



The Geisinger ProvenCare Experience

GEISINGER
HEALTH SYSTEM

A strong business case for quality

- Not all appropriate care is rendered
- Unnecessary care is being provided
- Compliance with evidence-based guidelines known to improve outcomes is poor
- Outcomes of care vary widely

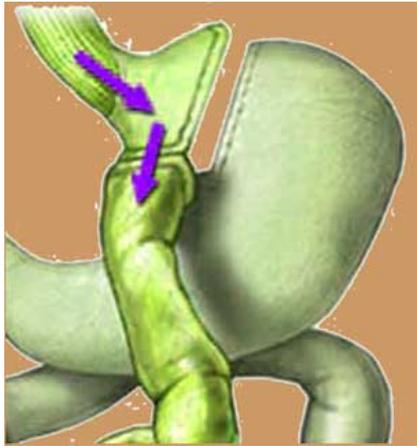
ProvenCare[®]

- Concept: Link evidence-based practices to a continuum of care in a subclass of patients and reliably give that care **to each and every patient**
- Purpose: Fully optimize patient outcomes
Reduce unnecessary variability in care
Create an idealized flow for providers and patients

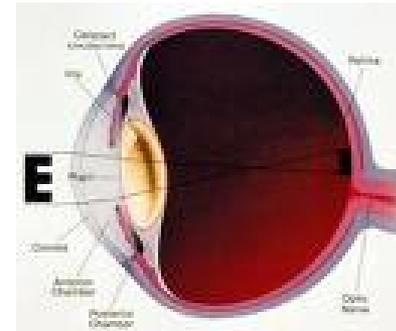
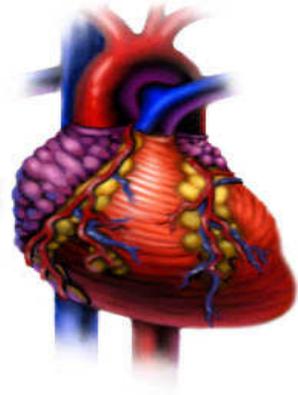
Evidence

- Evidence-based practices are Class I and Class IIa recommendations published by the sub-specialty's national governing body
- Physician consensus-based practices are guided by the sub-specialty's national governing body
- Applicable regulatory requirements are incorporated into best practices

ProvenCare[®]



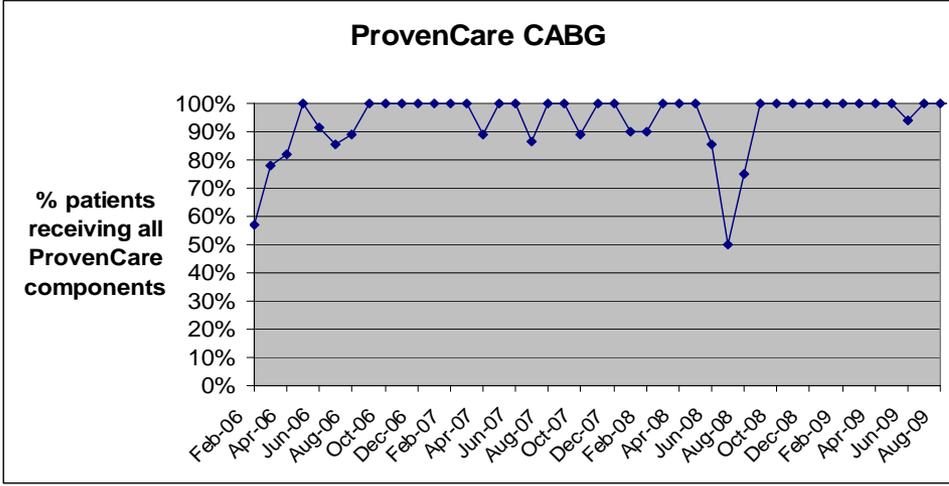
- ✓ Elective CABG
- ✓ Elective Cataract Surgery
- ✓ Elective Total Hip Replacement
- ✓ Elective PCI (Percutaneous Coronary Intervention)
- ✓ Bariatric Surgery
- ✓ Low Back
- ✓ **Perinatal**



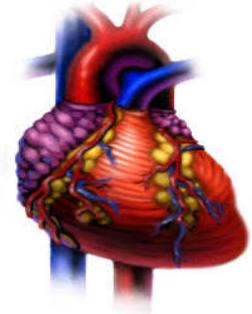
Why? Because typical care has...

