Implementing A New Bed Map at Rouge Valley Health System: A Collaborative Approach To Aligning Care Delivery And Patient Need

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Rouge Valley Health System

- RVHS is a two site hospital with 479 beds serving the East GTA community
- Key facts (2012-2013)
  - 2700 employees
  - Over 500 physicians and 1000 nurses
  - 124,000 ED visits
  - 22,100 surgeries
  - 3,760 births
  - 215,000 outpatient clinic visits
  - 13,400 MRI scans
  - 3,460 Cardiac catheterization
- Adopted Lean as a management and quality improvement philosophy
- In 2013, RVHS launched a new BedMap, a major process redesign initiative to improve access, quality and cost efficiency of patient care by bringing services to the patient rather than moving the patient to services

The best at what we do
Rationale for Change

• Patient demand did not reflect program-level budgeted bed base
• Significant issues with off-servicing
• ++ Patient moves
• High rates of ALC and conservable days
• Seasonal variations in demand for services
• We were not always appropriately capturing work the we are doing clinically
RVHS Bed Mapping Exercise

• Objectives
  – Maintain/improve access
  – Maintain/enhance quality/safety
  – Improve HBAM cost performance

• Deliverables (Outcomes Expected)
  – A new bed map plan and associated processes to support each program to achieve:
    • No off-servicing (closed services)
    • No inpatients held in ED (achieve 90th pctl expected performance)
    • Absorb demand
Understanding Our Bed Needs

1. Confirm historical budgeted bed base (bed days)

2. Calculate program-specific historical bed utilization values (bed days)

3. Complete demand / capacity analysis by program, service, and value stream

4. Apply consistent planning assumptions:
   1. Program specific occupancy rates
   2. Removal of historical non-utilized bed space volumes from ‘host service’
   3. Bed utilization efficiency adjustments (eg. 15% conservable days, reductions in length of stay/ALC days for targeted populations related to integration of services)
   4. Bed demand adjustments (reduction in admission rate and/or smoothing of admission variability)

5. Identify opportunities through service line segmentation, program pooling and/or value stream alignment

6. Propose new bed day allocation by program / service line / value stream
## Factors Influencing New Bed Map Design

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<td>• Integration of acute/post acute services</td>
<td>• Community impact</td>
<td>• Collaborative service delivery model</td>
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<td>• Reduce LOS</td>
<td>• Application of best practices</td>
<td>• High-level human resource considerations</td>
<td>• Self-directed work teams</td>
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<td>• Factors influencing discharge delays</td>
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<td>• Understanding demand</td>
<td>• Technology Supports</td>
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### RVHS Objectives and Performance Targets
- Achieve HSAA / QBPs
- Achieve P4R performance metrics (time to bed admit <8 hrs)
- Improve quality
- No off-service
- Improve the Patient Experience

### RVHS / Program Strategies
- Implement assess and restore philosophy
- Reduce unnecessary patient moves
- Reduce LOS
- Tighten links to community partners

### Organizational / Program Efficiencies
- Opportunities to pool or segment capacity
- Integration of acute/post acute services
- Application of best practices
- Smoothing flow

### Key Community and Operational Factors
- Physical capacity of the organization
- Community impact
- High-level human resource considerations
- MOHLTC / CELHIN reporting requirements
- Understanding demand

### Detailed Operational Considerations
- Staff scheduling
- Collaborative service delivery model
- Self-directed work teams
- Factors influencing discharge delays
- Technology Supports
Scope of Implementation

• Facilities renovations

• Infrastructure reengineering
  – Information Systems / Finance / Performance

• Unit staging
  – Health human resource management

• New administrative processes

• Embed best practices
  – Integrated units
  – Collaborative care
  – Assess and restore
  – Home first

• Specialized clinical streams of care
Iterative Implementation Approach

- Processes
- Change
- Systems
- People

Inception | Elaboration | Construction | Transition
--- | --- | --- | ---
Risk | Value | Value | Value

You don’t have to see the whole staircase, just take the FIRST STEP.
System Redesign

• Simplified Taxonomy of hospital services
  service category → service → service stream → clinical pathway
• New geography (locations, beds)
• Single patient account (chart) throughout hospital stay
• Process maps to design and teach new processes and standard work
• E-WardBoards to support multidisciplinary team communications and collaborative care model
Design & Teaching New Processes
# Electronic WardBoard

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Key Learnings to Date

• Engage, design, review collaboratively
  • Iterative A3
  • Smaller PDSAs
  • Tollgates

• Simplify the system
  – Creates clarity
    • Eg. patient account management
  – Streamline tools and reports
  – Teach +++
Early Impacts: ALC Reduction

- ALC reduction related to implementation of Home First Philosophy and elimination of beds designated ALC for LTC
Early Impacts: Off-servicing

• On average, 20 beds of medical off-service prior to initiation of bed map
• Post bed map
  – same number of beds corporately
  – program distribution changed
• Since April 2014, one bed equivalent of off-servicing