

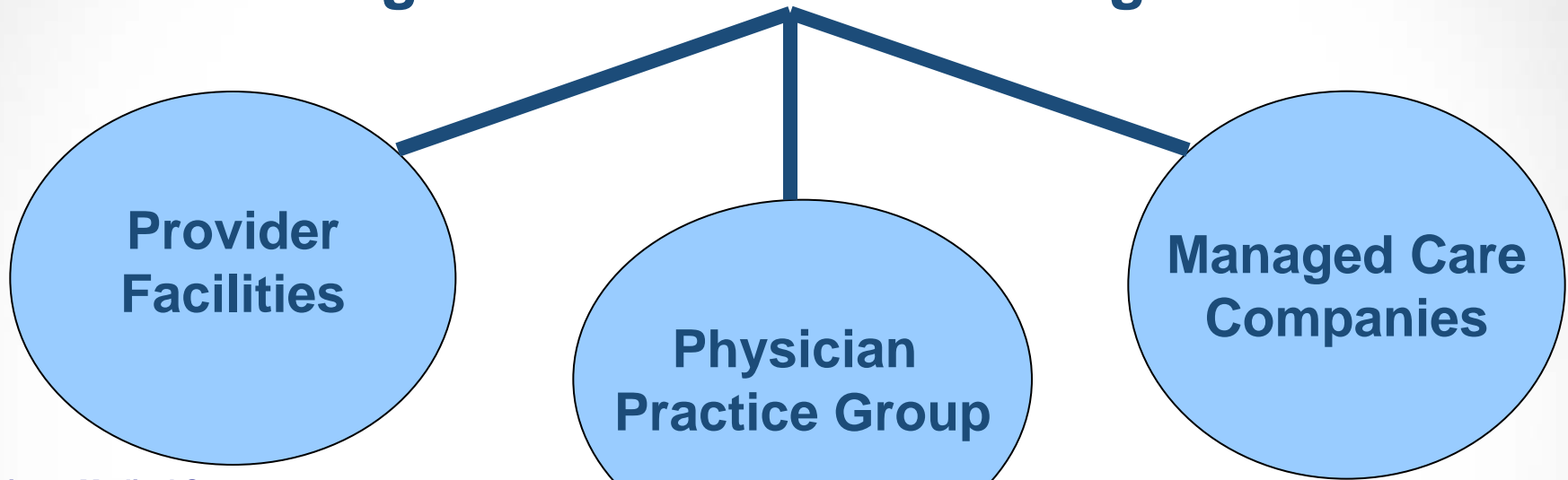
The Geisinger Innovation Model: Scaling and Generalizing

Brandeis University – The Health Industry Forum
Washington, DC
Thursday, April 5, 2012

