Translating Public Health Policy to Private Practice Using Lean

Connie van Eeghen, DrPH
Amanda Kennedy PharmD, Rodger Kessler PhD,
Benjamin Littenberg MD, Charles MacLean MD, Mark Pasanen MD
General Internal Medicine-Research
University of Vermont
Overview

• Lean: What and Why
• Prior Work: Using Lean to Implement Public Health Policies
• Modifying Lean: Adapting to Primary Care Provider Settings
• Case Study: Opioid Prescription Management
• Using Lean to Move from Public Policy to Local Solutions: Value and Requirements
Primary Practice Challenges

• Significant role in changing population health
• Challenges in conducting quality improvement to promote public health policy
• Fischer, 1988:
  – Limited resources
  – QI process that is “inept and awkward”
  – QI participation is costly
  – Need flexibility to accommodate organizational structure and culture
Lean as a QI Process

- Centers on the “Voice of the Customer”
- Establishes a structure for problem-solving
- Requires multi-functional teamwork
- Creates a visual map of patient care processes
- Creates value by removing “waste:”
  - Wasted effort
  - Errors
  - Delays and waiting time
Example, What would Lean look like in a Practice where:

- Providers see patients “back-to-back”
- Providers document at breaks or end of day

Results:
- Delays in generating orders
- Misplaced records or information
- Errors in memory
- Problems found late in the care process

**LEAN ANSWER:** Document care as part of, or immediately after, each patient visit
Prior Lean Work: Lead Screening

- **Aim:** Increase the rate of lead screening as required by State Health Department:
  - Increase current 25% to > 85% for 1 year olds and
  - Increase current 47% to > 75% for 2 year olds
- **Before:** patients and parents seen for wellness visit were scheduled to return for a lab test
- **After:** patients and parents taken to lab as part of wellness visit, for immediate draw
Lead Screening Lean Results

![Graph showing Lead Screening Lean Results with data points: 2009 Baseline 25%, 2010 Jan-Jun 47%, 2010 Aug-Jan '11 86%, 2010 Aug-Jan '11 75%, 2010 Aug-Jan '11 89%, and 2010 Aug-Jan '11 91%. The graph compares 1 YO Percent Lead Tested (blue line) and 2 YO Percent Lead Tested (red line).]
Prior Work: Behavioral Health

Aim: Redesign a primary care office to integrate behavioral health service such that:

- Patient meets specialist during primary care visit
- Behavioral health visit scheduled before leaving
- Behavioral health visits located in primary care
- Behavioral health services are brief and few
- Coordination with intensive or specialized services managed by behavioral health clinician

Measure: Improve referral rates, % referrals scheduled, and time to treatment initiation
## Behavioral Health Lean Results

<table>
<thead>
<tr>
<th>Results</th>
<th>Baseline 2010</th>
<th>2011 (5 mos)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referrals per 1000 PCP visits</td>
<td>21.9</td>
<td>41.5</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Successful scheduling of referrals</td>
<td>68%</td>
<td>75%</td>
<td>0.037</td>
</tr>
<tr>
<td>Days to treatment initiation (sd)</td>
<td>33.1 (30.1)</td>
<td>20.6 (28.6)</td>
<td>&lt; 0.0001</td>
</tr>
</tbody>
</table>
What we Learned about Modifying Lean for Private Practice

• Lean is usually a 10 step process
  – It can be reduced to as few as 5 steps when:
  – There is deep knowledge of the process
  – There is shared knowledge of best practices

• Lean is usually a 20 hour process
  – It can be accomplished in mini-sessions < 8 hours
  – Adapts to provider and staff availability
  – Shorter sessions benefit from updated practice data and feedback from providers and staff
Modified Lean Process

- Agreement on Underlying Issue
- Background Data from Multiple Sources
- System Diagram of Current Process
- Time Study
- Error Study
- Root Cause Analysis
- Review of Best Practice Strategies
- System Diagram of Target Process
- Counter-Measures Identified
- Action Plan

- Required
- Optional
Case Study: Opioid Rx Management

- State Health Department called for action on prescription drug diversion and addiction
- 10 ambulatory practices volunteered for QI projects, supported by VT AHEC personnel
- Practices included:
  - 2 to 12 providers per site
  - Provider ages: 20 to >60
  - Settings from five VT counties
  - 9 primary care; 1 specialty orthopaedics
# Opioid Rx Strategies – Highest Use

<table>
<thead>
<tr>
<th>Strategies Used by &gt; 50% of Offices</th>
<th># Offices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Prescription Data Monitoring Program</td>
<td>10</td>
</tr>
<tr>
<td>Team approach to managing; include all staff</td>
<td>10</td>
</tr>
<tr>
<td>Consistent approaches across entire practice</td>
<td>9</td>
</tr>
<tr>
<td>Monitor with urine screens</td>
<td>9</td>
</tr>
<tr>
<td>Conduct on-treatment assessments</td>
<td>8</td>
</tr>
<tr>
<td>Roster of chronic pain patients</td>
<td>8</td>
</tr>
<tr>
<td>Visit type for chronic pain; seen regularly</td>
<td>6</td>
</tr>
</tbody>
</table>
# Opioid Rx Strategies – Lowest Use

<table>
<thead>
<tr>
<th>Strategies Used by &lt;= 50% of Offices</th>
<th># Offices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow sheet or dashboard for tracking</td>
<td>5</td>
</tr>
<tr>
<td>Prescribe in multiples of 7-day increments</td>
<td>5</td>
</tr>
<tr>
<td>Pre-prescribe to minimize visits</td>
<td>5</td>
</tr>
<tr>
<td>Random urine screens</td>
<td>5</td>
</tr>
<tr>
<td>Update patient agreement/consent template</td>
<td>5</td>
</tr>
<tr>
<td>Review patient agreement regularly</td>
<td>3</td>
</tr>
<tr>
<td>Conduct pre-treatment assessment</td>
<td>3</td>
</tr>
<tr>
<td>Random pill counts</td>
<td>3</td>
</tr>
<tr>
<td>Practice group decision for complex patients</td>
<td>1</td>
</tr>
</tbody>
</table>
# Opioid Rx Lean Results

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>% Positive Pre-Project</th>
<th>% Positive Post-Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescriber satisfaction</td>
<td>48</td>
<td>89</td>
</tr>
<tr>
<td>Staff satisfaction</td>
<td>50</td>
<td>83</td>
</tr>
<tr>
<td>Staff assessment patient sat.</td>
<td>58</td>
<td>76</td>
</tr>
</tbody>
</table>
Participant Comments about Lean

“(Lean) required us to measure and quantify something we don’t usually think about.”

“It was the “mapping” process that worked so well... If you can see it, you can understand it.”

“It made sense out of chaos.”

“I never thought of looking at work flow as a way to improve quality – it added to patient outcomes.”
Using Lean to move from Public Policy to Local Solutions

- Uses 8 hours of time from at least 3 practice workers: provider, clinician, staff
- Translates the policy into work processes
  - Lean allowed participants to see the “big picture”
  - Lean helped participants change behavior
- Focuses on the patients’ need and policy goals
- Well-tolerated by providers and staff

*Requires up front agreement to engage in change*
Thank You!

Connie van Eeghen, DrPH

cvaneegh@uvm.edu

802-373-6286