and ROI measurement reporting; and population health improvement programming. Technical assistance for those developing super utilizer programs was the emphasis of a special post-conference session.

Always noted for its outstanding speakers, program highlights this year included Bruce Broussard, President and CEO of Humana; Stephen K. Klasko, MD, MBA, President of Thomas Jefferson University and President and CEO of TJUH System; and Jeffrey Brenner, MD, Founder and Executive Director of Camden Coalition of Healthcare Providers, and a recent recipient of the MacArthur Foundation's Genius Award.

The colloquium is co-located with the Medical Home Summit, a leading national forum on developing and implementing patient and family-centered medical homes. ■

For more information about the Population Health Colloquium and Medical Home Summit visit: www.populationhealthcolloquium.com/



Stephen K. Klasko, MD, MBA, President and CEO of Thomas Jefferson University and Thomas Jefferson University Hospitals, and David B. Nash, MD, MBA, Dean, Jefferson School of Population Health at the Population Health Colloquium.

Photo by Michael Perez/AP Images for Humana.

JSPH Fellows Reflect

The U.S. healthcare landscape is undergoing considerable change, driven in large part by the provisions of the Patient Protection and Affordable Care Act (ACA). The regulations codified in the ACA have deliberately realigned incentives for stakeholders to improve the value of health care. This focus on value is driven by the shortcomings of traditional reimbursement models such as fee-for-service (paying for procedures and tests without regard to evidence as to their appropriateness or utility), which has resulted in substandard quality and efficiency. Moreover, the consequence of these perverse financial incentives is poor health outcomes and exorbitant costs. As a result, the dual issues of improving health outcomes and reducing overall costs have been the subject of countless health policy debates and thus the emphasis of our fellowship at the Jefferson School of Population Health (JSPH).

For 20 years, the objective of the JSPH post-doctoral fellowship program has been to foster the development of health professionals with an interest in outcomes research to examine the cost, quality, and policies applied within the healthcare system. These

primary objectives are met through linking health economic constructs in our didactic coursework with research projects that span health services research, outcomes research, and health economic analysis. Our research projects during the first year of the fellowship have ranged from developing innovative tools for communicating health economics and outcomes research (HEOR) evidence to financial stakeholders, to working on deliverables related to the clinical and financial underpinnings of new models of primary care. As newly minted pharmacists, this bolus dose of exposure through our research projects has afforded us the opportunity to witness firsthand the paradigm shift in health care from volume to value-based care.

While some parts of the ACA took effect before our time at JSPH, the beginning of our fellowship was marked by highly debated issues, such as the individual mandate and Medicaid expansion. At the time, the implications of these policies and their relationship to the scope of our fellowships were uncertain. However, over the course of the year we were able to draw on our formal



JSPH Health Economics and Outcomes Research Fellows: Tony B. Amos, PharmD and Tom Karagiannis, PharmD

training, experiences at national conferences, and dedicated discussions with experts in the field to better understand their implementation. Reflecting on these last 9 months, we witnessed several responses to these policies including the government shutdown, changes in employer coverage, and the ultimate March 31st enrollment numbers through the shrewd lens of apprentices in outcomes research. As we complete the final stretch of our first year, we have witnessed the beginning of a revolution grounded in value-based care. The collaborative approach to our training at

JSPH has given us a clear understanding of how patients, providers, payers, and other stakeholders are beginning to piece together their roles in this evolving landscape focused on value. This rich insight will serve us well as we move to the next phase of our fellowship in the pharmaceutical industry. Our contribution in this setting is correspondingly aligned with the pharmaceutical industry's mission to deliver transformational evidence to a variety of stakeholders that support decision-making on the value of pharmaceutical agents.

In the 20 years that JSPH has offered this fellowship, no two experiences have been exactly alike, and we believe this is certainly the case regarding our opportune time to be a part of the legacy of this program. Our experience at JSPH has given us a glimpse of how research can help generate transformational evidence that will contribute to the nation's goal of providing valuable care through containing cost and improving health outcomes. ■

Click here for more information about the HEOR fellowship program.