- Clinical
 - Uncertain appropriateness
 - Variable compliance with known-to-be beneficial evidence-based best practice
 - Limited patient engagement
 - Variable outcomes
- Business
 - Lack of accountability for outcomes and quality
 - A la carte payment for services
 - Perverse incentives: more payment for complications

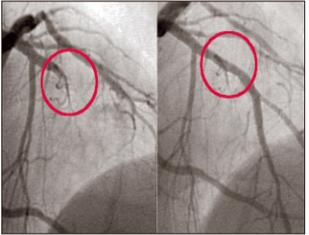
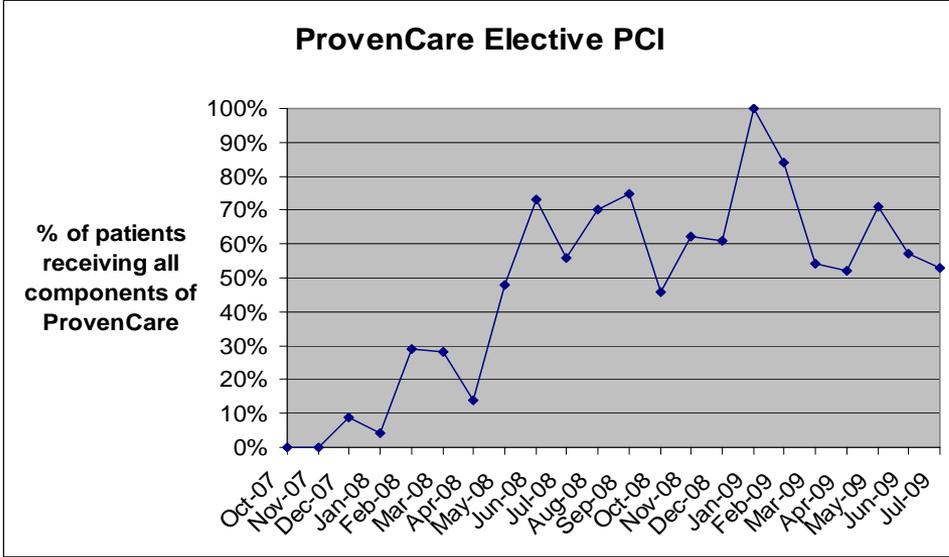
ProvenCare CAB and PCI



ProvenCare CABG



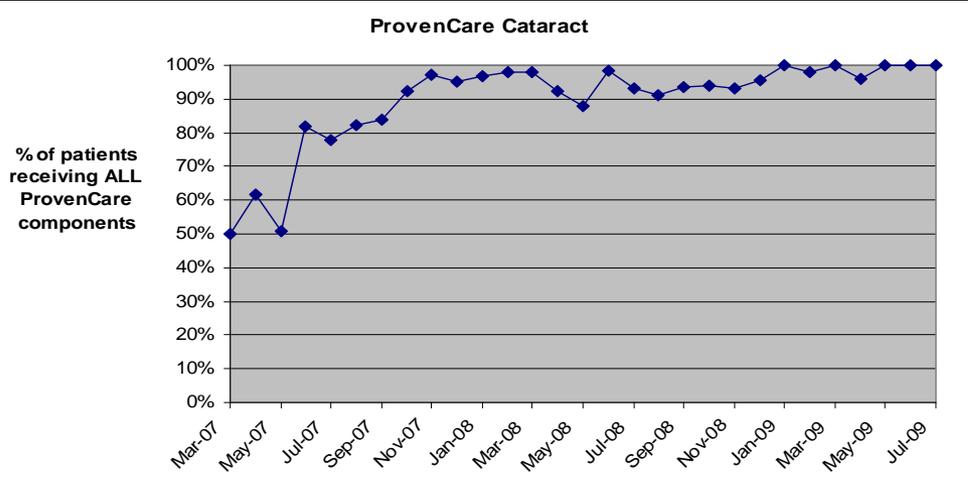
Snapshot:
 -5 Surgeons
 -2 hospitals
 ProvenCare patients through Aug 2009
393



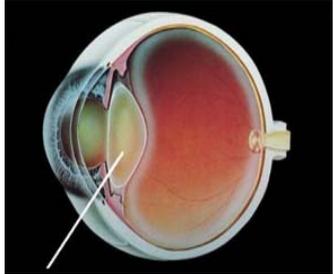
ProvenCare PCI

Snapshot:
 - 6 Interventionalists
 - 2 Hospitals
 ProvenCare patients through July 2009
945

ProvenCare Cataract and Total Hip Replacement



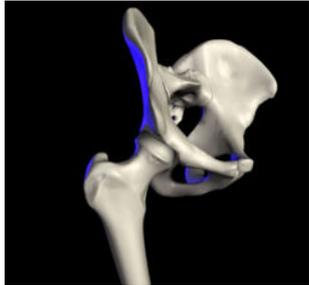
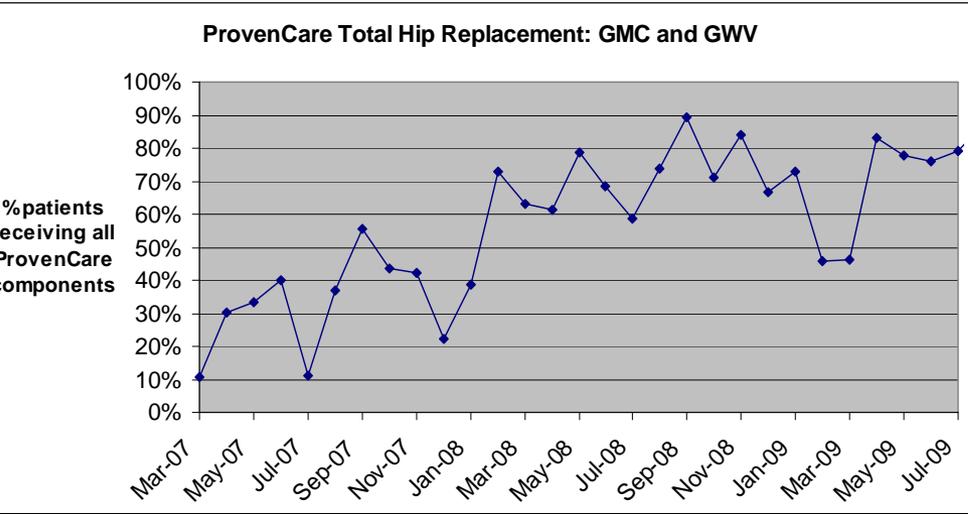
ProvenCare Cataract