Glenn Steele, Jr., MD, PhD
President & CEO
Geisinger Health System

Geisinger Health System

An Integrated Health Service Organization



Provider Facilities

Physician Practice Group

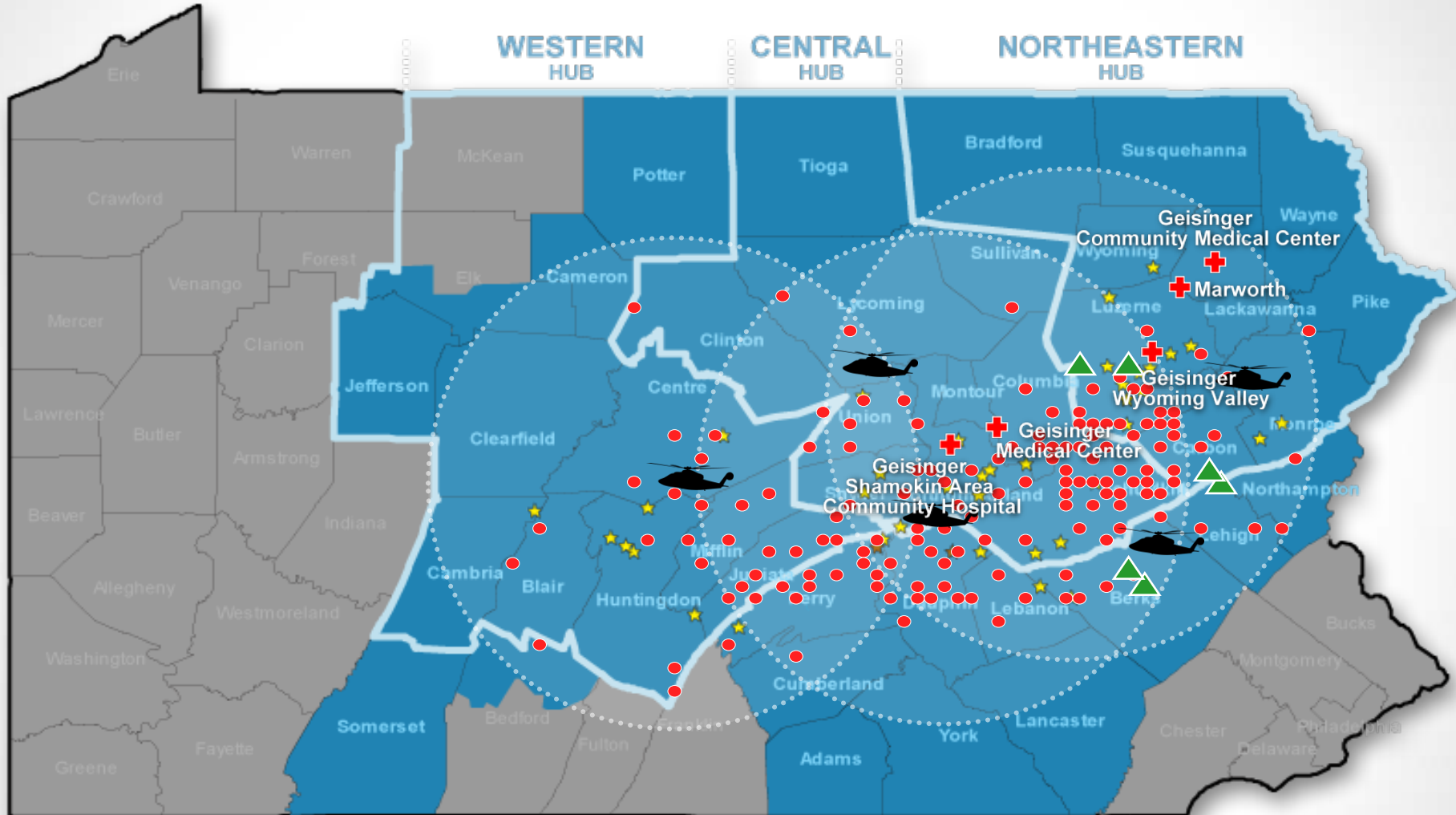
Managed Care Companies

- Geisinger Medical Center
 - Hospital for Advanced Medicine, Janet Weis Children's Hospital, Women's Health Pavilion, Level I Trauma Center
 - Geisinger Shamokin Community Hospital
- Geisinger Northeast (3 campuses)
 - Geisinger Wyoming Valley Medical Center with Heart Hospital, Henry Cancer Center, Level II Trauma Center
 - South Wilkes-Barre Adult & Pediatric Urgent Care, inpatient rehab, pain mgmt, sleep center
 - Geisinger Community Medical Center
- Marworth Alcohol & Chemical Dependency Treatment Center
- Mountain View Care Center
- >69K admissions/OBS & SORUs
- 1,372 licensed inpatient beds

- Multispecialty group
- ~1000 physician FTEs
- ~520 advanced practitioner FTEs
- 65 primary & specialty clinic sites (37 community practice sites)
- 3 Ambulatory/outpatient surgery centers
- >2.1 million clinic outpatient visits
- ~360 resident & fellow FTEs

