Overview

Describe the impetus, implementation, & implications of two pilot programs:

- **Pilot 1** – Lab-implemented improvements to existing insurance preauthorization process for genetic testing

- **Pilot 2** – Reducing duplicate testing in the ICUs
Laboratory Testing Headaches: A Tale of Two Pilots, Jessie Conta, Seattle Children's Hospital

March 11, 2015 - San Francisco, CA

Hypothesis:
By implementing a review process for expensive genetic sendout tests, we will save $ and improve value for patients.

Study Design:
All sendout tests meeting certain criteria require approval. Data from each case is recorded and analyzed.

Test Review Criteria
- Tests costing the lab > $700
- Multiple genetic tests on same requisition
- Requests to send to non-preferred laboratory
- Requests to send to international laboratories
- Requests to send tests which are performed in-house
- Tests which are defined under management

A day in the UM life at Seattle Children’s…

Request received by SO team → E-mail to Lab GC/ SO Consultant → Case review & Adjudication → Additional information needed

- Approved 68%
- Outcome
  - Modified 22%
  - Cancelled 10%
  - Discussion with ordering provider

Lab Contact: Monique Trojacek
Financial Implications (n=1486 genetic cases)

$3,476,432* Total genetic requests

$2,878,769 Actual

$597,663 savings

32% order modification

~$400 saved per request

*Data collected September 2011 – Dec 2014

10% of modifications and 27% of cancellations are the result of order entry errors.

Reasons to modify order (%)

Corrected: 10%
Sequential: 57%
Cost: 20%
Improved: 13%

Reasons to cancel order (%)

Wrong: 27%
Cost: 10%
Deferred: 23%
Duplicate: 10%
No Preauth: 30%

*Data collected Sept 2011 – Dec 2014
N=1486 genetic cases
Preauthorization Ups & Downs

- Many insurance companies have specific genetic testing policies that require review and authorization prior to initiating testing
- Preauthorization reduces $$ risk for families and the hospital
- Successful preauthorization requires medical necessity documentation
- CPT coding for genetic testing is complex and changing
- “Authorization” means genetic testing is approved. Payment and out-of-pocket expense depends on the specific insurance plan.

Problem: no standard process = delays & waste

Current state at SCH:
- Centralized Insurance Processing Department (IPD)
- Lack of standard process to carry out the Insurance preauthorization Policy for Genetic Testing causes delays up to several months
- Insurance Preauthorization Policy for Genetic Testing lacks clear guidance regarding medically necessity
- ~30% of genetic test requests inappropriately avoid preauthorization process
- Patients and the hospital bear the $$$ burden when preauth process is avoided or when preauth is not obtained due to poor execution
Background: genetic test coordination is complex and is growing 22% per year in US

- Genetics 45%
- Neurology 14%
- Hem-Onc 14%
- Other 10%
- Cardiology 5%
- Endocrinology 4%
- Inpatient 5%
- Rheumatology 3%

45% of genetic tests ordered by genetics providers. Non-genetic specialists order testing infrequently & lack support staff/resources

**Quality**
- Confusing process leads to waste
- Roles/Responsibilities are unclear
- Use of wrong experts/skill set

**Cost**
- Financial liability to patient/family → unexpected & stressful

**Delivery**
- Process leads to delays in testing
- Use of wrong experts impacts the other work they should/could be doing
- Financial liability to the institution: 1) Impacts lab's ability to deliver services to all patients 2) Wasted labor (wrong people doing the work)

**Safety**
- Delays in testing can lead to delays in diagnosis & treatment
- Waste in process impacts other areas of patient care

**ENGAGEMENT:** Providers & Staff are frustrated by unclear, complicated process

Patients & Families are frustrated by an unclear, complex & lengthy process

Lab Contact: Monique Trojacek
Laboratory Testing Headaches: A Tale of Two Pilots, Jessie Conta, Seattle Children's Hospital

March 11, 2015 - San Francisco, CA

Current state: It's complicated.

Current state: Preauthorization of genetic tests

Lots of handoffs (~15), re-work loops, and waste throughout the process

- wrong CPT code
- wrong lab
- auth expires before testing is completed
- UM review identifies Genetic Testing Sendouts w/ no Pre-Auth (above $700 threshold)
- incomplete information
- multiple requests submitted concurrently

Lab Contact: Monique Trojacek
**Pilot study: Target Condition**

- Reduce handoffs
- Improve first time quality through the process
- Decrease turn-around time
- Right person doing right work

Clinic Note Includes Medical Necessity Language

<table>
<thead>
<tr>
<th>RN</th>
<th>MD</th>
<th>GC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CPOE Pre-Auth Orderable → Lab GC → Pre-Auth Complete

Insurance Co.

Patient Registration/Billing → IPD

Key elements of pilot were: 1) lab GC involvement, 2) new CIS order

**Pilot: Process**

- Scope designed to match existing resources
- CPOE orderable created
- Requests triaged via shared Message Center Inbox
  Requests documented in EMR
- Providers coached to improve medical necessity documentation
- Cases tracked in database
CIS Communication Request:
Preauthorization Request for Genetic Testing

Step 1: Clearly document rationale for testing within CIS.