Snapshot:

- 9 Surgeons
- 4 Hospitals (2 non-Geisinger)
- 2 Surgical Centers

ProvenCare patients through July 2009
4022



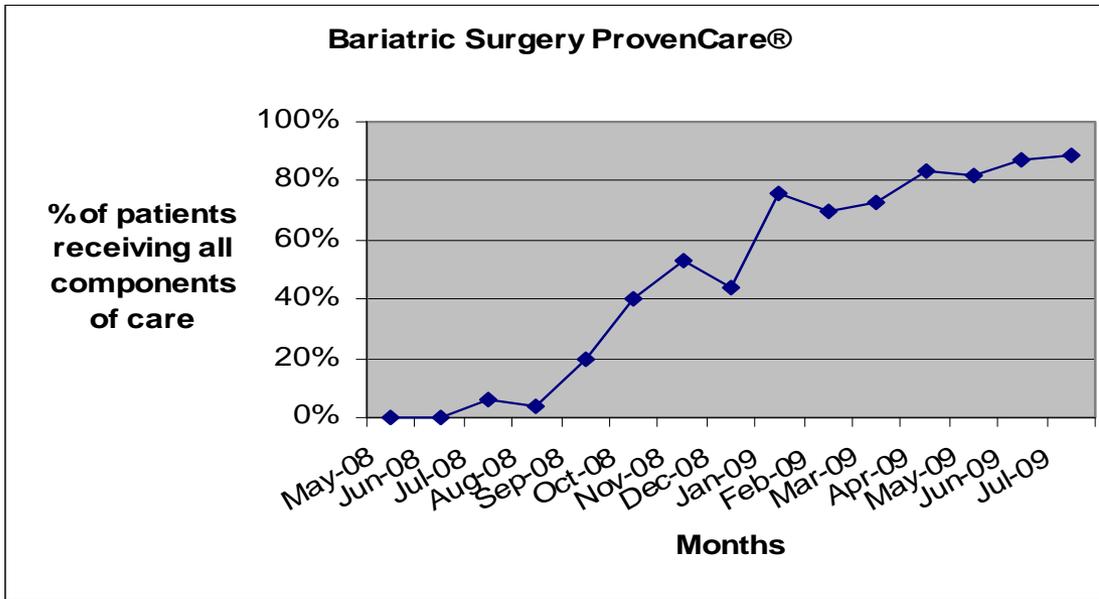
ProvenCare THR

Snapshot:

- 6 Surgeons
- 2 Hospitals

ProvenCare patients through July 2009
871

ProvenCare Bariatric



ProvenCare patients through July 2009
599

Snap Shot:

Patient population: ~800 in the program, 400 proceed to surgery each year

Duration: Pre-surgery- 7 months

Post-surgery- 12 months

Surgical approaches: 2

Professionals: Surgeons-5

Internal Medicine- 2

Psychology-2

Nutritional Spec.-6

Perinatal ProvenCare[®] Goals

- 103 Discrete evidence-based elements of care are incorporated, measured and tracked for compliance
- Redesign, from the ground up, all aspects of provider workflow
 - Drive fundamental efficiency improvements
 - Increase patient safety and process reliability
 - Reduce/eliminate documentation redundancy
 - Streamline patient education and cut costs
- Seek observable reductions in C-section rates and premature births
- Enhance management of comorbid conditions
- Improve fetal/child health and wellness

Does it work?

ProvenCare®

brings national attention

StarNewsOnline.com 
The Voice of Southeastern North Carolina

The Detroit News
detnews.com

Chicago Tribune

denverpost.com
THE DENVER POST



The New York Times
National
MAY 13, 2007

In Bid for Better Hospital Care, Heart Surgery With a Warranty

By REED ABELESON

What if medical care came with a 90-day warranty?

That is what a hospital group in central Pennsylvania is trying to learn in an experiment that some experts say is a radically new way to encourage hospitals and doctors to provide high-quality care that can avoid costly mistakes.

The group, Geisinger Health System, has overhauled its approach to surgery. And taking a cue from the makers of TVs, washing machines and other products, Geisinger essentially guarantees its workmanship, charging a flat fee that includes 90 days of follow-up treatment.

Even if a patient suffers complications or has to come back to the hospital, Geisinger promises not to send the insured another bill.

Geisinger is by no means the only hospital system currently rethinking ways to better deliver care that might also reduce costs. But its effort is noteworthy as a distinct departure from the typical medical reimbursement system in this country, under which doctors and hospitals are paid mainly for delivering more care — not necessarily better care.