- ~298,000 members (including ~63,000 Medicare Advantage members)
- Diversified products
- ~30,000 contracted providers/facilities
- 43 PA counties

Geisinger Health System



- Geisinger ProvenHealth Navigator Sites
- Contracted ProvenHealth Navigator Sites
- ★ Geisinger Medical Groups
- ★ Geisinger Specialty Clinics
- + Geisinger Inpatient Facilities
- Ambulatory Care Facility
- Geisinger Health System Hub and Spoke Market Area
- Geisinger Health Plan Service Area
- ▲ Careworks Convenient Healthcare
- Non-Geisinger Physicians With EHR
- LifeFlight Base

Heal • Teach • Discover • Serve

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GEISINGER

Electronic Health Infrastructure

- **>\$135M invested** (hardware, software, manpower, training)
- **Running costs:** ~4.4% of annual revenue of >\$3B
- **Fully-integrated EHR:** 39 community practice sites; 2 hospitals; 2 EDs; 6 Careworks retail-based and worksite clinics
 - Acute and chronic care management
 - Optimized transitions of care
- **Networked PHR** - ~178,000 active users (34% of ongoing patients)
 - Patient self-service (self-scheduling, kiosks)
 - Home monitoring integrated with Medical Home
- **“Outreach Health IT”** – 3,159 users in 612 non-Geisinger practices
 - Remote support for regional ICUs
 - Telestroke services to regional EDs
- **Active Regional Health-Information Exchange (KeyHIE)**
 - 18 hospitals, 100+ practices, 500,000 patients consented
- **e-Health (eICU[®]) Programs**
- **Keystone Beacon Community** - 5 rural counties “wired”
- **Corporate Data Store** - integrating clinical, utilization, cost, and quality data to drive real-time patient care improvements

The Key Issues

- Unjustified variation
- Fragmentation of care-giving
- Adversarial payor-provider relationship
- Perverse payment incentives
- Patients as passive recipients of care

Geisinger Innovation

- ProvenCare[®] for Acute Episodic Care (the “Warranty”)
- ProvenCare[®] Chronic Disease
- ProvenHealth Navigator[®] (Advanced Medical Home)
- Beacon
- Physician Group Practice Demonstration
- PGP Transitions Demonstration
- GAPP (Geisinger Accelerated Performance Program)

ProvenCare[®] for Acute Episodic Care (the “Warranty”)

ProvenCare[®] CABG: Clinical Outcomes

(Comparison of before (n=132) and after (n=321) ProvenCare[®])

- 80% improvement in In-hospital mortality
- 61% reduction in re-intubations
- 63% reduction in deep sternal wound infection rate
- 40% reduction in neurologic complications
- 29% reduction in pulmonary complications
- 20% reduction in 30 day readmissions w/ 8% reduction in ALOS

ProvenCare[®] CABG: Financial Outcomes

Hospital:

- Contribution margin increased 17.6%
- Total inpatient profit per case improved \$1946

Health Plan:

- Paid out 4.8% less per case for CAB with ProvenCare[®] than it would have without
- Paid out 28 to 36% less for CAB with GHS than with other providers

ProvenCare[®] Chronic Disease

Value Driven Care for 25,250 Patients with Diabetes

	3/06	3/07	1/11	1/12
Diabetes Bundle Percentage	2.4%	7.2%	11.8%	14.8%
% Influenza Vaccination	57%	73%	76%	74%
% Pneumococcal Vaccination	59%	83%	84%	78%
% Microalbumin Result	58%	87%	78%	81%
% HgbA1c at Goal	33%	37%	50%	52%
% LDL at Goal	50%	52%	55%	53%
% BP < 140/80	39%	44%	53%	67%
% Documented Non-Smokers	74%	84%	85%	85%

Measure change resulted in a 9% decrease February 2010
BP changed from 130/80 to 140/80 November 2011

Value Driven Care

Patient Centered Outcome Improvements

Microvascular

- **Retinopathy**
 - Less than 3 years
 - Number needed to treat to prevent 1 case is 151
 - 331 cases prevented

