How to Meet Pediatric Well-Visit Requirements using Lean QI Methods

Dee Watts

Molly O’Neil
Presenter Disclosure

The following individuals have responded that they have nothing to disclose:

• Delitha Watts, Practice Transformation Facilitator, Institute for Health Policy and Practice, University of New Hampshire

• Molly O’Neil, BS, Project Director, Institute for Health Policy and Practice
What is Lean?

Quality improvement tools and concepts

• Reducing waste
• Increasing efficiencies
• While focusing on customer value
Where did Lean come from?

After World War II, Japan:

• Lacked Money…
• Lacked Resources…
• Lacked People…
• Needed to fix the problem fast…
Why do we use Lean?

• For the same reasons as Japan

• To keep up with Health Care Transformation
  • Payment Reform
  • Implementation of Quality Measures
  • Meeting Patient Satisfaction Expectations

• Health Care Sustainability
Who did we use Lean with?

Rochester Pediatric Associates

Frisbie Memorial Hospital

THANK YOU
How did we start using Lean?

- By reviewing strategic objectives
- By watching
- By listening
- By identifying
- By prioritizing
- By planning, doing, studying and acting
Examples of strategic objectives

- Increase productivity
- Improve patient satisfaction
- Improve best practice protocols
- Improve staff and provider satisfaction
Examples of what we looked for

• Staff, Provider and Patient movement throughout the area
• Delays in the process
• Location of supplies and equipment
• Length of time for the visit
• Number of patients scheduled vs seen
• Right person doing the right job at the right time
• Everyone has a clear understanding of their role and responsibility
Observation details

- Observation timeframe 8:00am-11:45am
- One provider (MD) and one clinical support (RN)
- 8 patients
  - 4 well patients seen
  - 2 cancellations
  - 1 no-show
  - 1 acute appointment added
- 3 well child visits, 1 follow up visit, 1 acute visit
- Additional staff include PSRs and a Triage Nurse
- Practice uses the Bright Futures recommendations for pediatric healthcare schedule
## Bright Futures Schedule

American Academy of Pediatrics Recommendations

| Age | Prenatal | Newborn | 3-5 mo | 6 mo | 9 mo | 12 mo | 15 mo | 18 mo | 24 mo | 36 mo | 48 mo | 60 mo | 72 mo | 84 mo | 96 mo | 108 mo | 120 mo | 144 mo | 168 mo | 192 mo | 216 mo | 252 mo | 288 mo |
|-----|----------|---------|--------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| INFANCY | | | | | | | | | | | | | | | | | | | | | |
| DEVELOPMENTAL/BEHAVIORAL HEALTH | | | | | | | | | | | | | | | | | | | | | |
| Developmental Screening | | | | | | | | | | | | | | | | | | | | | |
| Autism Spectrum Disorder Screening | | | | | | | | | | | | | | | | | | | | | |
| Developmental Surveillance | | | | | | | | | | | | | | | | | | | | | |
| Psychosocial/Behavioral Assessment | | | | | | | | | | | | | | | | | | | | | |
| Tobacco, Alcohol, or Drug Use Assessment | | | | | | | | | | | | | | | | | | | | | |
| Depression Screening | | | | | | | | | | | | | | | | | | | | | |
| Maternal Depression Screening | | | | | | | | | | | | | | | | | | | | | |
| PHYSICAL EXAMINATION | | | | | | | | | | | | | | | | | | | | | |
| Prenatal Blood Tests | | | | | | | | | | | | | | | | | | | | | |
| Newborn Blood | | | | | | | | | | | | | | | | | | | | | |
| Critical Congenital Heart Defect | | | | | | | | | | | | | | | | | | | | | |
| Immunization | | | | | | | | | | | | | | | | | | | | | |
| Vaccines | | | | | | | | | | | | | | | | | | | | | |
| Lead | | | | | | | | | | | | | | | | | | | | | |
| Interventions | | | | | | | | | | | | | | | | | | | | | |
| Ophthalmology | | | | | | | | | | | | | | | | | | | | | |
| Sexually Transmitted Infections | | | | | | | | | | | | | | | | | | | | | |
| HIV | | | | | | | | | | | | | | | | | | | | | |
| Cervical Dysplasia | | | | | | | | | | | | | | | | | | | | | |
| ORAL HEALTH | | | | | | | | | | | | | | | | | | | | | |
| Oral Health | | | | | | | | | | | | | | | | | | | | | |
| Periodontal Disease | | | | | | | | | | | | | | | | | | | | | |
| Fluoride Supplement | | | | | | | | | | | | | | | | | | | | | |
| ANTICIPATORY GUIDANCE | | | | | | | | | | | | | | | | | | | | | |

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Floor Plan

Strategic Objectives
Watching
Listening
Identifying
Prioritizing
Plan, Do, Study, Act

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Spaghetti Diagram

Strategic Objectives

Watching

Listening

Identifying

Prioritizing

Plan, Do, Study, Act
Patient 1 (6 year old female)

Appointment - 8:00-8:30am Follow-Up Visit

Reason - ADHD follow up post Neurologist visit

8:06-8:11 – Patient arrived, checked in and seated
8:11-8:13 – Nurse collected weight and height
8:13-8:16 – Nurse collected additional intake and history
8:16-8:18 – Nurse updated provider patient set to be seen
8:18-8:21 – Patient waiting in exam room for provider
8:21-8:43 – Provider in exam room with patient
8:43-8:47 – Patient discharged

41 minutes total clinic time for patient

15 minutes additional Provider time after visit
Patient 2 (No Show)