Since Geisinger began its experiment in February 2006, focusing on elective heart bypass surgery, it says patients have been less likely to require intensive care, have spent fewer days in the hospital and are more likely to return directly to their own homes instead of going to a nursing home.

Geisinger presented the first-year results of its experimental program at a meeting last month of the American Surgical Association.

Geisinger stands out as a group that has transformed the way it delivers care, said Dr. Donald M. Berwick, the chief executive of Institute for Healthcare Improvement, a national nonprofit organization whose

In almost no other field would consumers tolerate the frequency of error that is common in medicine, Dr. Berwick said, and Geisinger has managed to reduce the rate significantly. "Getting everything right is really, really hard," he said.

It is still too early to know whether the approach, which Geisinger calls ProvenCare, will catch on with employers and health insurers.

So far, the only insurer that Geisinger has contracted with under the new arrangement is its own insurance unit, which covers about 210,000 people in Pennsylvania. Eventually, though, Geisinger hopes to attract other insurers and employers that provide health benefits by expanding the approach into other lines of care provided by the nearly 600 doctors it employs at its three hospitals and 55 offices in the region.

Geisinger is trying to address what it views as a flaw in the typical medical reimbursement system.

Under the typical system, missing an antibiotic or giving poor instructions when a patient is released from the hospital results in a perverse reward: the chance to bill the patient again if more treatment is necessary. As a result, doctors and hospitals have little incentive to ensure they consistently provide the treatments that medical research has shown to produce the best results.

Researchers estimate that roughly half of American patients never get the most basic recommended treatments — like an aspirin after a heart attack, for example, or antibiotics before hip surgery.

The wide variation in treatments can translate to big differences in death rates and surgical complications. In Pennsylvania alone, the mortality rate during a hospital stay for heart surgery varies from zero to the best-performing hospitals to nearly 10 percent at the worst performer, according to the Pennsylvania Health Care Cost

Around the world, other modern industries — whether car manufacturing or computer chip making — have long understood the importance of improving each piece of the production process to ramp down costs and improve overall quality.

But hospitals have been slow to focus their attention on standardizing the way they deliver care, said Dr. Arnold M. Klutznick, the medical director for the Pacific Business Group on Health, a California organization of large companies that provide medical benefits to their workers. Geisinger "is one of the few systems in the country that is just beginning to understand the lessons of global manufacturing," Dr. Klutznick said.

In re-examining how they perform bypass surgery, Geisinger doctors identified 48 essential steps, then devised procedures to ensure the steps would always be followed, regardless of which surgeon or which one of its three hospitals was involved.

From screening a patient for the risk of a stroke before surgery, to making sure the patient has started on a daily aspirin regimen upon discharge, Geisinger's 40-step system makes sure every patient gets the recommended treatment.

At least one heart surgery patient, David Dunsmair, 65, was impressed by the care he received — and the doctors' and staff's efforts to explain things during the four days he spent last December at Geisinger's hospital in Wilkes-Barre, Pa.

The care, which included a few weeks of rehabilitation, was delivered "like clockwork," Mr. Dunsmair said recently. "I'm feeling fine."

For Geisinger, as with any hospital, the challenge is often in persuading the doctors to get on board. Before ProvenCare began, Geisinger's seven cardiac surgeons each delivered the care they believed was best for patients. And that care varied.

"We realized there were seven ways to

boston.com
The Boston Globe

Online
The Ledger
theledger.com

INTERNATIONAL
Herald Tribune HEALTH/SCIENCE

BMJ

May 24th, 2007 at the George Washington University Medical Center
HEALTH CARE: Hillary Remarks on Reducing the Cost of Health Care

Heal • Teach • Discover • Serve

GEISINGER

Lessons Learned

Total Hip Quality Manager Data Improvements with >90% compliance

- Decreased LOS
 - 3.6% reduction
- Decreased 30 day readmission rate
 - 58% reduction
- Decreased DVT rate
 - 49% reduction
- Decreased PE rate
 - 67% reduction

