



“Reducing the expense and poor outcomes caused by incorrect ordering of genetic tests”



PLUGS

Pediatric Laboratory Utilization Guidance Services

The Problem: Send-outs

- For pediatric hospitals and health systems, the cost of sending out tests is high (often > \$1 million per year for genetic testing alone) and increasing at an annual average rate of 22%.
- Patients complain about the high cost of these tests.
- Labs bear the cost for the many patients who can't pay.
- The tests are sometimes unnecessary. When necessary, providers often order the wrong test or too large of a panel.

The solution: PLUGS

Mission/Vision

- Significantly reduce pediatric laboratory testing expenses while increasing the value of testing to patients.
- Be the #1 provider of services that promote pediatric test utilization management (UM) programs in hospitals and health systems.

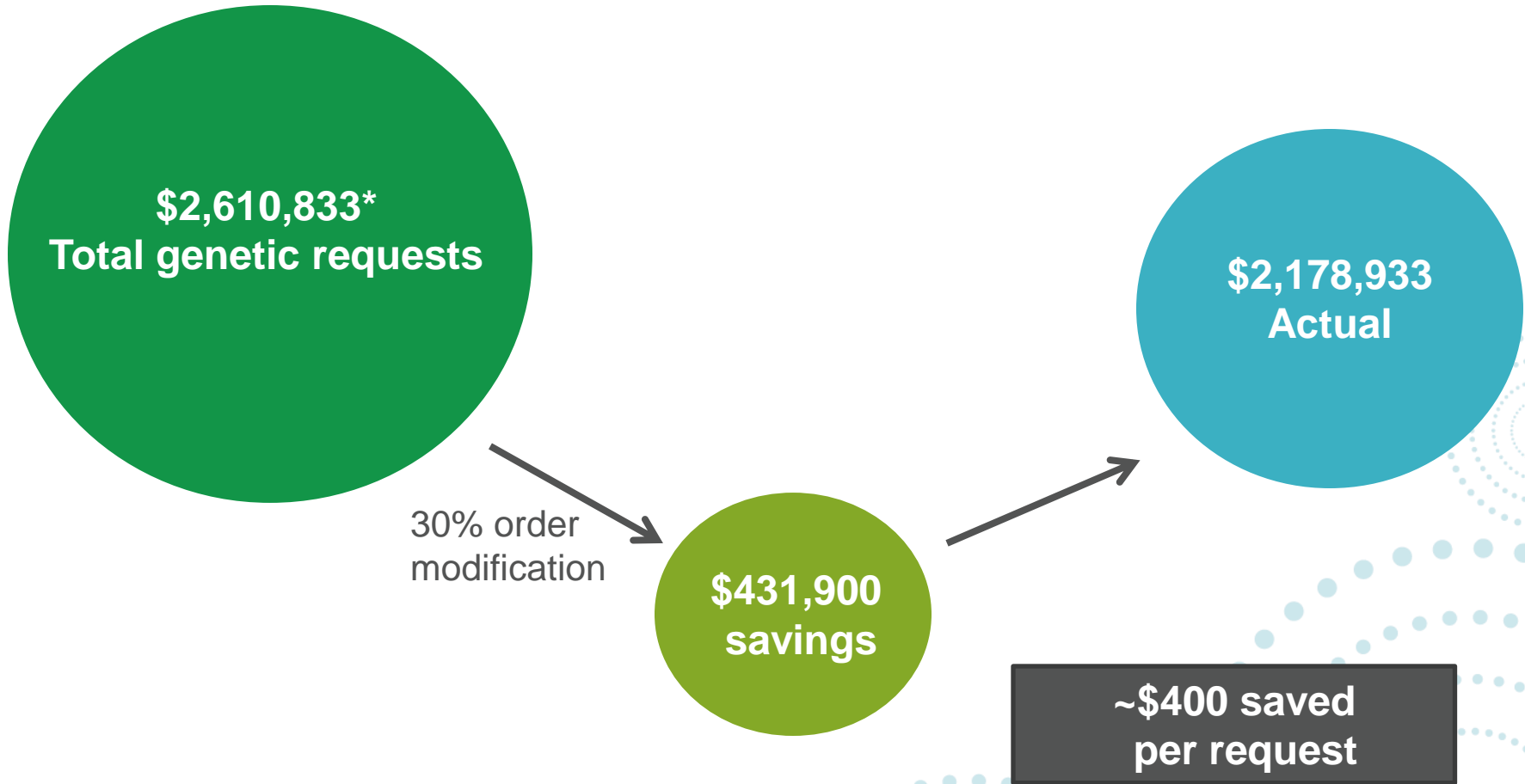
Goal

- Help hospitals implement / strengthen their own UM programs

Outcomes

- Decrease ordering errors
- Decrease send-out bill for genetic tests by 20-40%
- Decrease send-out bill for non-genetic tests by 10%
- Decrease patient complaints by reducing out of pocket expenses and unnecessary testing.