Appointment – 8:30-9:00am

Office policy states that patient is not a no show until at least one half of the visit is over.
Patient 3 (11 year old female)

Appointment - 9:00-9:30am Well Child Visit

Reason – Well child visit, one year behind in vaccines

8:28-8:45 – Patient arrived, checked in and seated
8:48-8:50 – Nurse collected weight and height
8:50-8:54 – Nurse collected BP, BMI and history
8:54-8:55 – Nurse updated provider child
8:55-9:24 – Provider in exam room with patient
9:24-9:46 – Patient waiting for vaccines
9:42-9:45 – Nurse drawing and administering vaccines
9:45-9:47 – Patient discharged

1 hour, 19 minutes total clinic time for patient

4 minutes additional nurse time entering orders and charges for vaccines

15 minutes additional Provider time after visit
Patient 4 (6 year old male)

Appointment - 9:30-10:15am Well Child Visit & Follow Up

Reason – Well child visit, med check for ADHD, sleeping disorder and anxiety

9:21-9:25 – Patient arrived, checked in and seated
9:26-9:28 – Nurse cleaned room and set up screening
9:29-9:31 – Nurse collected weight and height information
9:31-9:40 – Nurse collected BP, BMI, history, vision and hearing
9:40-9:42 – Nurse updated provider mom has concerns
9:45-10:25 – Provider in exam room with patient
10:25-10:27 – Patient discharged

1 hour, 6 minutes total clinic time for patient
30 minutes additional Provider time after visit
Patient 5 (2 year old female)

Appointment – 10:30-11:00 Well Child Visit

Reason – Well child visit

10:18-10:30 – Patient arrived, checked in and seated
10:28-10:30 – Nurse cleaned room and prepped room
10:30-10:32 – Nurse collected weight and height
10:32-10:36 – Nurse collected lead screening, BMI, and MCHAT
10:36-10:38 – Nurse updated provider with normal lead
10:32-10:42 – Patient waited in room for provider
10:42-11:03 – Provider in exam room with patient
11:03-11:09 – Patient discharged

51 minutes total clinical time for patient

5 minutes additional nurse time entering orders, running test and entering charges for lead screening

15 minutes additional provider time after visit
Patient 6 & 7 (Cancellations)

Appointments – 11:00-11:30 & 11:30-12:00

Cancellations left on the overnight voicemail and retrieved first thing in the morning

One opening was rebooked with another patient
Patient 8 (7 year old female)

Appointment – 11:00-11:30 Acute Visit

Reason – Rash

10:50-11:01 – Patient arrived, check in and seated
11:01-11:02 – Nurse collected weight and height
11:02-11:05 – Nurse collected additional intake and history
11:05-11:06 – Nurse updated provider with history and reason
11:06-11:25 – Provider in exam room with patient
11:25-11:29 – Patient discharged

39 minutes total clinic time for patient

10 minutes additional provider time after visit
Examples of what we heard

• Electronic Health Record isn’t always user friendly or customizable

• Providers aren’t always comfortable with “select all” options

• Hard stops in the registration process create problems when the patient doesn’t have the information

• Patients are encouraged to come 15 minutes early but most are not put in early

• Previous medical records are often hard to obtain or decipher

• In order to meet time requirements some patients have to be seen without records

• Not sure which services need charges
Examples of what we heard

• Entering orders can be repetitive and it takes a lot of time

• Vaccine administration always requires 2 clinical staff

• Staff can be left on hold for extended periods of time or they play a lot of telephone tag

• No shows and late cancelations are a problem for everyone

• Information collected during intake depends on how much time the nurse has available to spend with the patient

• Information prepped for next days patients depends on how much time the nurse has that day

• Clinical supplies are inventoried and re-ordered weekly
Examples of strategic objectives

- Increase productivity
- Increase patient satisfaction
- Improve best practice protocols
- Improve staff and provider satisfaction
Examples of what we can identify

DOWNTIME

Strategic Objectives
- Watching
- Listening
- Identifying
- Prioritizing
- Plan, Do, Study, Act

The 8 Wastes
Defects

- Registration or scheduling errors
- Missing charges or incorrect coding
- Misdiagnosis or missed services
Overproduction

- Preparing tests or vaccines before the patient gives consent
- Printing more medical records than necessary
- Not staffing to volumes
Waiting

- Time spent in waiting room by patient
- Uneven workloads
- Time spent on hold
Non-Utilized Talent

- Staff not working at the top of their license
- Roles and duties so restricted that staff can’t help each other
- Not listening to employees
Transportation

- Moving patients back and forth between locations
- Moving supplies back and forth between locations
Inventory

- Excessive supplies taking up space
- Needing to discard expired supplies
- Running out of supplies
Motion

- Printers and fax machines not close at hand
- Paper supplies and forms not easy to reach
- Exam rooms not laid out efficiently
Extra Processing

- Information printed or collected and not used
- Unnecessary referrals
- Unnecessary testing
Example of how we can prioritize

- Strategic Objectives
  - Watching
  - Listening
  - Identifying
  - Prioritizing
- Plan, Do, Study, Act

Quick Fixes
- High Impact
- Easy Effort

Major Projects
- High Impact
- Hard Effort

To Do List
- Low Impact
- Easy Effort

Thankless Tasks
- Low Impact
- Hard Effort
Examples of PDSA cycles

Strategic Objectives
Watching
Listening
Identifying
Prioritizing
Plan, Do, Study, Act

Plan
Do
Act
Study

Continuous Improvement
Process