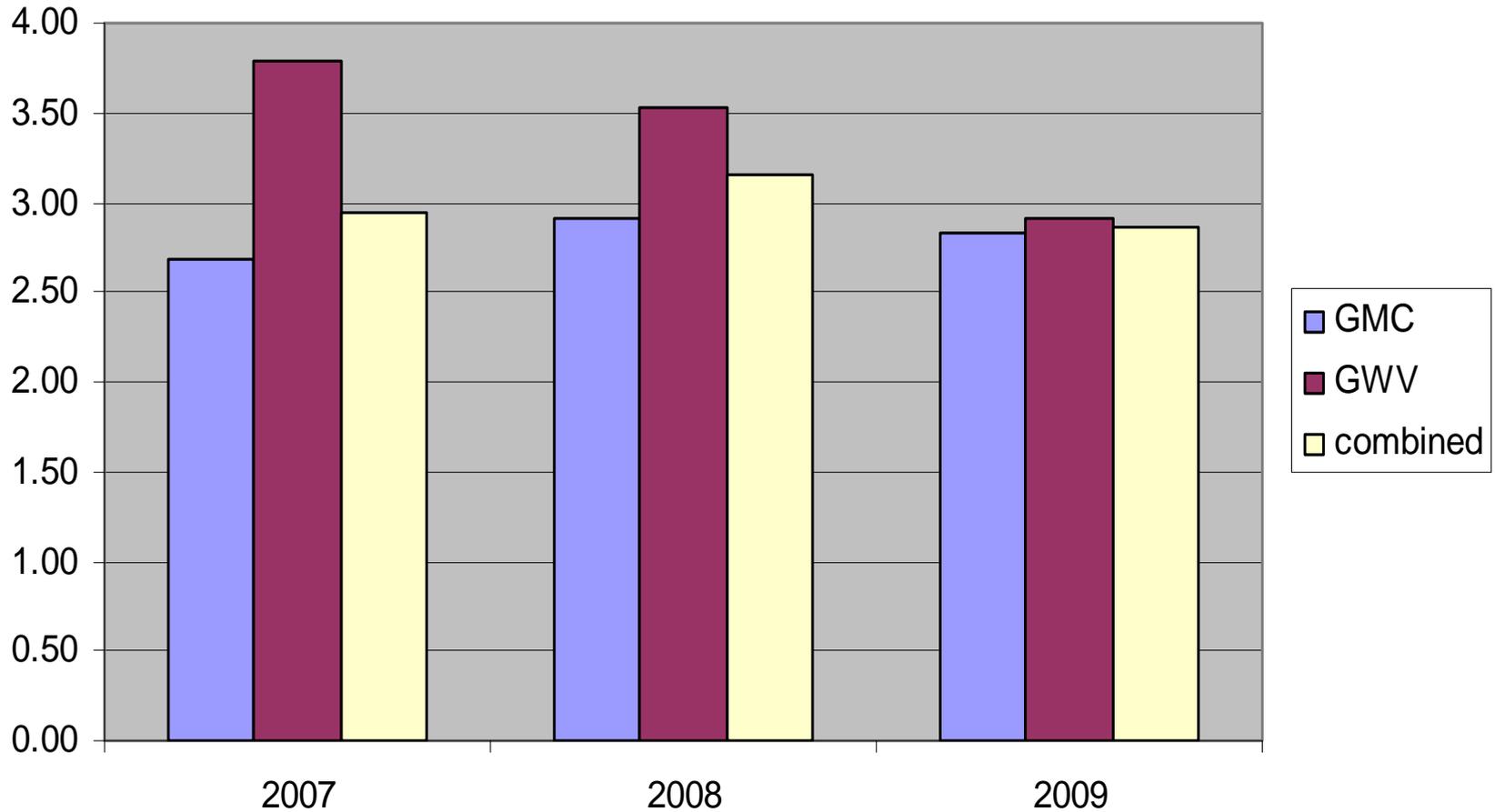
| | CY prior to ProvenCare | Expected | CY 2009 | % change |
|------------------------------|-------------------------------|-----------------|----------------|-----------------|
| Mortality | 0.90% | 0.10% | 0.00% | |
| Morbidity¹ | 3.50% | 1.90% | 1.00% | 71% |
| Complications | 27.90% | 27.10% | 16.30% | 42% |
| LOS | 3.8 | 2.8 | 2.8 | 26% |
| Geometric Cost | \$10,057 | \$14,292 | \$12,715 | 26% |