Step 2: In the Orders section of CIS, search for “Preauthorization Request for Genetic Testing”

Step 3: Complete the required fields as follows:

- **Gene(s) or panel to test**: Provide name of gene, panel or test name (e.g. NF1, Fragile X, or SNP array)
- **Genetic condition**: Provide name of condition or indicate as not applicable. This detail serves as a critical cross-reference (e.g. NF1, Fragile X syndrome, chromosomal abnormality NOS)
- **Test methodology**: Drop-down list allows selection of multiple test methodologies (e.g. Sequencing, or Sequencing & Deletion/Duplication)
- **Special instructions**: add notes as needed (e.g. preferred reference lab if this is not already defined)
- **Medical necessity documented date**: Date of note or communication in CIS that outlines medical rationale for testing.
- **Contact number**: Please provide best contact number/pager.

Required fields highlighted in yellow. Add additional comments to special instructions or Order Comments tab.

Pop-up will appear to notify providers not involved in the pilot.
**Step 4:** Sign the communication request. Please note, the preauthorization order is **not** associated with sample collection.

**Order will appear in CIS Orders screen as “Completed” once signed. This confirms that the order has been sent to the Lab GC for review.**

**Step 5:** The Lab GC will review the request and review the medical rationale for the test, ensuring clear documentation in the medical record. If a request requires clarification, the requesting provider will be notified by the Lab GC via a communication within CIS Message Center.

**Step 6:** The Lab GC will submit the appropriate details to the Insurance Processing Department (IPD) via EPIC to initiate the preauthorization process.

**Step 7:** IPD will e-mail you and your designated point contacts regarding the outcome of the preauthorization request.

Questions? Contact LabGC@seattlechildrens.org or x7-3353
Laboratory Testing Headaches: A Tale of Two Pilots, JessieConta, Seattle Children’s Hospital

March 11, 2015 - San Francisco, CA

Request Documentation

Note will appear in CIS as below

Pilot study: Results (N = 99 test requests)

- Lab GC modified or corrected 1/3 of requests:
  - Improved medical necessity documentation
  - Changed to different reference lab ($4250 savings)
  - Corrected CPT code errors
  - Blocked duplicate & unnecessary requests

<table>
<thead>
<tr>
<th></th>
<th>Current State</th>
<th>Pilot Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preauth submission</td>
<td>RN time:</td>
<td>Lab GC time:</td>
</tr>
<tr>
<td>(time to process initial submission to IPD)</td>
<td>30 min/request</td>
<td>12 min/request</td>
</tr>
<tr>
<td># of handoffs (average)</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Cycle time</td>
<td>8 weeks</td>
<td>2.5 weeks</td>
</tr>
</tbody>
</table>

Lab Contact: Monique Trojacek
Pilot study: Results (cont.)

Provider satisfaction survey (completed by 15/20):
- Majority of providers found CPOE order easy to use
- Majority preferred the pilot process to the current state
- CPOE order did not add to provider work relative to previous process (remained constant at 2.5 min)
- Strongly preferred that order was visible in EMR

Pilot study: Financial justification

<table>
<thead>
<tr>
<th></th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right person doing right role, optimize use of qualifications</td>
<td>$40.4K</td>
<td>$48.5K</td>
<td>$60.6K</td>
</tr>
<tr>
<td>Cost avoidance due to cancelled tests</td>
<td>$270K</td>
<td>$324K</td>
<td>$405K</td>
</tr>
<tr>
<td>Eliminate unnecessary work of IPD staff and RN</td>
<td>$3.9K</td>
<td>$4.7K</td>
<td>$5.8K</td>
</tr>
<tr>
<td>Lost revenue related to tests not performed in-house</td>
<td>-$21K</td>
<td>-$25K</td>
<td>-$31.5K</td>
</tr>
<tr>
<td>Additional FTE for implementation (e.g. Lab GC)</td>
<td>-$90K</td>
<td>-$90K</td>
<td>-$90K</td>
</tr>
<tr>
<td><strong>Total projected cost-savings</strong></td>
<td><strong>$203.3K</strong></td>
<td><strong>$257.3K</strong></td>
<td><strong>$349.9K</strong></td>
</tr>
</tbody>
</table>
Additional improvements beyond the pilot

- Family information letter
- Proposal for improved communication templates from Insurance Processing Division to providers re: outcome of auth request & next steps

What’s next?