Tom Karagiannis, PharmD
Health Economics and Outcomes Research Fellow
Novartis

Tony B. Amos, PharmD
Health Economics and Outcomes Research Fellow
Janssen Scientific Affairs, LLC



Jefferson School of Population Health invites you to join the **Grandon Society**, a membership organization for individuals and organizations focused on advancing population health. The Grandon Society is designed for leaders throughout the healthcare sector who are dedicated to transforming the US health care system through collaboration, education and innovation.

Benefits of membership include exclusive member-only programs and events, a member e-newsletter, and early notice and special registration rates for JSPH conferences and events. Memberships are available for individuals and for organizations, with special rates for academic, non-profit and government institutions.

For more information visit:
http://www.jefferson.edu/population_health/GrandonSociety.html

Questions? Contact Amanda Solis at (215) 503-6871
 or amanda.solis@jefferson.edu



Left to Right: Aaron Smith-McLallen, PhD, Somesh Nigam, PhD, and Ravi Chawla, MS, MBA of Independence Blue Cross respond to questions moderated by David Nash, MD, MBA at a recent Grandon Society Member-Only workshop.

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JSPH is hosting a series of convenient online and onsite information sessions to help introduce you to our degree and certificate programs including: Population Health; Public Health; Health Policy; Healthcare Quality and Safety; and Healthcare Quality and Safety Management.

ONSITE INFORMATION SESSIONS
Click on program titles to link to registration.

Master of Public Health (MPH)
 June 12, 2014, 5:30 pm -7:30 pm

ONLINE INFORMATION SESSIONS
Click on program titles to link to registration.

Master of Science in Health Policy
 May 14, 2014, 1:00 pm – 2:00 pm

Master of Public Health (MPH)
 May 28, 2104, 12:00 pm – 1:00 pm

Healthcare Quality and Safety and Healthcare Quality and Safety Management
 June 4, 2014, 1:00 pm – 2:00 pm

For more information visit: http://jefferson.edu/population_health/campus_events.html or call 215-955-6969.

Einstein's Comprehensive Unit-Based Safety Program

In 2010, Einstein Healthcare Network adopted a new approach to improve the culture of safety throughout the organization. The **Comprehensive Unit-based Safety Program (CUSP)** is a framework to improve patient safety through the establishment of unit-based teams.

CUSP was originally developed at The Johns Hopkins Hospital and has since been implemented in healthcare facilities in all 50 states. The Agency for Healthcare Research & Quality (AHRQ) has since endorsed the CUSP framework as a mechanism for hospitals to reduce hospital-acquired infections (HAIs).¹ An early example of the impact of implementing CUSP across over 100 intensive care units (ICUs) in Michigan was known as the “**Keystone Project**,” which saved more than 1,500 lives and nearly \$200 million over 18 months.¹

Although the CUSP initiatives focused on reducing HAIs in ICU settings have shown sizeable cost savings and infection prevention,¹ the CUSP framework is a model that can be adopted throughout an organization as a strategy to address a broad range of safety concerns. To date, Einstein has established CUSP teams on nine inpatient units, including a medical ICU, a labor and delivery unit, a medical-surgical unit, a trauma-surgical unit, a surgical ICU, a neonatal ICU, two medical progressive care units, and a hepatology unit.

Every CUSP unit team is comprised of local leadership, frontline representatives (eg, nursing, residents, therapists, housekeeping, health unit coordinators, pharmacy), a physician champion, a senior executive sponsor, and a coach. The team focuses on local safety priorities and creating a culture of safety and teamwork using the basic principle that culture is local.

Implementing CUSP on a unit begins with training all staff on the “science of patient

safety;” that is, training staff on how to view their unit’s environment from the patient’s perspective and identify potential risks of harm to patients and staff. Staff are then asked to describe how the next patient in their unit/clinical area could be harmed and what could be done to minimize that harm.

Using this initial data, the team prioritizes projects and partners with the Executive Sponsor (a Vice President or other senior leader in the organization) on improvement efforts. The CUSP framework also includes tools such as the “**Learning from Defects**” tool, which is designed to allow frontline staff to analyze cases and identify systems issues and process breakdowns that can lead to patient harm. At Einstein, we combine the CUSP framework with the Model for Improvement (i.e., the Plan-Do-Study-Act)² approach to improve processes. Once the staff-identified safety issues are prioritized, the team is led through the process of assessing the issue using data, developing an intervention to test, and analyzing the results of the test of change.