Macrovascular

- **Heart Attack**
 - Less than 3 years
 - Number needed to treat to prevent 1 case is 82
 - 610 prevented
- **Stroke**
 - Less than 3 years
 - Number needed to treat to prevent 1 case is 178
 - 281 prevented

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The New York Times

Business Day

TUESDAY, JUNE 22, 2010

Paying to Cut Health Costs

Extra Nurses Help Doctors Keep Patients Out of the Hospital

A Health Insurer Pays More to Save
By Reed Abelson June 2010



THE AMERICAN JOURNAL OF
MANAGED CARE

Value and the Medical Home: Effects of Transformed Primary Care

Richard J. Gilfillan, MD; Janet Tomcavage, RN, MSN; Meredith B. Rosenthal, PhD;
Duane E. Davis, MD; Jove Graham, PhD; Jason A. Roy, PhD; Steven B. Pierdon, MD;
Frederick J. Bloom Jr, MD, MMM; Thomas R. Graf, MD; Roy Goldman, PhD, FSA; Karena M. Weikel, BA;
Bruce H. Hamory, MD; Ronald A. Paulus, MD, MBA; and Glenn D. Steele Jr, MD, PhD

August 2010

Health Affairs

REENGINEERING THE DELIVERY SYSTEM

By Glenn D. Steele, Jean A. Haynes, Duane E. Davis, Janet Tomcavage, Walter F. Stewart,
Tom R. Graf, Ronald A. Paulus, Karena Weikel, and Janet Shikles

ANALYSIS & COMMENTARY

How Geisinger's Advanced Medical Home Model Argues The Case For Rapid-Cycle Innovation

November 2010

ProvenHealth Navigator®

Expansion since 2007 update

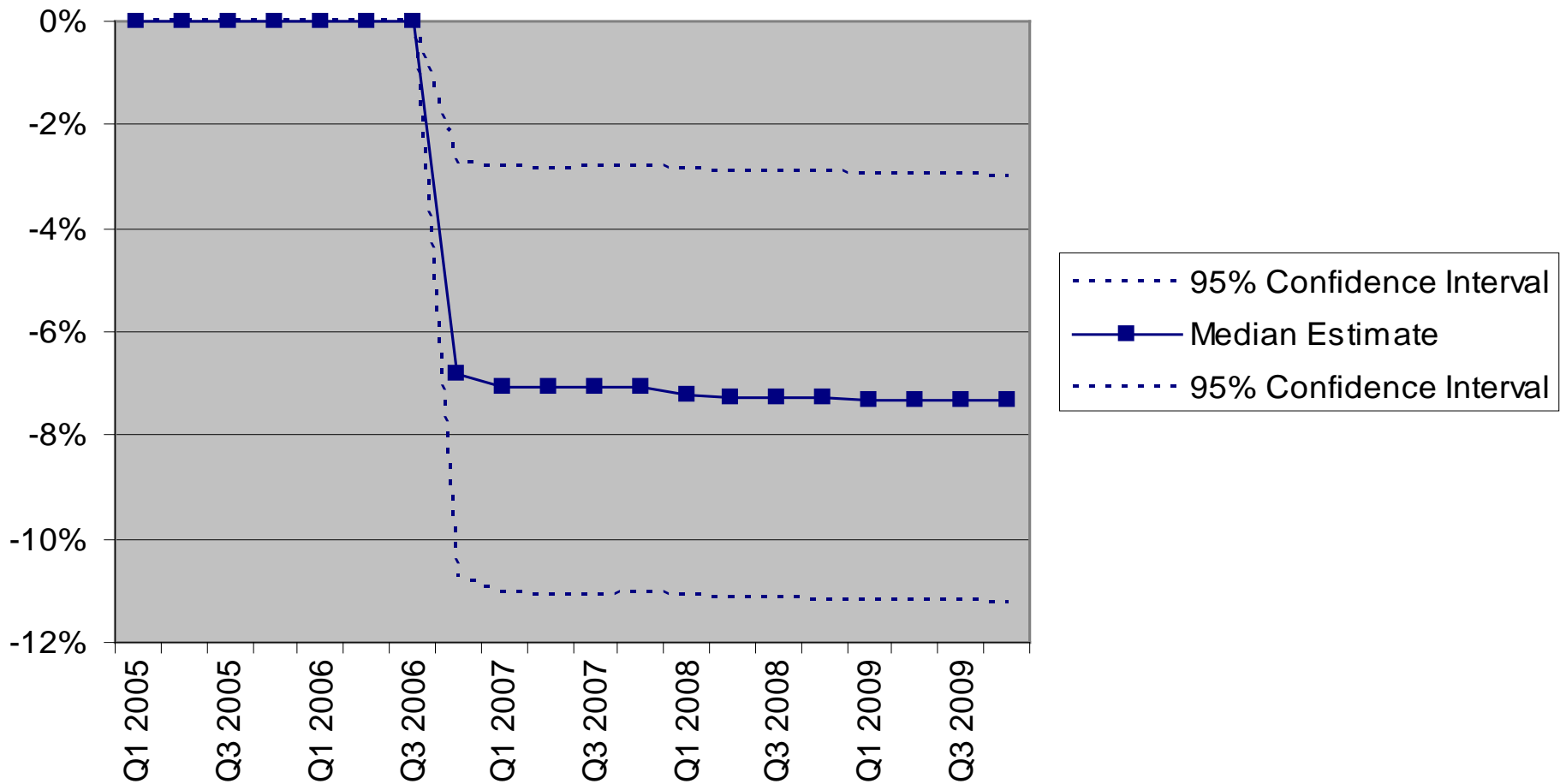
	Sites	MA members	Commercial Members	Medicare members	Total
Phase 1 (2007)	3	2,950	650	1,950	
Phase 2 (2008)	10	8,000	8,350	10,950	
Phase 3 (2009)	12	5,650	6,950	7,400	
Phase 4 (2010)	12	2,750	6,900	4,900	
Phase 5 (2011)	7	1,650	4,950	2,950	
Total	44*	21,000	27,800	28,150	76,950