- Proposal to expand pilot to include support from Lab GC for all preauthorization requests
- Create working group including lab, IPD, providers, ambulatory/RN leadership to provide critical support, PDCA of new process
- Implement new medical necessity language
- Develop process for handling provider disagreement
Overview

Describe the impetus, implementation, & implications of two pilot programs:

- **Pilot 1** – Lab-implemented improvements to existing insurance preauthorization process for genetic testing

- **Pilot 2** – Reducing duplicate testing in the ICUs
Pilot 2: Background

- Duplicate testing known issue in ICU’s – of particular interest now, due to our projected hospital growth
- Patrick Mathias, MD PhD rotating Lab Med/Informatics Resident working with Jane and Mike gathered/analyzed/built tools to tackle issue in partnership with ICU leadership

Excess laboratory testing does not add value to care

Inappropriate laboratory testing can negatively impact patient care by:
- increasing the amount of blood drawn, contributing to iatrogenic anemia
- increasing unnecessary workups to address abnormal results of limited clinical value
- decreasing the signal-to-noise of relevant lab testing results amidst large volumes of irrelevant information
- wasting time spent on additional draws as well as laboratory costs and resources on unnecessary testing
Critical Care Societies Collaborative Choosing Wisely Recommendation

Don't order diagnostic tests at regular intervals (such as every day), but rather in response to specific clinical questions.

Providers rarely receive feedback on test ordering patterns

- Provider feedback or provider report cards for labs not standard in most institutions
- Providing feedback to clinicians in training not extensively studied
  - One study showed only 20% received feedback regularly (Dine et al. J Grad Med Educ. 2010 Jun;2(2):175-80)
Inpatient provider report cards for residents can decrease common labs

- In University of Washington system, report cards reviewed in group setting with discussion of utilization topics.
- Tests/patient/day decreased by 13% for CBCs and 8% for metabolic panels

The playbook

1. Take a deep dive into the data
   - Identify general trends and high volume tests to target
   - Integrate prior knowledge to identify tests unlikely to be medically necessary

2. Engage stakeholders
   - Contrast lab perceptions with medical practice patterns and current policies
   - Develop shared mental model of current problems and waste as well as medically necessary testing
   - Creating good measures is key for monitoring success

3. Develop intervention collaboratively
   - Multiple interventions are typically better than one
   - Lab stakeholders may have more incentive and time to address the problems

4. Intervene, modify if necessary, and repeat
High volume tests across ICUs

56,943 laboratory orders for selected tests in 9 month period

Opportunities to target

Lab Contact: Monique Trojacek
Laboratory Testing Headaches: A Tale of Two Pilots, Jessie Conta, Seattle Children's Hospital

Ordering frequency reveals daily vs. more frequent testing

- Discussed with PICU MDs
- Reviewed protocols

**Conclusion:** Mg & Phos testing in < 8 hr intervals was likely unnecessary

Collaboration with PICU

**Goals:**
- Focus on decreasing duplicates for high volume tests and unnecessary daily testing
- Integrate report card with structured lab discussion at evening rounds
  - Daily: Dedicated time for each patient to cancel unnecessary labs and order necessary ones
  - Weekly: Review report card
Laboratory Testing Headaches: A Tale of Two Pilots, Jessie Conta, Seattle Children's Hospital

Each circle is a patient, position represents the number of tests/patient/day.

Monthly tracking to assess progress

Lab Contact: Monique Trojacek
Expectations do not always match up…

- Laboratory eager to get started
  - Analyzed data, sent report, built report cards over ~2 month period
  - Still waiting…
- Clinical colleagues have other priorities to address

But the NICU did come calling…

- NICU director, attendings, and residents started asking cost questions about labs
- Particularly interested in relative cost of point of care testing compared with central lab testing
Laboratory Testing Headaches: A Tale of Two Pilots, JessieConta, Seattle Children's Hospital

March 11, 2015 - San Francisco, CA

Expanding the analysis beyond central lab testing (NICU)

Counts represent distinct orders over 3 months

Point of care generally being used cost efficiently

Inefficient to test single analytes given fixed cost
Laboratory Testing Headaches: A Tale of Two Pilots, Jessie Conta, Seattle Children's Hospital

March 11, 2015 - San Francisco, CA

Ca and K are the most common single analytes tested

Some testing driven by protocols
POCT chosen for rapid TAT and blood volume

Engaging the NICU

• Blood loss is a primary concern
  • Point of care requires <100 µl
  • Minimum blood draw requires 500 µl but smaller samples can be run

• ECMO patients represent a distinct subset
  • Highest volume testing
  • Review protocols to ensure frequencies appropriate

Lab Contact: Monique Trojacek
Laboratory Testing Headaches: A Tale of Two Pilots, Jessie Conta, Seattle Children's Hospital

March 11, 2015 - San Francisco, CA

Acknowledgements

Seattle Children's Faculty
Michael Astion, MD, PhD
Jane Dickerson, PhD
Bonnie Cole, MD
Stephanie Wallace, MD
Rhona Jack, PhD
Joe Rutledge, MD
Patrick Mathias, MD, PhD

Lab Genetic Counselors
Darci Sternen
Shannon Stasi

Business Operations
Joanne Simpson
Monica Wellner
Lisa Wick
Nitasha Kumar

Thank you, CHA!
Monique Trojacek
Karla Bronson