One example of the framework in action can be seen with our 52-bed medical-surgical unit, which implemented CUSP in April 2012. Supported by the nurse and clinical managers, a hospitalist as the physician champion, and the network COO as the executive sponsor, the team has worked on a variety of issues that have had an impact throughout the medical center. From the outset, the team led efforts to replace medication carts, improve nurse-physician communication, and reduce transfers to a higher level of care.

More recently, the CUSP team’s physician champion has spearheaded efforts to improve earlier identification of delirium in patients on the medical-surgical floor using the Confusion Assessment Method (CAM) tool.³ The CUSP project has been supported with guidance from the nurse educator and the addition of

a geriatrician to the team. The team’s work has sparked an effort to begin introducing the CAM tool throughout the inpatient units, including the surgical ICU.

Our other CUSP teams are working on a diverse array of improvement projects, including developing a new maternal triage process (labor and delivery unit); piloting new bar-code medication administration equipment (trauma-surgical unit); and establishing protocols for visitor control and improved security (surgical ICU).

As we continue to expand the program, we are pursuing opportunities to demonstrate the financial return on investment for the initiatives undertaken by the CUSP teams. However, some of the benefits to the teams and the organization are not quantifiable financially. CUSP teams are breaking down silos and forging strong partnerships between nurses, physicians, administration, and frontline staff. Indeed, the CUSP framework supports bringing leadership closer to the frontline staff while allowing frontline staff to see more clearly how their work can have an impact on other areas in the organization. ■

Beth LaPiene, MSPH

*Manager, Growth, Professionalism & Service initiative
Einstein Healthcare Network
lapieneb@einstein.edu*

The author would like to acknowledge the current and former members of the CUSP team highlighted in this article: A. Susan Bernini, Debbie Cattolico, Allison Connors, Tania Conwell, Janae Garcia, Dr. Guillermo Garrido-Rosa, Ma-Jenneh Jah, Mary Beth James, Dr. Julie Lai, John Menzano, Patti O’Hagan, Dianne Oswald, Myra Parker, Nicole Pecoraro, Dr. Andrew Rosenzweig, Dr. Marvin Schatz, Justine Sgrillo, and Elizabeth Thomas.

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Einstein's Medication REACH Program Enhances Patient Care

Einstein Healthcare Network (Einstein) has rallied a previously untapped resource to reduce healthcare costs while enhancing patient care: the Pharmacy Department. Through an innovative program called **Medication REACH** (Figure 1) that began three years ago, patients are provided unprecedented support to promote medication adherence after they've been discharged from the hospital.

At Einstein, we created the program in 2010 in response to new reimbursement rules imposed by Medicare on the nation's hospitals for excessive rates of patient readmission within 30 days. A readmitted patient costs Einstein \$7,200, and it is expected the penalties will continue to increase.

Since medication non-adherence is a key contributor in hospital readmission, the program provides comprehensive guidance to patients to ensure they take the appropriate medicines after they are discharged.

Under the program, a hospital pharmacist works as part of the multidisciplinary discharge team, making sure the patient's list of medications on release is accurate and complete (*Reconciliation*) and that the patient fully understands what the medicines are for and how they're to be taken (*Education*). Patients are sent home with a pictorial diagram containing images of the actual pills, the days and times they're to be taken, and a compartmentalized pill box.

The pharmacist insures the patient has *Access* to the medication, either through their private pharmacy or through the hospital outpatient discharge pharmacy. For those who don't immediately have the co-pay on-hand, the hospital pharmacy fills the prescription and bills the patient for the co-pay – something a private pharmacy won't do. For patients without insurance, the pharmacy works with patient assistance programs to provide free or discounted medications for 30 days.

A hospital pharmacist provides comprehensive face-to-face *Counseling* on

the day of discharge and then telephones the patient at home a few days post-discharge and several days before the end of the 30-day period to promote continued adherence and to reinforce follow up in care with their primary care physician (another major factor in readmissions). The intended result is a *Healthy* patient at home. The hospital pharmacist assesses patient health literacy and utilizes the Teach-Back Method to reinforce learning. It has been reported that over one-third of the population has basic or below basic health literacy, which can have a negative impact on medication adherence rates. Thus, the name of the program: **REACH**.