Quality Manager Data/ Not statistically significant

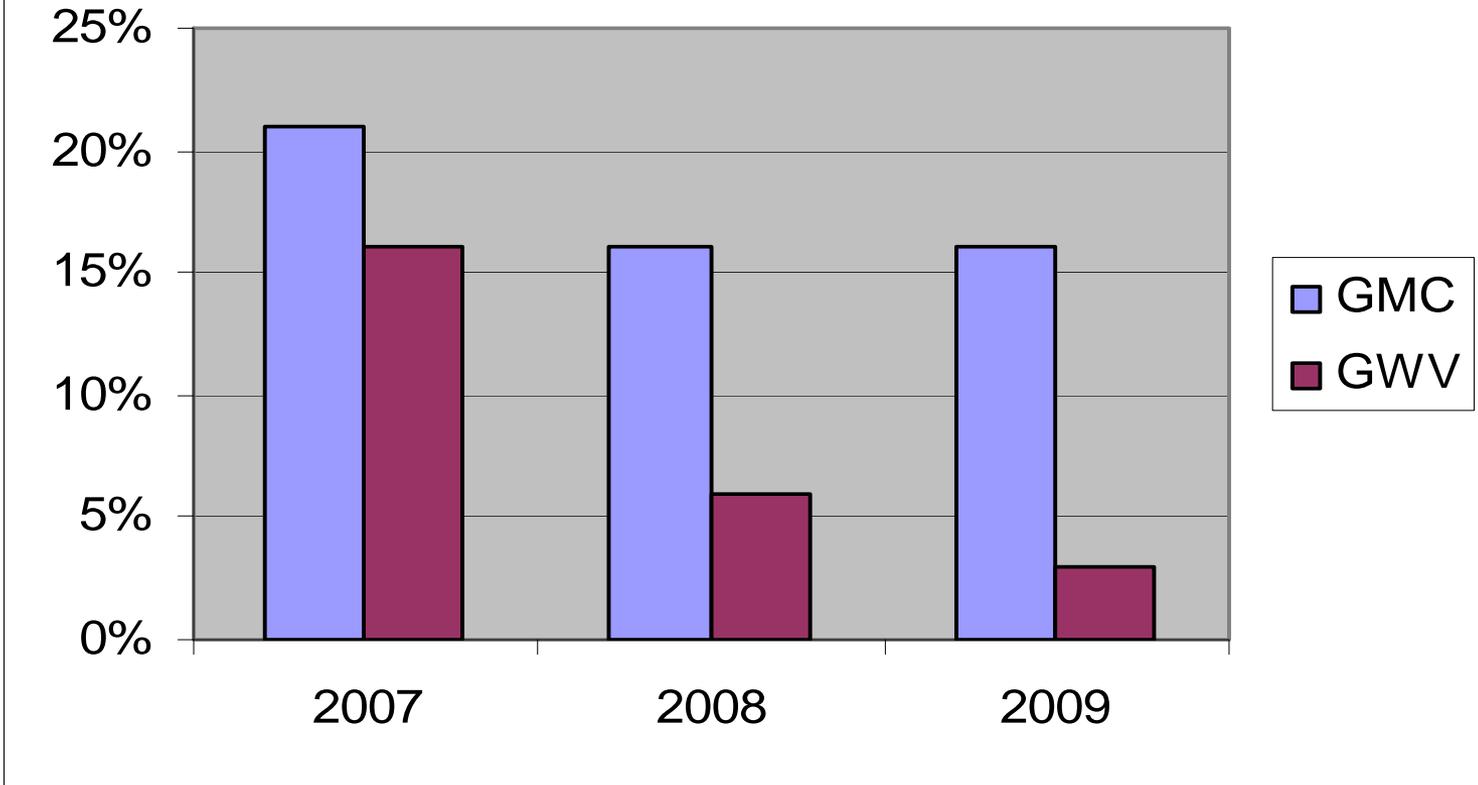
¹**Morbidity Rate**, as defined by Quality Manager, is the percentage of patients who develop at least one morbid complication during hospitalization. Patients are said to have a morbid complication if the clinical impact of the complication was determined to be in the category of D or E as outlined below:

| <u>Morbidity</u> | <u>Clinical Impact</u> |
|------------------|--|
| A | None or trivial |
| B | One or two day increase in LOS |
| C | Unscheduled ICU admission and one or two day increase in LOS |
| D | 50%+ risk of temporary impairment, unscheduled ICU admission and / or 3+ day increase in LOS |
| E | 50%+ risk of temporary impairment, unscheduled ICU admission and / or doubling LOS |

ProvenCare Total Hip Average LOS

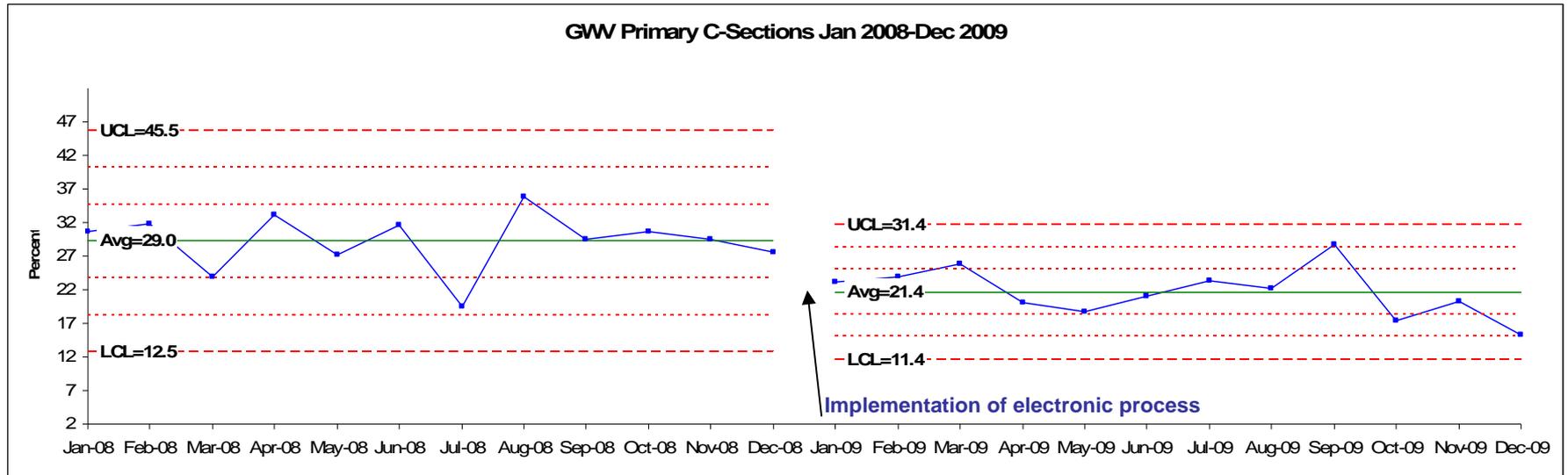


Transfusion Rate



Quality Manager Data

ProvenCare Perinatal Quality Measures



Balancing the Message- AHRQ Patient Safety Indicator 17

- The numerator includes any of the following diagnosis codes: 767.0, 767.11, 767.3, 767.4, 767.5, 767.7, 767.8
- Subdural and cerebral hemorrhage (due to trauma or to intrapartum anoxia or hypoxia)
- Epicranial subaponeurotic hemorrhage (massive)
- Injuries to skeleton (excludes clavicle)
- Injury to spine and spinal cord
- Facial nerve injury
- Other cranial and peripheral nerve injuries
- Other specified birth trauma

