The Bizarre Business Case for Patient Safety

Health Watch Webinar                         Feb. 25, 2015

Presented by:
Michael L. Millenson
President, Health Quality Advisors, LLC and
Adjunct Associate Professor of Medicine
Northwestern U. Feinberg School of Medicine
mm@healthqualityadvisors.com
“[Doctors], on the whole, desire to cure the sick; and – if they are good doctors, and the choice were fairly put to them – would rather cure their patient and lose their fee, than kill him and get it.”

– John Ruskin, social thinker and critic, c. 1860
“[F]or the patient, the mortality and morbidity are reduced; for the surgeon, his illusions are dispelled; and for the hospital, greater economy....The days saved to the patient and to the hospital by more speedy convalescence mean money saved to both the patient and the hospital.”
Boston Reality, 90 Years Later
Hospital Deaths vs. Care Cost

Massachusetts Hospitals
Hospital Standardized Mortality Ratio (Jarman)
Health Quality Advisors LLC
The CLABSI Economic “Burden” (To Whom?)

“Extra hospital and SICU (surgical intensive care unit) length of stay attributable to bloodstream infection was 24 and 8 days, respectively. Extra costs attributable to the infection averaged 40,000 per survivor....The attributable mortality...is high in critically ill patients.” In survivors, “a significant economic burden.”

– Pittet, Tarara and Wenzel, JAMA, 1994
Errors’ Cost to the Nation  
(Minor? Who’s Paying?)

The cost of hospital errors is estimated at $17 billion - $29 billion in extra costs that include lost income, lost household production, disability and direct costs.
– Crossing the Quality Chasm, Institute of Medicine, 2001

Medical costs, increased mortality costs and lost productivity from hospital errors cost the nation $19.5 billion in 2008.
– Society of Actuaries and Milliman, 2010
Convincing the Hospitals

“No, really, it’s costing you money.”

Average Additional Payment per Admission with Hospital-acquired Infection

<table>
<thead>
<tr>
<th>Category</th>
<th>Average Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Avg.</td>
<td>$10,145</td>
</tr>
<tr>
<td>Medicare</td>
<td>$4,308</td>
</tr>
<tr>
<td>Blue HMO</td>
<td>$28,704</td>
</tr>
<tr>
<td>HMO</td>
<td>$21,591</td>
</tr>
<tr>
<td>PPO</td>
<td>$20,833</td>
</tr>
</tbody>
</table>

DRG adjusted analysis of 232,994 admissions in 5 states across 13 facilities

Source: MedMined 2004
“A tacit but potentially significant barrier to the eradication of HAIs in general, and CLABs in particular, rests in the complexities of the reimbursement system. There is a widespread but unsubstantiated belief that CLABs contribute to...increases in outlier payments....Accordingly, we examined the actual payments and expenses...

In 54 patients whose care was complicated by a CLAB, the loss from operations average $26,885 per patient, despite a sizeable increase in payments...The losses were not specific to a given payer.”

–Shannon et al., AJMQ, 2006
CLABSI Reduction/Goals c. 2004
Allegheny General, Pittsburgh

CCU / MICU Aggregate
Central Line Infection Data

- NNIS
- CCU/MICU
- PRHI

Line infections/1000 line days

Initiate PRHI/TPS Process

01 Q3, 01 Q4, 02 Q1, 02 Q2, 02 Q3, 02 Q4, 03 Q1, 03 Q2, July, Aug, Sept, Oct, Nov, Dec, Jan, Feb, Mar, Apr.

2003, 2004
“A Conspiracy of Error and Waste”

CCU/MICU and HAI
A Big Return on Investment

- Total Savings
  CLAB = $1,235,765 (2 years)
  VAP = $1,003,162 (1 year)
- Highmark PFP = $2,100,000
- HAI elimination Initiatives = +$4,338,927
- Investment = $34,927
- 126 additional ICU admissions
- 47 lives saved

Source: Shannon, Allegheny General Hospital, to APIC, 2006
“Clap your hands if you believe”

The Business Case is Compelling

But need never substitute for the moral imperative to prevent infections

Source: Ken Segel, Value Capture, to APIC, 2006
Another View of Who Pays

When surgical complications occur, hospitals experience a decline in profits and profit margin per case, but reimbursement usually covers their costs. In contrast, payors always lose money with complications.


<table>
<thead>
<tr>
<th></th>
<th>Costs: resources used by the hospital ($)</th>
<th>Reimbursement: amount paid to the hospital ($)</th>
<th>Hospital profit (profit margin) ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No complications</td>
<td>10,978</td>
<td>14,266</td>
<td>3,288 (23)</td>
</tr>
<tr>
<td>With complications</td>
<td>21,156</td>
<td>21,911</td>
<td>755 (3.4)</td>
</tr>
<tr>
<td>Increase in reimbursement</td>
<td>7,645 (54)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Values in parentheses are percentages.
Are we there yet?

- “HAIs result in considerable operating losses in almost all cases.” Denise Murphy et al., APIC Briefing, February, 2007

- “Infection prevention pays from every possible angle.” Denise Murphy, Modern Healthcare, May, 2014
Lack of Information gives way to...

“The majority of [medical literature] publications did not provide financial information adequate to make an informed business case-based decision to implement patient safety interventions.”

...the “compelling” business case

- “In 2008, CMS stopped paying hospitals for cases involving ‘never events’. The results of [our ICU patient safety program) should further encourage hospitals.” Waters et al., AJMQ, 2011

- “The impact on hospitals of reducing surgical complications suggests many will need shared savings programs with payers.” – Krupka, Sandberg and Weeks, Health Affairs, 2012

- “Hospitals may have to work with payers to reduce complication rates, which can be costly.” – Patel et al., App Health Econ Policy Review, 2013
More “compelling” evidence

- For children in the hematology and oncology units, CLABSIs increased costs by “nearly $70,000…If all of these costs can be recovered by preventing these infections, this suggests potentially significant value of prevention efforts.” – Wilson et al., *Am J Inf Control*, 2014

- “Although hospitals and payers reduce costs by preventing CLABSIs, hospitals would also decrease their margins.” – Hsu et al., *Am J Med Qual*, 2014

- “Payer support, such as covering or funding some intervention costs and imposing financial penalties on hospitals when patients develop CLABSIs, could encourage uptake and dissemination of the program [to prevent them].” – Herzer et al., *BMJ Open*, 2014
Why I love the conclusions, but doubt the numbers

- If you focus on treatment costs, then calculate the impact of “kill ‘em or cure ‘em;” i.e., the balance between injuries and deaths shifting could save money without care improving.

- If you calculate savings based on ICU beds filled, then admit some hospitals will profit by not improving care.
The Bottom Line
All it takes is culture change

Betsy Lehman, c. 1994