The pilot program targeted cardiac telemetry patients with congestive heart failure, acute myocardial infarction and hypertension – all conditions with a high risk of readmission. After a randomized control study determined that half as many REACH patients were readmitted within 30 days compared to a control group, REACH was implemented and expanded. During the REACH pilot IRB study which launched during October 2010 (health literacy month) and concluded in June 2011, the REACH intervention group (n=47) had a readmission rate of 10.6% compared to the control group (n=42) readmission rate of 21.4%.

The initial program was created with a grant from the Albert Einstein Society, the hospital's internal foundation. An additional grant was awarded for a full-time pharmacy technician role (known as an APPLE, **Ambulatory Pharmacy Patient Liaison Empowerment**) to conduct outreach to additional patients and to primarily address the myriad access to care issues. The APPLE role builds on the existing program with the idea that an APPLE a day will keep the doctor (or in this case, the readmission) away.

In 2013 a subsequent grant was received to create an innovative program using personally programmed iPhones to make automatic calls to patients when they're due to take

Figure 1. REACH

Reconciliation
Education
Access
Counseling
Healthy

medicine at home. Einstein has partnered with a company called Leap of Faith Technologies, Inc. developer of a computer-based software program known as **eMedonline** to study the use of mobile technology in improving medication adherence. Essentially, the software program will telephone patients to remind them when they're scheduled to take pills. The phone will scan special labels on their medicine bottles, which are embedded with chips containing the patient's personalized protocol, to make sure the correct pills are being taken. The patient's overall adherence will be monitored by a "dashboard" at the pharmacy, to trigger personal intervention if the patient is not adhering to the protocol.

REACH has gained national attention, with Einstein regularly fielding calls from other hospitals inquiring about the program. REACH won a Best Practices award from the American Pharmacists Association and the American Society of Health System Pharmacists, among other commendations.

Medication non-adherence has been described as the Achilles heel of modern healthcare, and is often called America's other drug program. Failure to properly take medication is estimated to cost \$200 billion a year nationwide.¹ ■

Deborah Hauser, RPh, MHA
Network Director of Pharmacy for Einstein Healthcare Network
hauserd@einstein.edu

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Jefferson Hosts Fourth Interprofessional Care Conference

October 12, 2014

The Jefferson Center for Interprofessional Education (JCIPE) will host its fourth biennial conference on interprofessional care this fall. The conference will run from Friday, October 10th through Sunday, October 12th. Entitled “Interprofessional Care for the 21st Century: Redefining Education and Practice,” its purpose is to bring individuals involved in interprofessional education and care together to share ideas, innovative programs and the latest research to help advance interprofessional approaches to education and care (IPE/C) across the country. It will also highlight the leadership that Jefferson has exhibited in this arena since the inception of JCIPE in 2007.

The planning committee has set four objectives for the conference for which papers will be invited. These topics reflect issues that many of the leaders in the field believe are necessary to move the IPE/C agenda forward. These are:

- Apply a theoretical framework to interprofessional education initiatives
- Design creative interprofessional education teaching strategies including dynamic academic /clinical partnerships
- Integrate innovative collaborative practice models in their clinical settings, and
- Assess individual education and/or clinical practices in light of the information and discussion during the

conference and identify specific strategies to implement as part of a continuing improvement process for practice.

The first JCIPE conference was planned as a local sharing of information about Jefferson’s interprofessional program with local health professionals. However, the conference has grown in scope and size over the years and has now attracted national, even international participation. Approximately 325 individuals attended the last conference in 2012.

Attendees came from across the United States, Canada, the United Kingdom and Australia. In addition, the 2010 conference provided a forum for the newly organized American Interprofessional Health Collaborative to hold a major planning and organizational meeting.

