

Making the Case for Medication Reconciliation

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Objectives

- discuss challenges in creating a business case for quality
- identify key components of a business case
- review the business case for medication reconciliation



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“Health care today harms too frequently and routinely fails to deliver its potential benefits...for change to take place, healthcare organizations need to create a business case for quality - a compelling rationale for an organization to make a resource investment.”

Bailit & Dyer, “Beyond Bankable Dollars: Establishing a Business Case for Improving Healthcare”, The Commonwealth Fund, 2004



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"A business case ... exists if the entity that invests in the intervention realizes a **financial return** on its investment in a reasonable time frame.....In addition a business case may exist if the investing entity believes that a **positive effect on organizational function and sustainability** will accrue within a reasonable time frame"

Leatherman et al, "The Business Case for Quality: Case Studies And An Analysis," 22 Health Affairs 17, (March/April 2003).



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8 Essential Steps of Managing Change

- Establish a sense of urgency
- Form a guiding coalition
- Create a vision
- Communicate the vision
- Empower others to act on the vision
- Create short-term wins
- Consolidate improvements and produce still more change
- Make changes permanent: Don't go back to the old ways.

Kotter, John P. Leading Change. Boston, MA: Harvard Business School Press, 1996



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Challenges in creating a business case for quality

- implementation can be complex & resource intensive
- multiple competing priorities with limited capacity
- current financial incentives not aligned with quality
- limited measurement/data to support investment in quality
- difficult to quantify return on investment



Components of a business case

1. Direct financial considerations
2. Internal organizational considerations
3. Strategic considerations

Bailit & Dyer, Bailit Health Purchasing &
The Commonwealth Fund, 2004.



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1. Direct financial incentives

- Reduced expenditures or cost avoidance
e.g. Savings from ADE prevention
- Cost of “doing it”
- Return on investment (ROI)



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Reduced expenditures

- Quantify potential estimated savings related to preventing adverse drug events

Each preventable ADE costs an estimated \$4700. Classen et al. Adverse Drug Events in Hospitalized Patients: Excess Length of Stay, Extra costs, and Attributable Mortality. JAMA 1997; 277(4) 301-306.

Potential estimated savings = Baseline discrepancy rate X \$4700



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The cost of “doing it” – implementation resources

- Mandatory Staff education:
 - ✓ Total hours X average salary X # staff
- Quality Improvement Specialist/Project Manager: data collation, analysis and reporting, and project management activities
 - ✓ Total hours X salary
- Pilot Unit Project Leader/Pharmacist: Dedicated time for data collection, front-line implementation support and project management activities
 - ✓ Total hours X salary
- Implementation team members:
 - ✓ Total hours X salary



The cost of “doing it” – reconciliation process

- Calculate total med rec hours / day

Total med rec hours per day = time to conduct BPMH + time to reconcile

Med rec time / pt = 10 min + 5 min = 15 min = 0.25 hrs

Average daily admissions 10 per day

Total med rec hours /day = 150 min = 2.5 hrs

- Calculate FTE needed

Total med rec hours / day = 2.5 hrs = 0.3 FTE



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The cost of “doing it” – ongoing

- Periodic data collection, analysis & reporting
- Follow-up education as needed



Sample analysis of resource requirements

Medication Reconciliation Process	Resource Requirements	Risks	Benefits
<p>Option 2: Risk based</p> <ol style="list-style-type: none"> 1. Admitting physician primary history documented 2. Risk assessment by RN 3. Low risk patients: BPMH by RN 4. High risk patients: BPMH by pharmacist 5. Team reconciliation 	<p>Pilot Unit Implementation:</p> <p>Front-line implementation support 15-20 hrs/week QA/Project management = 15 hrs week Staff education = mandatory 1 hour</p> <p>Ongoing:</p> <p>Periodic data collection & analysis to evaluate sustainability</p>	<ul style="list-style-type: none"> • Initial increase in RN time • Increased variability in BPMH • Increased front-line implementation resources required • Additional education time required for nursing • More complex implementation; longer project timelines 	<p>Prevention of ADE's</p> <p>Robust risk-based process</p> <p>Enhanced team accountability</p> <p>No additional pharmacist resources required</p> <p>Saved time at discharge</p> <p>Ability to standardize process hospital-wide in areas without pharmacy resources</p> <p>Compliance with CCHSA ROP</p>



2. Internal organizational considerations:

- External & internal evidence
- Relevance to organization's mission
- Link to strategic plan / goals
- Impact on internal culture
 - ✓ Competing priorities
 - ✓ Change fatigue



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External Evidence

- **medication errors are a leading cause of injury to hospitalized patients; over half of all errors occur at interfaces of care.** Rozich & Resar. Medication Safety: one organization's approach to the challenge. JCOM, 2001; 8(10): 27-34.
- **up to 60% of patients have at least 1 discrepancy in their admission medication history.** Vira, Colquhoun & Etchells. Reconcilable differences: correcting medication errors at hospital admission & discharge, Qual Saf Health Care 2006: 1-6.



External evidence

- Accuracy of medication histories improved from 45% to 95% with implementation of a medication reconciliation process. Whittington, J and H Cohen. OSF Healthcare's Journey in Patient Safety. Quality management in Health Care. 2004. 13(1) 53-59.
- initiation of a reconciliation process by obtaining medication histories reduced potential ADE's by 80%. Michels & Meisel. Program using pharmacy technicians to obtain medication histories. Am J Health-Sys Pharm. 2003; 60:1982-1986.



External evidence

- **Nursing time at admission reduced by 20 min/patient; pharmacist time at discharge reduced by 40 min.** Rozich et al. Standardization as a mechanism to improve safety in healthcare: impact of sliding scale insulin protocol & reconciliation of medications. Jt. Comm J. Qual Saf. 2004; 30(1): 5-14.
- Medication reconciliation is a **key component of "seamless care"**. Canadian Society of Hospital Pharmacists & Canadian Pharmacists Association, 2004.



Internal evidence

- Baseline data - undocumented intentional & unintentional discrepancy rates
- Gap analysis of current processes – process mapping, FMEA, RCA
- Pediatric case examples



Case example 1 – without reconciliation

- pt with neurodegenerative disorder admitted with pneumonia
- receiving cloBAZAM at home, cloNAZEPAM ordered on admission (3 fold overdose)
- day 2 - respiratory arrest requiring resuscitation
- day 11 – identification of ADE
- 11 day CCU admission; 5 days mechanical ventilation
- total hospital stay – 20 days

Estimated cost of CCU admission alone - \$17,773.91

Cost to patient - ??????



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Case example 2 – with reconciliation

- pt arrived in ED with profound hypoglycemia requiring resuscitation
- receiving prednisone at home
- patient denied taking father's glyburide
- on reconciliation inspection of prednisone bottle identified glyburide was dispensed by community pharmacy in error
- patient discharged home from ED

Cost savings = savings related to cost of repeated ED visit(s) & admissions (average LOS) had error not been detected

Cost to patient - ??????



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3. Strategic considerations:

- Conditions of participation e.g. CCHSA
- Alignment with explicit performance incentives e.g. pay for performance, insurance reductions
- Organizational image & reputation
- Relationship development with key stakeholders
- Strategic positioning



Conclusion

- Use external & internal evidence to support your business case
- Focus on patient benefits; use real & meaningful case examples
- Complete realistic assessment of resources required – don't sugar coat it!
- May need to revise business case as you learn more about your internal process



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