37 Geisinger primary care practices & 7 non-Geisinger primary care practices

Full Cost data available for the 76,950 patients, over 360,000 patients are receiving care in the new model

Implementation dates are approximate / Membership as of April 2011

Cumulative percent difference in spending attributable to PHN



Cumulative percent difference in spending (Pre-Rx Allowed PMPM \$) attributable to PHN in the first 21 PHN clinics for calendar years 2005-2009. Dotted lines represent 95% confidence interval. $P = < 0.003$

Source: Reducing Long-Term Cost by Transforming Primary Care: Evidence From Geisinger's Medical Home Model (*Am J Manag Care.* 2012;18(3):149-155)

Physician Group Practice (PGP) Demonstration Project

April 1, 2005 – March 30, 2010

Do large multispecialty group practices deliver higher quality care at lower cost than surrounding physicians and hospitals?

<u>NAME</u>	<u>STATE</u>
Billings Clinic	MT
Dartmouth-Hitchcock Clinic	NH
Everett Clinic	WA
Forsyth Medical Group	NC
Geisinger Clinic	PA
Marshfield Clinic	WI
Middlesex Health System	CT
Park Nicollet Health Services	MN
St. John's Health System	MO
University of Michigan	MI

Physician Group Practice (PGP) Year 5 – GHS Results

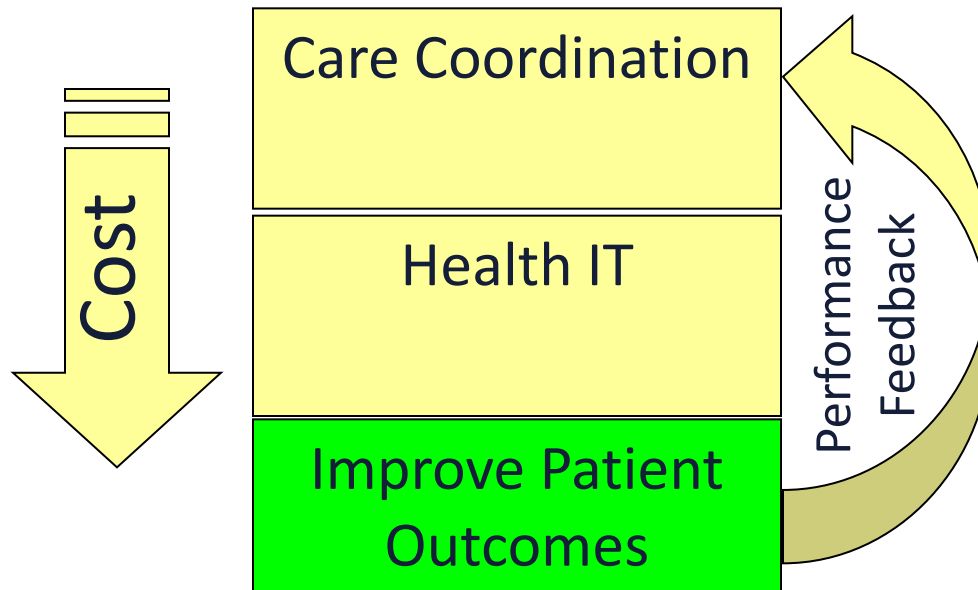
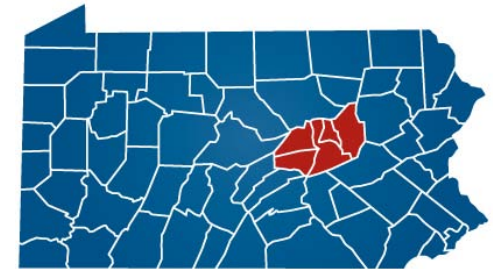
TCC – 1.4% vs. 5.8% National
All quality metrics achieved
No shared Savings

Keystone Beacon Community

Patient-focused, evidence-based, community-wide care coordination supported by health IT



HF and COPD in 5 counties in rural Pennsylvania
23 organizations over 60 locations across the care continuum



Keystone Beacon Community Progress to Date



- **Care Coordination**
 - Hospital care management – started December 2010
 - 4 hospitals, 5 nurses, 1043 patients enrolled
 - Care Coordination Call Center implemented April 20
 - 3 nurses, ensures safe transition
 - Ambulatory care management
 - 4.5 nurses at 6 primary care offices and 1 nursing home; 18 primary care sites planned
- **Care Improvement Opportunities**
 - Unsafe Discharge Disposition/Treatment Plan Revision - 428
 - Medication Error (Duplicate, missed, dosage) - 33
 - Timely follow-up - 336
 - Inadequate Psychosocial Support/Inadequate Living Arrangements - 51
- **Preventive Services**
 - Flu prevention, vaccination reminders, patient activation
 - Pneumococcal vaccination reminders, patient activation
- **IT Adoption**
 - 19 of 23 participating organizations are KeyHIE members
 - Community Data Warehouse established to support analytics
 - Support provider EHR adoption & MU
- **Patient /Provider Satisfaction being measured**

You Don't Have To Be Geisinger To Innovate Like Geisinger

A Healthier Way to Pay Doctors

Physicians' bills are inflating medical costs and distorting the profession. One hospital is trying to fix the system

BY JEFFREY HUBER

IT'S HARDER TO GET FOR AMERICA'S family doctors. An old job that averages \$120,000 per year and has you by your lonesome. With the threat to so in health care costs increasingly blamed on an antiquated fee-for-service model, some doctors are beginning to ask a question: How can we get paid better?

