

Fixing health care: or how I found my revolution

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The big idea

□ Quality reduces cost

- Saves lives
- Retains workers

□ Healthcare's twin dilemmas

- High cost
- Uncertain quality

Fixing these dilemmas begins at home!

What is quality?

Safety

- No errors

Efficiency

- No waste

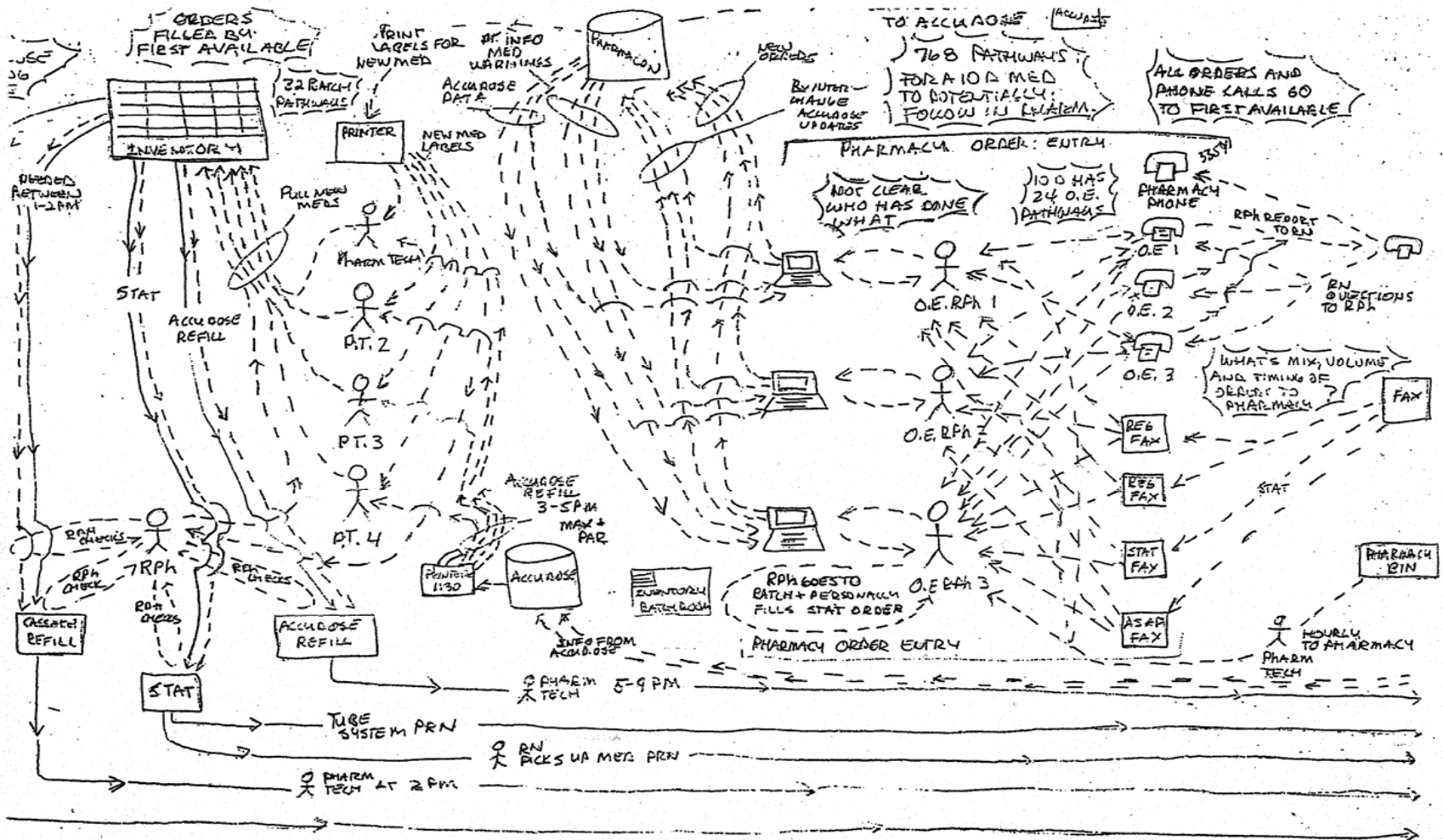
Best practice

- Evidence-based care
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Quality in health care