The interest in this conference and other, similar, ones reflects the growth of the interprofessional education and care movement, not only in North America, but worldwide. Interprofessional approaches to education have grown from small programs in a few schools to larger programs designed to incorporate interprofessional education as an integral part of the preparation of health professionals rather than an adjunct to it. As evidence of this interest, the Health Resources and Services Administration in the U.S. Department of Health and Human Services has awarded a \$4 million, five year collaborative agreement to the University of Minnesota to establish a National Center for Interprofessional Practice and Education. That effort is also being supported by contributions

\$8.6 million from four major foundations; Josiah Macy Jr, Robert Wood Johnson, John A. Hartford, and Gordon & Betty Moore. This represents a growing culture of collaboration within health care and the attendance at this conference recognizes Jefferson as one of the leaders in the movement.

Once again, major national and international leaders have agreed to come and present keynote speeches including: George E. Thibault, MD of the [Josiah Macy Jr. Foundation](#); Barbara Brandt, PhD, Director, [National Center for Interprofessional Practice and Education](#); John Gilbert, BSR (PT), MEd, PhD, former co-chair for the [WHO Study Group on Interprofessional Education and Collaborative Practice](#) and former Project Lead of the [Canadian Interprofessional Health Collaborative](#); and Malcom Cox, MD, former Chief Academic Affiliations Officer, [Veterans Health Administration](#).

Four types of papers reflecting one of the key objectives are invited; papers on research in progress, papers on completed research, seminars and posters. Abstract submission opened on April 28th. For more information visit: http://www.jefferson.edu/university/interprofessional_education.html ■

Kevin J. Lyons, PhD
Research Consultant
Office of Institutional Research
Thomas Jefferson University
Kevin.Lyons@jefferson.edu

Population Health Certificate

Jefferson’s Graduate Certificate in Population Health is intended for current and emerging leaders who want to thrive under Health Reform and implement real world solutions. This 21-month program includes 5 online courses: Population Health and Its Management; US Healthcare Organization and Delivery; Intro to Healthcare Quality and Safety; Chronic Disease Prevention and Chronic Care Management; and Intro to Health Economics and Outcomes Research.

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Population Health Forums

Improving Patient Safety Through Adaptive Approaches

Jeffrey Cohn, MD, MHCN, *President, Plexus Institute*

January 8, 2014

Dr. Jeffrey Cohn is President of the [Plexus Institute](#), a non-profit organization whose mission is to “foster the health of individuals, families, communities, and our natural environment by helping people use concepts emerging from the new science of complexity.” Dr. Cohn’s expertise is focused on how to create conditions for the social and cultural improvement work necessary for the most complex and intractable healthcare challenges. Prior to joining Plexus, Dr. Cohn was Chief Quality Officer and Patient Safety Officer for Einstein Healthcare Network where he led an initiative to reduce patient infection rates while working closing with Plexus to help transform the Einstein Network’s approach to patient safety.

Dr. Cohn’s Forum presentation began with a typical patient scenario that he used as an ice-breaker to generate audience discussion. His point in this exercise was to reveal that

different perspectives influence different approaches. When many people come up with the same answer, this is the zone of complexity or adaptive zone. He went on to explain technical versus adaptive work which is based on the book, [Leadership Without Easy Answers](#) by Ronald Heifetz, MD. The book uses historical events as examples of challenges that move into the realm of adaptive challenges. Though solutions are not known in advance, this framework can be used for the patient safety arena. Cohn described a list of technical and adaptive challenges and emphasized that all approaches have long-term unintended consequences. Over-emphasis on technical approaches, Cohn explained, have little short-term benefit and can even perpetuate or worsen the problem.

Cohn went onto to discuss the [Comprehensive Unit-Based Safety Program](#)

(CUSP) model, a 5- step program developed by Johns Hopkins aimed at changing the workplace culture. The elements of the steps include: science of safety training; staff identification of defects; senior executive rounds; and implementation of improvement needs. This model links leadership to frontline roles, by empowering all staff to be involved in the safety of their environment.