Return on Investment (n=1075 genetic cases)



Utilization Management (UM) Intervention at SCH

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 that are defined under management
-

The PLUGS Team

Faculty (University of Washington)

- Michael Astion, MD, PhD
- Jane Dickerson, PhD
- Bonnie Cole, MD
- Stephanie Wallace, MD
- Rhona Jack, PhD
- Joe Rutledge, MD
- Karen Tsuchiya, MD

Genetic Counselors

- Jessie Conta, MS, LGC
- Darci Sternen, MS, LGC

Business and Operations team

- Nitasha Kumar
- Monica Wellner
- Lisa Wick
- Sarya Sos
- Joanne Simpson
- Jeff Taylor

Outside advisors

- Bartley Bryt, MD
- Melissa Bennett, MS, CGC
- Denise Needham, MS, CGC
- Michael Graf, MS, CGC

Thanks to our members for their many contributions to the content and operations of PLUGS

Some current PLUGS Members

Members:

- Akron Children's Hospital
- ARUP / University of Utah
- Children's Healthcare of Atlanta
- Children's Hospital & Clinics of MN
- Children's Hospital Colorado
- Children's Hospital of Pittsburgh of UPMC
- Children's Medical Center of Dallas
- Children's Mercy Hospital & Clinics
- Claritas Genomics
- Lurie Children's Hospital Chicago
- Mayo Medical Laboratories
- Mercy Children's Hospital St. Louis
- Nationwide Children's Hospital
- Phoenix Children's Hospital
- Prevention Genetics
- St. Louis Children's Hospital
- The Children's Hospital of Philadelphia
- The Hospital for Sick Children, Toronto
- York Hospital (WellSpan Health System)



PLUGS has an annual fee of \$4000, PLUGS members receive...

UM Tools

- Policies, procedures & communication templates that help providers reduce unnecessary testing & correct test orders
- Database for collecting, tracking, & analyzing UM cases
- Tool to assess the risk of errors in send-outs area
- Provider-satisfaction survey to solicit feedback regarding their UM program

Communication

- Office Hours/Call Center
- Weekly Newsletter
- Member teleconferences with presentations by SCH team & members
- Website:
www.seattlechildrenslab.org

Education

- Tips & Tricks from PLUGS experts
- UM Learning Modules
- UM Webinars
- Case of the Week
- Extensive materials on how to get a UM program started in a lab or hospital
- Discounts on education provided by PLUGS partners

PLUGS Members Receive...

Needs Assessment to assess current state, identify UM strengths & weaknesses

Customized 1-year Strategic UM Plan

Discounts on consulting engagements with PLUGS faculty
...includes on site workshops, analysis, and face-to-face meetings with hospital executives

Join PLUGS in 3 Easy Steps...

1. Go to: www.seattlechildrenslab.org/plugs
2. Get a free look at the contents of the website.
3. Sign the PLUGS Participation Agreement.

We will invoice you the \$4000 annual fee.

We can't wait to help you.

Any questions about membership, PLUGS products or collaboration information can be sent to: plugs@seattlechildrens.org, or call: **206-987-3361**

The savings from eliminating unnecessary genetic testing will pay for a PLUGS membership in about 5 days. The other 360 days of savings are for your health system and your patients.

Appendix:

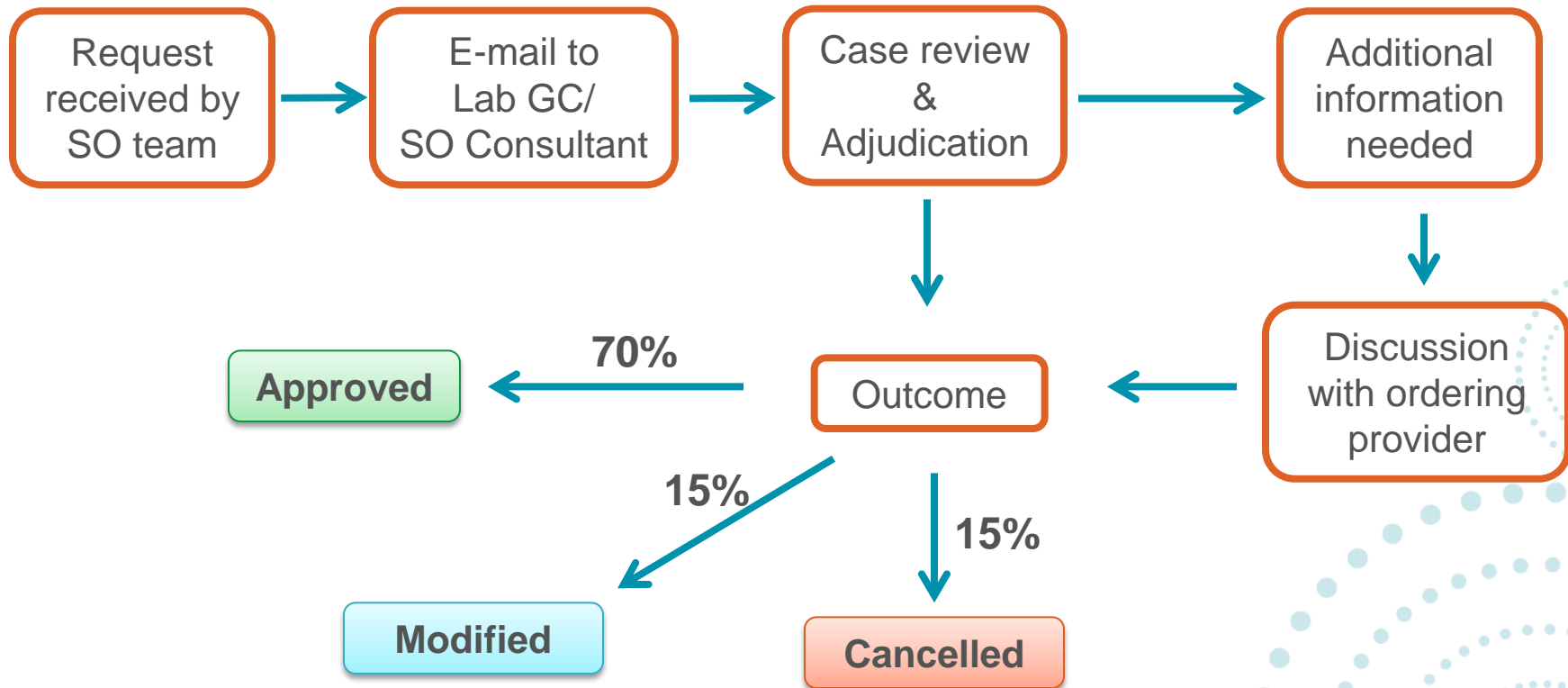
Supporting Evidence and Publications



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A day in the UM life at SCH...



30% of genetic test requests are canceled or decreased with active utilization management