- Seemingly unnatural
 - Can be taught
 - Champions can be nurtured
 - Improvement can be standardized, coached and applied
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Introducing "Systems Thinking"



Perfecting Patient Care™ (PPC)

- ❑ PRHI's adaptation of Toyota Production System (TPS).
 - ❑ Working to solve problems one by one, as close as possible to the point of patient care.
 - ❑ Using PPC, PRHI and partners developing replicable models for transforming care.
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PRHI: a little history

- ❑ 1997—PRHI convenes medical and business leaders, insurers, others in effort to eliminate infections and medication errors, apply best practices in 5 clinical areas.
 - ❑ 1999—IOM report states that medical errors cause 100,000 deaths annually.
 - ❑ 2001—PRHI partners begin applying Toyota-based engineering to healthcare (Perfecting Patient Care™).
 - ❑ 2005—IOM/National Academy of Engineering report calls for applying engineering principles to health care.
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A strategy evolves

- ❑ Initially, coalition of hospitals, insurers, employers, plans.
 - ❑ Focused on zero infections and medication errors and 5 clinical areas.
 - ❑ Established pilot PPC programs in several hospitals.
 - ❑ Began program to report 100% of “errors” in real-time.
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PPC site: MRSA reduction

- ❑ 36-bed inpatient surgery unit at VAPHS
 - ❑ Receives patients from 12 surgery lines
 - ❑ Objective: eliminate methicillin-resistant *Staph Aureus* (**MRSA**) infections.
 - ❑ Prior year: 12 MRSA infections
 - ❑ Three years since program began:
90% decline in MRSA infections
 - ❑ HOW?
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Clean equipment room



Results

- ❑ More than \$20,000 in equipment freed up
 - ❑ Reduced time to obtain and store equipment
 - ❑ Equipment always clean and ready to use
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Clean supply room



Results

- ❑ Stock-outs reduced 90%
 - ❑ Inventory reduced 50%
 - ❑ Stocking time from 40 minutes to under 10.
 - ❑ Workers easily find supplies.
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Building the business case

- Eliminating hospital-acquired infections will save millions.
 - Work at AGH has shown promise
 - Five statewide infection demonstrations
 - Work of Dr. Shannon at AGH
 - Used PPC to virtually eliminate central line infections in two ICUs
 - Now working to eliminate MRSA in the same way
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The business case: CLAB infections

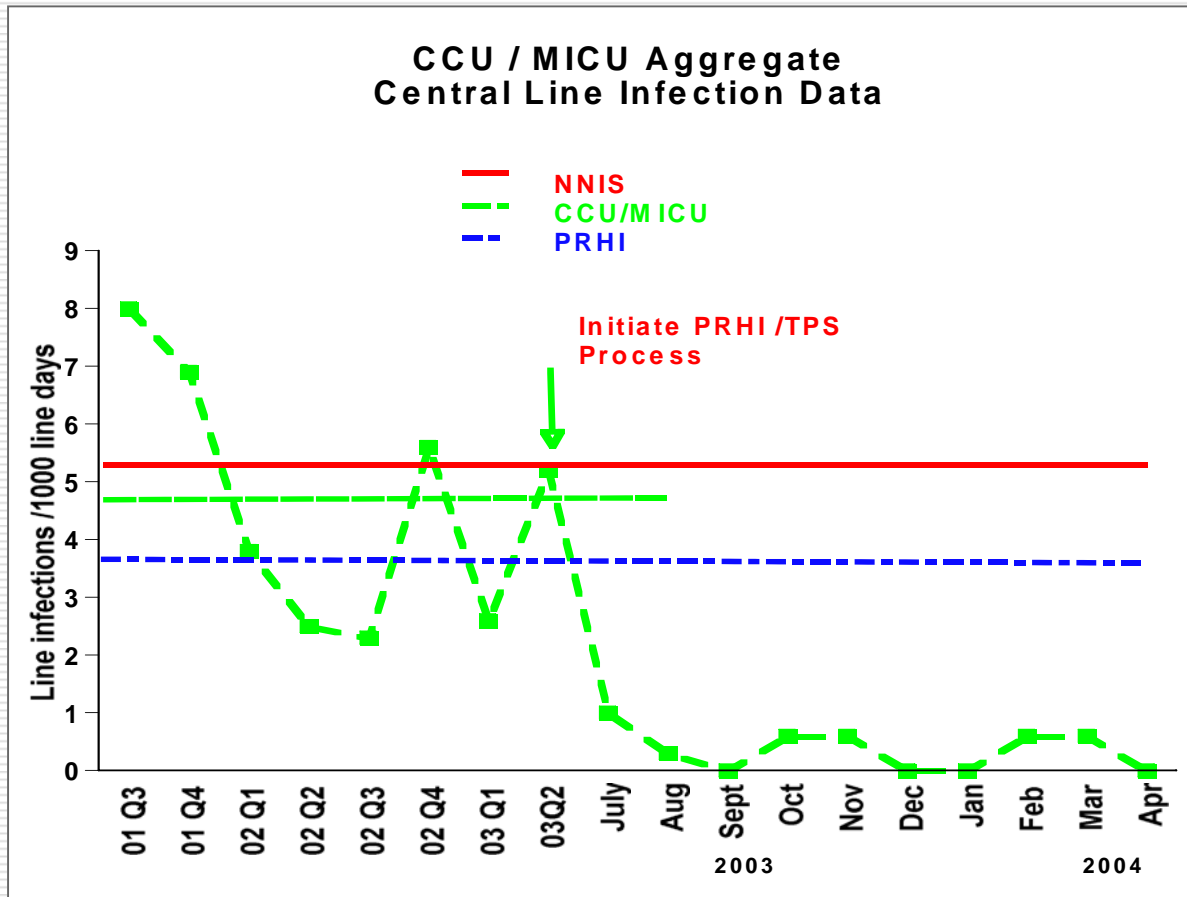
Retrospective data revealed:

- In Hospital Mortality CCU/MICU
21%
 - In Hospital Mortality Respiratory Failure
(DRG 475)
35%
 - In Hospital Mortality from CLABS
51%
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PPC countermeasures applied

- Subclavian site preferred
 - No re-wiring of existing lines
 - Remove femoral lines within 12 hours
 - Consider a PICC line
 - Remove all lines present at transfer.
 - "Is the line necessary?"
 - Checklist prior to line placement
 - Insertion documentation
 - Standardized sterilization procedure
 - Standardize credentialing
 - New insertion kits and disinfectants
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Clinical results sustained 3 yrs

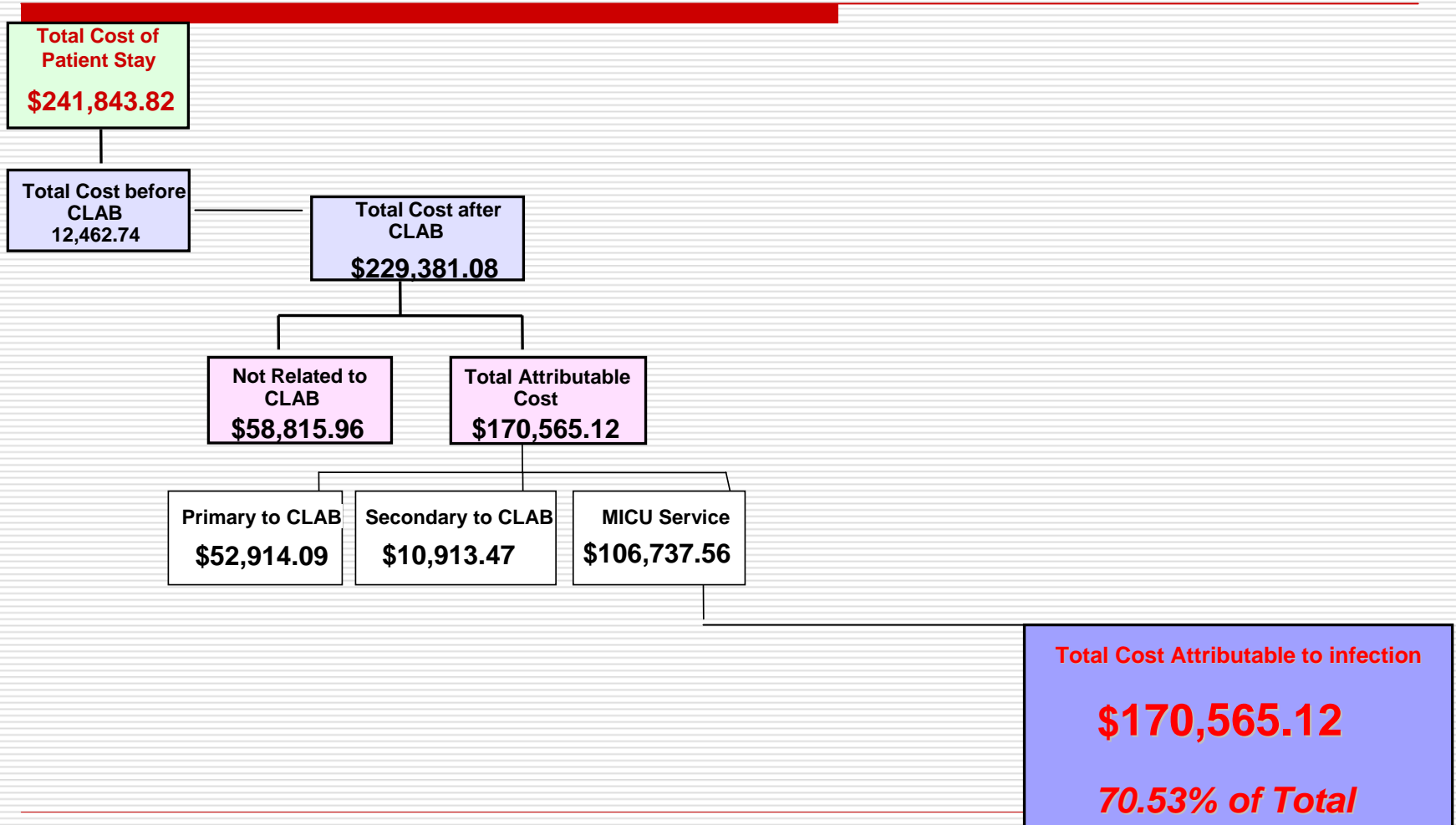


The price of one infection

- ❑ 37 year old father of 4, admitted with acute pancreatitis.
- ❑ Day 3: hypotension, respiratory failure.
- ❑ Day 6 : fever and blood cultures positive for MRSA secondary to a femoral vein catheter in place for 4 days.
- ❑ Multiple infectious complications.
- ❑ Day 86: Discharged to nursing home.



The price of one infection



The price of one infection

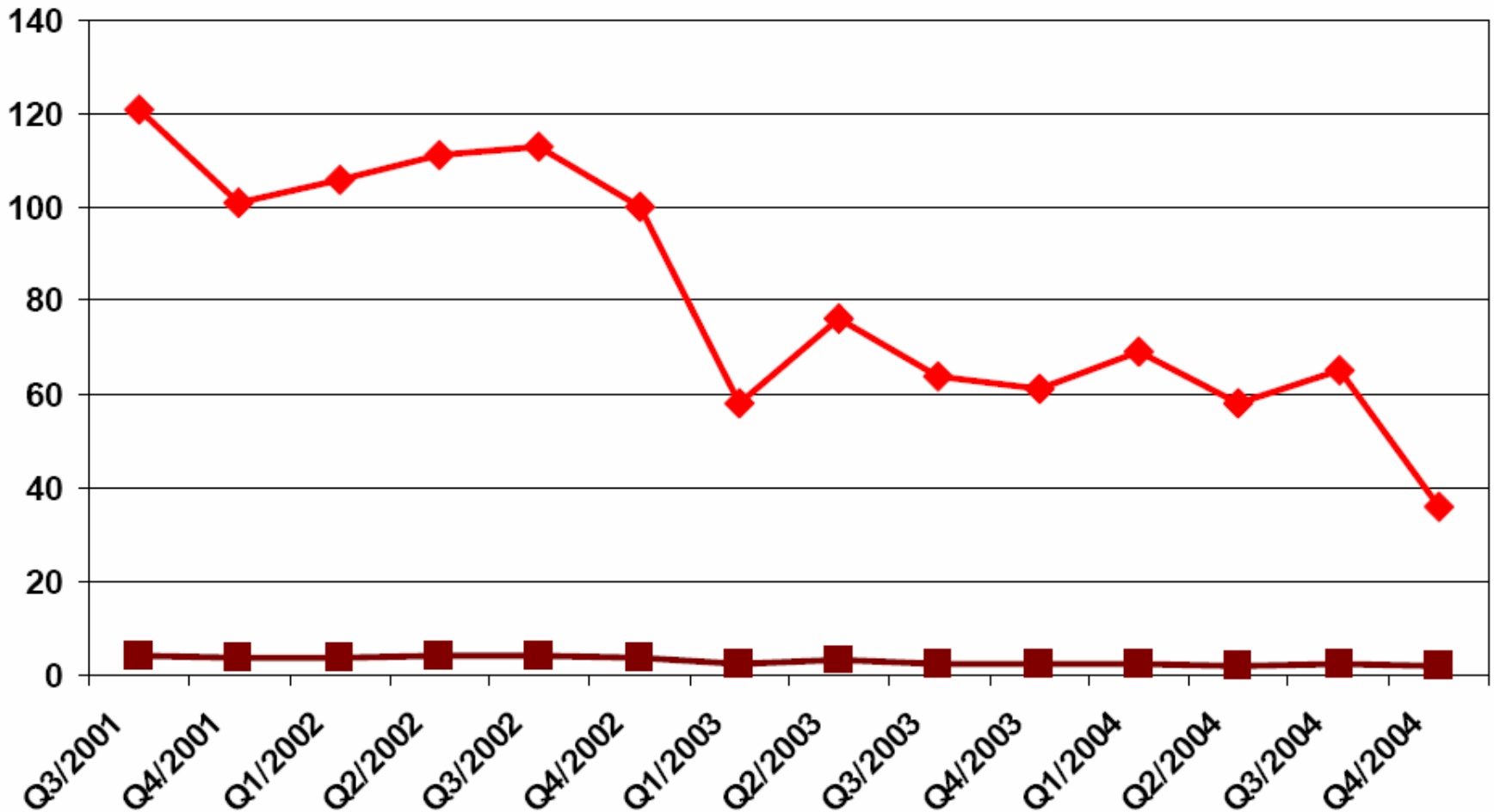
Actual unreimbursed cost to the
hospital:

Over \$41,000

Two units, one hospital, one year:

*Eliminating CLABs has saved millions of
dollars.*

Regionally . . .



PRHI Cardiac Registry

- ❑ 2001: Cardiac surgeons collect data on coronary artery bypass graft surgeries in common format.
 - ❑ Now PRHI Cardiac Registry includes data from over 10,000 CABG surgeries from 12 cardiac units.
 - ❑ Data show which processes of care lead to the best patient outcomes—for example, tight blood glucose control following surgery, even in non-diabetics.
 - ❑ Examining differences in outcomes due to gender.
 - ❑ Information can be acted upon using PPC principles.
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Other PPC sites: Pathology redesign



Results

- ❑ Checklist developed for GYN to obtain best Pap sample.
 - ❑ Checklist accompanies sample to the lab.
 - ❑ Improved information flow between physician and laboratory has helped halve inaccuracies and “indeterminate” diagnoses.
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A house on fire

- ❑ Internal and external dissent.
 - ❑ Frustration over pace of change, who should lead and how.
 - ❑ Hospitals did not embrace idea of 100% error reporting and sharing.
 - ❑ Perfecting our own PPC method, rules.
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A strategy refined

Regroup:

- Build a board, let it lead.
- Enter a site gently, by invitation.
- Obtain institutional sign-off and support.

Renew focus:

- Hospital-acquired infections.
 - Chronic care.
 - Pathology.
 - Cardiac surgery.
 - Long-term care.
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A strategy refined

- ❑ Transforming institutions and specialties
 - ❑ Applications in units and teams
 - ❑ Learning center
 - ❑ Workforce development
 - ❑ Analytics: *it's about measurement!*
 - ❑ Convening
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New strategy: nurturing champions

- “Champions of change” working from inside.
 - Physician champions
 - Nurse navigators
 - Nurse managers
 - Team leaders
 - Fellows
 - PRHI training, on-site coaches.
 - Accountable for clinical and financial results.
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Don't devalue the little gains

- “Simple” support for 100% hand hygiene isn't so simple.
 - Where successful, infection rates drop.
 - Low-cost, low-tech approaches work.
 - 20 ongoing demonstrations
 - Celebrate every process improvement.
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Celebrate every gain

“With Perfecting Patient Care, there’s no need to wait for technology to start making gains. All we needed was get the right people together, find our common goals, and work as a team that was open to trying something new.”

--Jennifer Condel, BS, SCT(ASCP)MT
Team Leader, Pathology Learning Line