Diagnosing the system is a starting point in adaptive patient safety work. Aside from the technical elements, it is important to account for past attempts and understand failures. Cohn emphasized the need for multidisciplinary perspectives and that most change work happens in groups. Cohn summarized his discussion by describing [adaptive change patient safety workshops](#) offered by the Plexus Institute. ■

Health Before Birth: Why it Matters and What Can be Done

Janet Currie, PhD, *Henry Putnam Professor of Economics and Public Affairs and Director, Center for Health and Well Being, Princeton University*

February 12, 2014

Janet Currie, PhD is the Director of Princeton’s [Center for Health and Wellbeing](#), an organization focused on research and teaching relevant to health policy, and how social determinants of health and policy influence the quality of people’s lives. Dr. Currie has conducted extensive research on socioeconomic differences in child health and environmental threats to children’s health. As an economist, she held leadership roles with a number of societies, including the American Economics Association and the Society of Labor Economists.

Dr. Currie began her presentation by delving into the issue of low birth weight (LBW) as a significant measure of health

at birth. It’s an important measure to analyze because it has been well measured objectively over a long period of time in many populations. Currie compared populations to show economic and racial disparities related to LBW, and emphasized that these differences are not genetic.

Currie used the term “epigenetics” to describe the environmental influences that cause genetic changes. From an economic perspective, health at birth, as measured by birth weight, is very changeable. She went on to point out that multiple influences factor into birth weight including social programs; smoking, drinking, and drugs; maternal education; and pollution.

In one study by Currie that compared siblings, mothers, and grandmothers, it was found that a sibling who was LBW (when compared to another sibling) and gets less education is more likely to live in a high-poverty zip code at the time of her own infant’s birth.

Currie continued to stress that disparities are mostly influenced by environmental factors and in turn, health at birth predicts important outcomes including earnings, education, and health. She went on to discuss the emerging research and literature on environmental justice which is centered on the argument that poor and minority neighborhoods are disproportionately

Continued on page 2

exposed to harmful pollution. Some of these factors may account for differences in health at birth.

Currie believes that differences can be remediated through person-based policies and that future research is dependent on access to

data and an evaluation of policies aimed at giving children and equal start in life. ■

Collaborating for Regional Impact: Improving Care Transitions in Southeastern Pennsylvania

Kate J. Flynn, MBA, FACHE, *President, Healthcare Improvement Foundation*

March 12, 2014

Kate Flynn is President of the [Healthcare Improvement Foundation \(HCIF\)](#), an organization dedicated to building partnerships for better health care in the Delaware Valley area through initiatives focused on patient safety, outcomes, and patient care experiences. As a regional non-profit organization, HCIF is positioned as a neutral, expert resource, with the leadership stature and capabilities to engage multiple stakeholders.

Flynn first provided an overview by defining transitions of care and identifying the multiple layers and factors that contribute to quality of care. Transitions of care refers to the “movement patients make from one health care practitioner or setting to another as their condition and care needs change during the course of a chronic or acute illness.”¹ Flynn explained that transitions occur at many levels both within settings (i.e. primary care, specialty care); between settings (i.e. hospital, sub-acute facility, hospital, home); and across states from curative care to hospice and personal residence to assisted living.

Care transitions in southeastern Pennsylvania have unique challenges due to compact

geography and density of hospitals and physicians, explained Flynn. The ER is a major access point to care. However, a 911 call is often directed to transport a patient to the nearest hospital, which may not necessarily be the patient’s primary hospital. Many readmitted patients “return” to a different facility than the one they were discharged from.

In an effort to reduce hospital readmissions, HCIF initiated a collaborative project, [Preventing Avoidable Episodes: Smoothing the Way for Better Transitions \(PAVE\)](#). The model for PAVE consisted of an advisory panel, baseline survey and data collection, webinar series, train the trainer program, collaborative workgroups, and post-project data collection and analysis. PAVE project participants included 53 organizations representing hospital and health care systems; specialty hospitals; home care; payers; and primary care practices. Workgroups were formed to focus on medication management, care transitions, and personal health records.

Flynn shared qualitative and quantitative data from the PAVE project which showed that many individuals valued the collaboration

with other institutions and the information shared at educational programs, particularly best-practice examples and checklist tools. PAVE participating hospitals are showing a slight decrease in readmissions.