Quality Performance- AHRQ Patient Safety Indicator 17

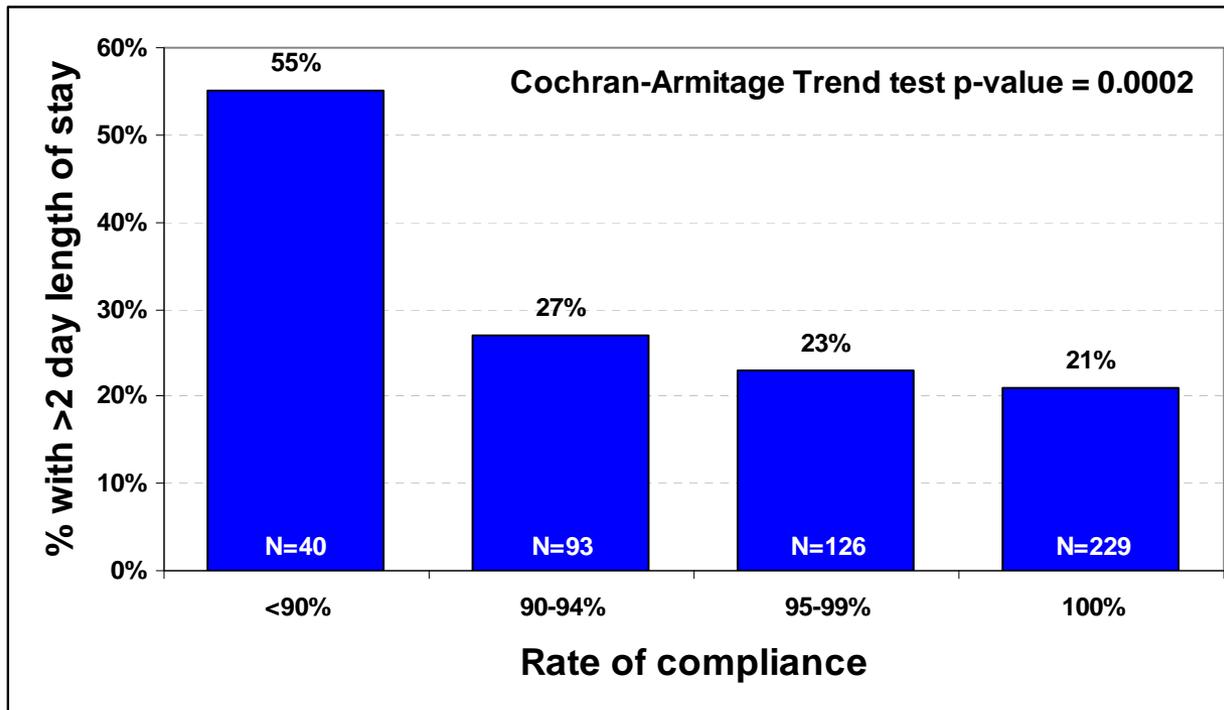
| | Population of Mothers | Population of Babies | # of All Diagnoses birth trauma cases | Number of Excluded cases | Numerator based on PSI 17 definition | Birth Trauma Rate based on PSI 17 definition (per 1000 babies) |
|---------------|-----------------------|----------------------|---------------------------------------|--------------------------|--------------------------------------|--|
| FY2008 | 2635 | 2888 | 20 | 5 | 15 | 5.19 |
| FY2009 | 2786 | 3054 | 10 | 5 | 5 | 1.64 |

- At GWV, there is no change in PSI 17 Birth Trauma Rates although vaginal deliveries have increased (GWV remains below the national average)
- As a system, there is a significant decline in PSI 17 for FY09 ($p=0,047$). The national average is 2.31