The truth is, we pay them all wrong. Doctors themselves would tell you that, particularly primary care providers (PCPs), the best additional dollar of revenue is a dollar logging up on the computer screen. Now, they have graduated from medical school with a low six-figure salary, but in the high-cost, long days and long nights of a hospital or academic practice, they are involved in training a patient, and it is not a simple matter to get paid for that. They are paid as if they were a general internist, but they are not. They are paid as if they were a general internist, but they are not.

Doctors themselves could tell you that — particularly primary care providers (PCPs), the foot soldiers of the U.S. medical system. New doctors graduate from medical school logging up on a domestic product, compared with 4% in other industrialized countries, yet leaves the U.S. with a high cost, long days and killing headaches involved in running a practice, and it's no wonder so many family doctors are trading up to specialties like orthopedics or neurology, where the pay can be three times as great and the hours a whole lot shorter. Only 1 out of 10 doctors in the

TIME

REPRINTED FROM OCTOBER 26, 2009

A Healthier Way to Pay Doctors

U.S. now are PCPs, compared with 5 out of 10 elsewhere in the world. Those family physicians who remain find themselves in a constant money chase, meeting their monthly rent with the help of prescribing tests — X-rays, CT scans, EKGs — that may or may not be strictly necessary but generate a lot of separate billing. This so-called fee-for-service tradition has contributed to the dysfunction of the U.S. health care system. Americans buy health care the same way they buy furniture, clothes and food: one item at a time. Physicians bill by the visit, radiologists bill by the X-ray, hospitals bill by the day. That drab, spending has led to the familiar torturous sundries: a health-care system that gobbles up 18% of gross domestic product, compared with 4% in other industrialized countries, yet leaves the U.S. with a high cost, long days and killing headaches involved in running a practice, and it's no wonder so many family doctors are trading up to specialties like orthopedics or neurology, where the pay can be three times as great and the hours a whole lot shorter. Only 1 out of 10 doctors in the

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GEISINGER

REDEFINING BOUNDARIES

The New York Times

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Business Day

THURSDAY, FEBRU 12, 2010

Paying to Cut Health Costs

Extra Nurses Help Doctors Keep Patients Out of the Hospital

BY REED ABLSON

Like a lot of doctors, Patrick Kilbiff has too many patients and too little time. He and the five other physicians in Danville, Pa., oversee the care of about 12,000 people, and a typical office visit lasts just 15 minutes. Because health insurers pay him as if he sees 40 patients a day, he has to see as many patients as he can into their day. That makes it virtually impossible to spend time explaining to patients the importance of keeping their blood sugar under control or how to take their medicine. But the insurers' penny-wise approach can lead to as much as \$1 million in hospital bills, if a person with under-treated diabetes has a heart attack.

"That is why none of the doctor's insurers are giving primary care doctors more help — and more money — to take care of the sickest patients and help prevent them from becoming sicker."

Otherwise, insurers know they risk being overwhelmed by rising health care costs as an older, sicker population ages with chronic conditions.

"The essential business model of medical insurance will have to change," said Dr. Glenn D. Steele Jr., the chief executive of Geisinger Health System, which operates a network of clinics and hospitals in Pennsylvania.

Geisinger is known nationally for its innovative approaches to delivering high-quality care at a lower cost. It also owns a health insurance plan that covers about 250,000 people — including many of Dr. Kilbiff's patients in Danville.

As an insurer, Geisinger now pays the salaries of doctors in doctors' offices, whose full-time job is to help patients with

chronic diseases stay on top of their conditions, and, ideally, out of the hospital. The doctors, including Dr. Kilbiff, help hire the nurses, who work closely with the doctors to oversee the patients' care.

The nurses make sure patients who need quick appointments are squeezed in, and they alert the doctors to any early indications of trouble by keeping in close contact with the patients and looking out for the results of patients' lab tests.

One of Dr. Kilbiff's patients, Rose Ann Cox, 69 years old, began working with her nurse, Karen Thomas, to control her diabetes, talking by phone at least once a week. Ms. Cox had gone to the emergency room when her blood sugars were too low, but she has not been in the hospital for about three years now.