Flynn went on to describe [SEPA Reads](#) which stands for the **Southeastern Pennsylvania (SEPA) Regional Enhancements Addressing Disconnects (READS) in Cardiovascular Health Communication**. This important HCIF initiative, in collaboration with Thomas Jefferson University and Hospitals, addresses the health literacy needs of healthcare consumers in SEPA through partnerships with hospitals, health systems, and community organizations serving diverse populations. This project is aimed at enhancing health care providers’ capacity to respond to health literacy needs specifically related to cardiovascular information for adults aged 50 and older. The program provides specialized training and support for providers; consumer education; a shared portal and website; and cardiovascular health literacy coalition events. ■

Please visit [Jefferson Digital Commons](#) to access Forum presentations.

Population Health Academy

This 5-day program is designed to prepare the next generation of health care leaders for the dramatic changes occurring in our nation’s health system. Busy health system administrators and leaders will receive a solid foundation in the key domains of Population Health:

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- Health Economics
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- Prevention and Chronic Disease Management.

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JSPH Publications

Baghdassarian AA, Donaldson RI, Depiero AD, **Chernett NL**. Pediatric emergency medical care in Yerevan, Armenia: a knowledge and attitudes survey of out-of-hospital emergency physicians. *Int J Emerg Med*. 2014;Feb 7;7(1):11. doi: 10.1186/1865-1380-7-11.

Karagiannis T, Maio V, Del Canale M, Massimo F, Bramilla A, Del Canale S. The transformation of primary Care: are general practitioners ready? *Am J Med Qual*. 2014;29(2) 93-94.

Lieberthal RD, Comer DM. What are the characteristics that explain hospital quality? A longitudinal Pridit approach. *Risk Manag Insurance Review*. 2014;17: 17-35. doi: 10.1111/rmir.12017

Nash DB. The trend toward 'healthcare retailization.' *Medpage Today*. January 21, 2014.

Nash DB. Still no tie between quality and referrals. *Medpage Today*. February 24, 2014.

Nash DB. Turning controversy into profit. *Medpage Today*. March 27, 2014.

Nash DB. Population health: moving forward. *Popul Health Manag*. 2014;17(1):1-2.

Vikas C, Khubchandani J, Seabert D, Asalkar M, Rakshe S, Firke A, **Simmons R**. Students' perceptions and doubts about menstruation in developing countries: a case study from India. *Health Promot Pract*. Published online before print, March 11, 2014. DOI: 10.1177/1524839914525175.

JSPH Presentations

Abrams MK, Kern LM, **Lieberthal RD**, Paustian M, Peikes D. What does the research tell us? Opening plenary session presented at: National Medical Home Summit, Philadelphia, PA, March 18, 2014.

Karagiannis T. Determining the costs of activities required for small practice transformation: a case study. Poster presented at: Academy Health Annual Research Meeting 2014, San Diego, CA. June 8-10, 2014.

Simmons R. Health educator's role in the Affordable Care Act. Presented at: Society for Public Health Education Annual Meeting, Baltimore, MD, March 19, 2014.

Simmons R. Lessons learned and best practices from the 21st IUHPE World Conference on Health Promotion and Education. Presented at: Society for Public Health Education Annual Meeting, Baltimore, MD, March 20, 2014.

Simmons R. Reinventing or circumventing our mission, have we jumped the (Health

Education Methods) shark? Presented at: Society for Public Health Education Annual Meeting, Baltimore, MD, March 21, 2014.

Simmons R. Global health career opportunities: learning from global health education mentors. Presented at: Society for Public Health Education Annual Meeting, Baltimore, MD, March 21, 2014.

Skoufalos A, Goldfarb NI, Juday C. The Philadelphia Health Initiative. Presented at: Population Health Colloquium, Philadelphia, PA, March 18, 2014.

Upcoming Jefferson School of Population Health Forums

May 14, 2014

The Road Ahead - Genomic Advances Raise Challenging Questions

Jennifer Dreyfus, MBA, MBE

Principal, Dreyfus Consulting

Location: Bluemle Life Sciences Building, Room 101

June 11, 2014

Building an Ambulatory System of Care: Using Population Health to Combat Secular Trends and Achieve Triple Aim

Christopher T. Olivia, MD, MBA

President, Continuum Health Alliance, LLC

Location: Bluemle Life Sciences Building, Room 105/107

**All Forums take place
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