http://www.ahrq.gov/qual/nhqr07/measurespec/patient_safety.htm#rtraumt1

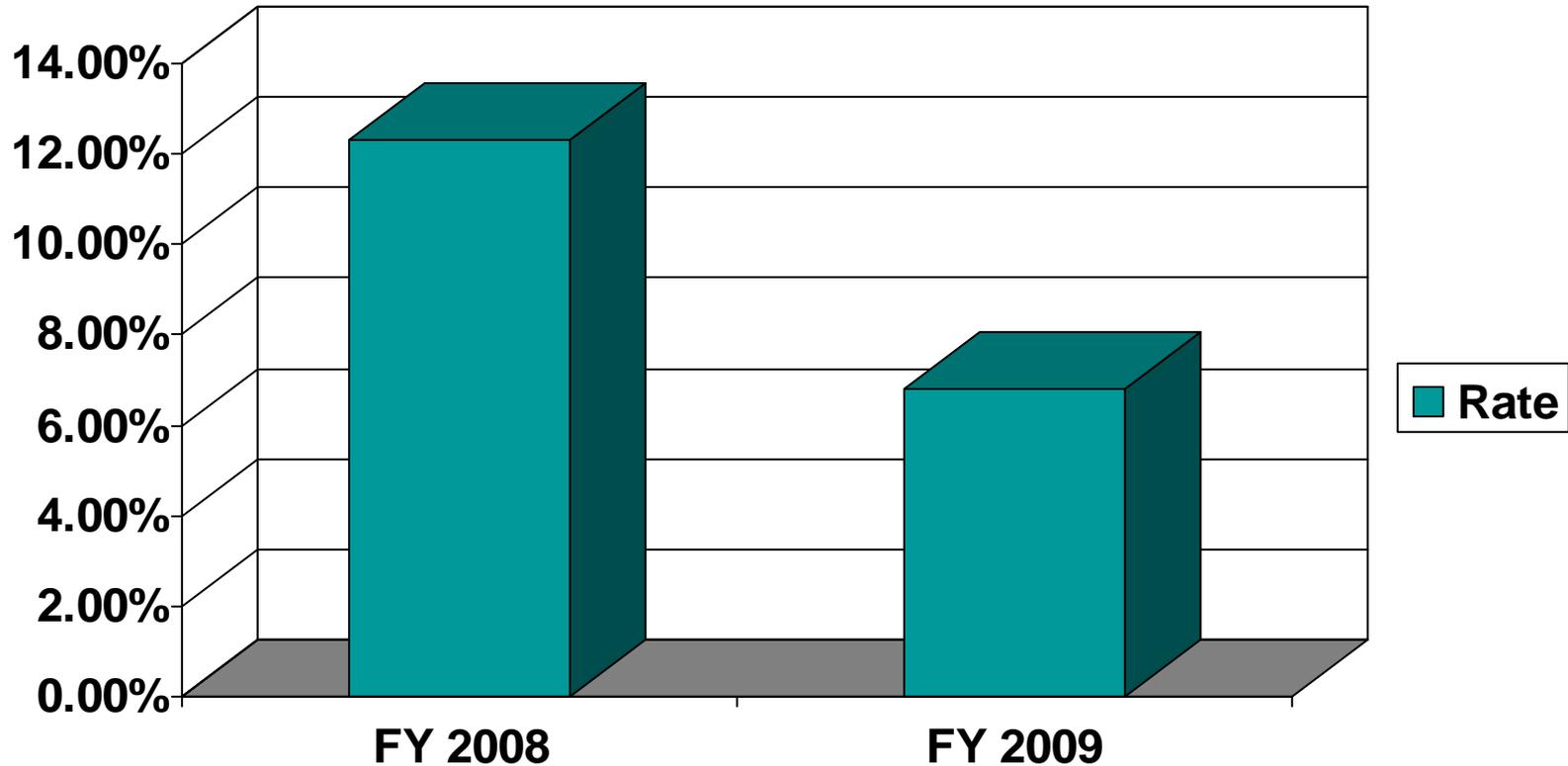
Length of stay

- 488 Proven Care patients from May 2008 through June 2009
- Length of stay was categorized into two group (≤ 2 days, $3+$ days). This was correlated with a 4-level categorical version of compliance ($<90\%$, $90-94\%$, $95-99\%$, 100%) using a Cochran-Armitage trend test.
- **Results:** Those with a lower rate of compliance were more likely to have an extended length of stay (>2 days)



This categorical length of stay was correlated with 100% compliance using a Cochran-Armitage Trend test.

90 day Readmissions



FY 2008: 413 cases, 51 readmissions

FY 2009: 427 cases, 29 readmissions

Why Were Our Outcome Not Even Better?

- **Only 60-70% of patients received all 42 measures**

Why Were Our Outcome Not Even Better?

- **Only 60-70% of patients received all 42 measures**
- But most patients missed only 1 measure**

Why Were Our Outcome Not Even Better?

- **Only 60-70% of patients received all 42 measures**
- But most patients missed only 1 measure**

Why Were Our Outcome Not Even Better?

- **Only 60-70% of patients received all 42 measures**
- **But most patients missed only 1 measure**
- **Some measures increased detection of complications**

Why Were Our Outcome Not Even Better?

- **Only 60-70% of patients received all 42 measures**
- **But most patients missed only 1 measure**
- **Some measures increased detection of complications**

Why Were Our Outcome Not Even Better?

- **Only 60-70% of patients received all 42 measures**
--- **But most patients missed only 1 measure**
- **Some measures increased detection of complications**
 - Proven PCI measures that prevent complications: 14
 - Proven PCI measures detect more complications: 10
 - Proven PCI measures no affect on complications: 18

ProvenCare should deliver more value

- Approach is patient centric
- Evidence-based care delivers better outcomes
- Provider documents appropriateness
- Enables an activated participative member

Every system is perfectly designed to
get the result it gets- *Paul Batalden, MD*