"You don't always think you should call the doctor," Ms. Cox said. But she has no qualms about reaching out to the nurse.

The initiative is part of an overall effort by Geisinger and other insurers to create a so-called medical home — the place where patients' care is carefully coordinated by a doctor and staff, with particular attention given to the chronically ill.

Geisinger began experimenting with this approach three and a half years ago and now uses it in 27 practices, most of which are part of its own network of doctor offices.

But five of the doctors' offices, including Dr. Kilbiff's, are independent practices that accept Geisinger as one of several insurance plans. Under the arrangements with the outside doctors, Geisinger pays for the nurses and shares with the doctors any savings they can achieve by reducing medical expenses. So far, Geisinger says it is pleased with the early results. In an unpublished review of 2008 data, Geisinger experienced an 18 percent drop in hospital admis-

The Washington Post

FRIDAY, MARCH 12, 2009

NATIONAL

Health System, Less Is More

News Doing Things Right the First Time, for Flat Fee, Pays Off



Shirley Skilling, a physician at Geisinger Health System in Danville, Pa., talks with a patient.

It's not surprising that so many thousands of children (and teenagers) are hospitalized for asthma. Geisinger's innovation, seeing they would "off" their asthma, is to pay for treatment of the condition. The right thing to do is to pay for the condition, not the hospital, it costs them, said Dr. Shirley Skilling, Geisinger's president and chief medical officer.

The budget Obama sent to Congress also calls for the Geisinger approach by making it easier for hospitals with high readmission rates to receive certain payments. Administering the program for certain procedures will be a challenge, but it is a step in the right direction.

Obama's comprehensive vision of 41 new hospitals and 600 ambulatory practices, says that these goals through standardization.

FAST COMPANY

INSIDER



How a small network of hospitals in Pennsylvania is defying convention, cutting costs, and improving health care.

HERE'S A GUARANTEE that will get your attention. Geisinger Health System, which runs three hospitals in central Pennsylvania, not only charges a flat fee on necessary surgery that goes with it, but it also offers a warranty: If a person 90 days, Geisinger will eat the cost.

Geisinger's doctors and executives—who sound like venture capitalists—say they're trying to do more than run a hospital network. They're trying to do more than run a hospital network. They're trying to do more than run a hospital network. They're trying to do more than run a hospital network.

Scaling and Generalizing

➤ GHS Consulting

- ProvenCare® Acute: CMMI Bundled Payment 35 systems
- PHN: Taconic IPA, North Florida Hospital
- Physician Practice Redesign: Wellstar, Singapore Health Ministry
- Population Management Case Manager Training: U Michigan
- ProvenCare® Acute: Lifebridge Health System

➤ GHS Collaboratives

- Integrated System Development : Singapore Health Ministry, HSHS, Bon Secours, Boston
- Single National Patient Identifier: Care Connectivity Consortium (Mayo/Intermountain/Kaiser/Group Health)
- Premier/Geisinger Integrated Care Collaborative
- Clinical Enterprise Development in Academic Medicine: U Central Florida
- ProvenCare® Acute: ACS Commission on Cancer Collaboration
- Insurance Risk Products Provider-Payer Partnership: New Jersey
- Insurance TPA Plus/Population Management: West Virginia, Maine, Delaware, NY

Geisinger Strategies

Existing

- Consulting – ProvenKnowledge™
- National Partnerships
 - PGP TD
 - CMMI Bundled Payment
- ACO Development

In Development ‘National Innovation Center’

- “Geisinger in the Cloud”
- Geisinger “Apps”
- NE US Regional Delivery “Influencer”
- NewCo

Are we moving fast enough...



NEXT STEPS

- Regional Innovation Engines
- Expanded Medicare Advantage
- Partial Population Payments (moving ACOs away from Fee-for-Service)
- Using Social Media to Bring Greater/Faster and National Transparency to Cost/Quality Problems in Medicare
- Setting Spending Targets for Medicare
- Uniform and Transparent Cost/Quality Outcome Metrics