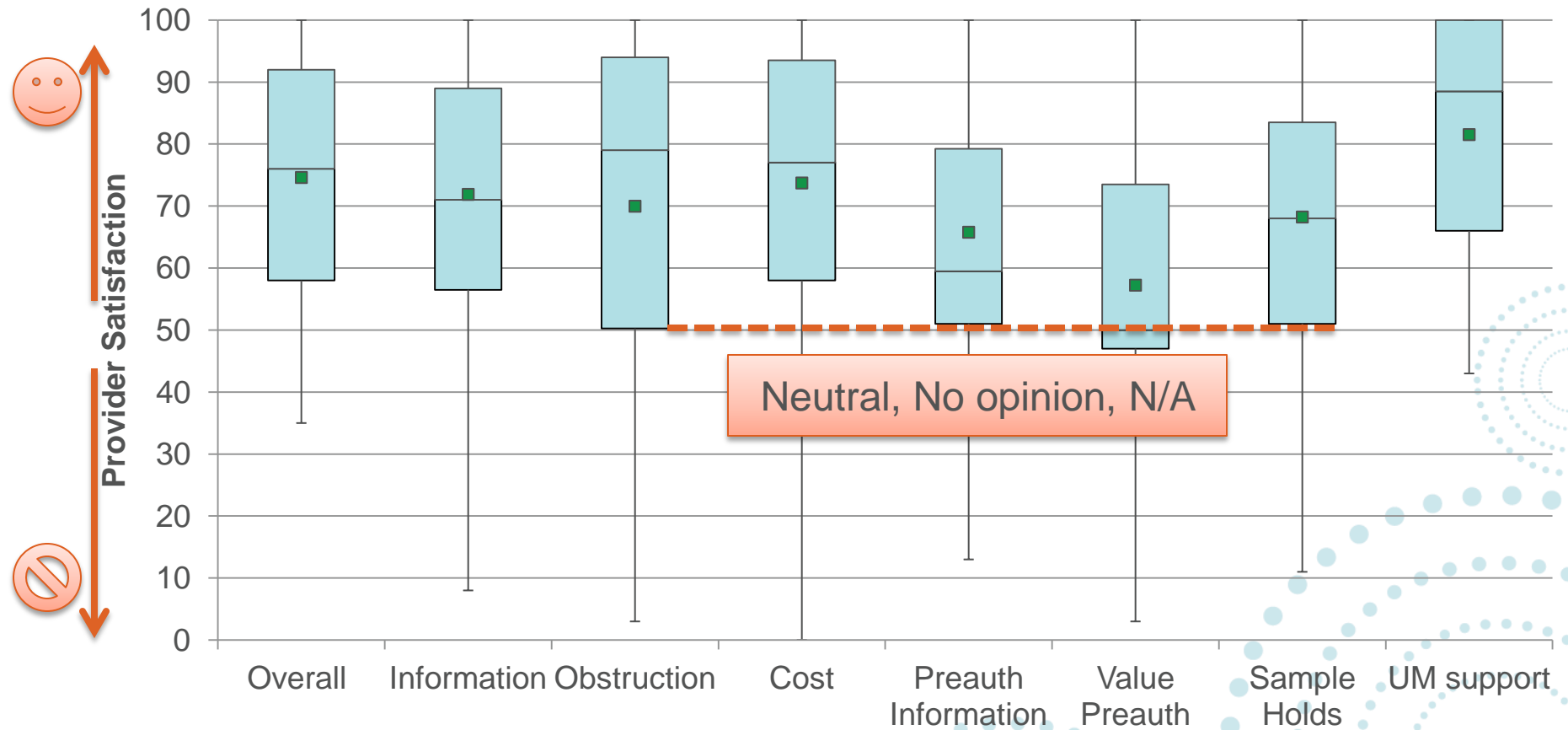
Utilization Management Data

Order Classification	All Cases (n = 1145)	Genetic Cases (n = 802)
Approved	70% (806)	70% (561)
Modified	15% (169)	21% (170)
Canceled	15% (170)	9% (71)

Dickerson JA, Cole B, Conta JH, et al.. Improving the value of costly genetic reference laboratory testing with active utilization management. *Arch Path Lab Med.* 2014. Jan;138(1):110-3.

Data updated 2/10/2014

Survey completed by 100 providers



PLUGS Pilot Outcomes- Part 1

- **Children's Hospitals and Clinics of Minnesota**

- One month preliminary data
- Reviewed 46 requests >\$1000
- **Saved \$10,600! (\$230/request)**

"PLUGS has been a great resource for us and has helped supply the tools to get more advanced utilization management strategies, such as a genetic counselor in the lab, underway at our hospital."

- Deb Garton, Laboratory Director & Cristina Pacheco. MD

- **Children's Hospital Colorado**

- Pilot targeting six genetic tests, started October 7, 2013
- 66 tests reviewed, 11 modified
- **Saved \$8400!**

"The PLUGS team provided expert and personalized assessment of our UM strengths and opportunities. With their support, we implemented a successful pilot which helped justify our lab GC position."

- Rob Carpenter, Administrative Director, Dept. of Pathology



Children's Hospital Colorado

PLUGS Pilot Outcomes- Part 2

- **Nationwide Children's**
 - Three week pilot, reviewed 45 cases >\$1000
 - **Saved \$29,833! (24%)**



- **St. Louis Children's Hospital**
 - Four week pilot, reviewed 65 cases
 - **Saved \$20,000! (20%)**

“Thanks for the call yesterday! I felt really encouraged after our chat... I had forgotten how much I might be able to use the PLUGS phone line and email. Also, the database is VERY useful; we used it for a 4-week intensive pilot study.”

- Sarah Brown, PhD



As a member you receive: PLUGS Templates

From: Conta, Jessie
Sent: Thursday, May 16, 2013 14:07
To: Conta, Jessie
Subject: Doe XYZ UM

Patient Name (last name, first name)	Doe, John
MRN	1234567
Ordering Provider (last name, first name)	Smith, Rebecca
Date of collection/order	5/15/2013
Test name	XYZ gene sequencing
Reference Lab	Genetic Testing R Us
Price of test	\$2,000
Type of specimen	Blood
Forms Required?	Yes, consent form and clinical information sheet

Jessie Conta, MS, LGC
Licensed Genetic Counselor - Laboratory Medicine
Seattle Children's

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Jessie.Conta@seattlechildrens.org

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MAIL M/S OC.8.720, PO Box 5371, Seattle, WA 98105
www seattlechildrens.org

As a member you receive: Access to a customized UM Database

Switchboard

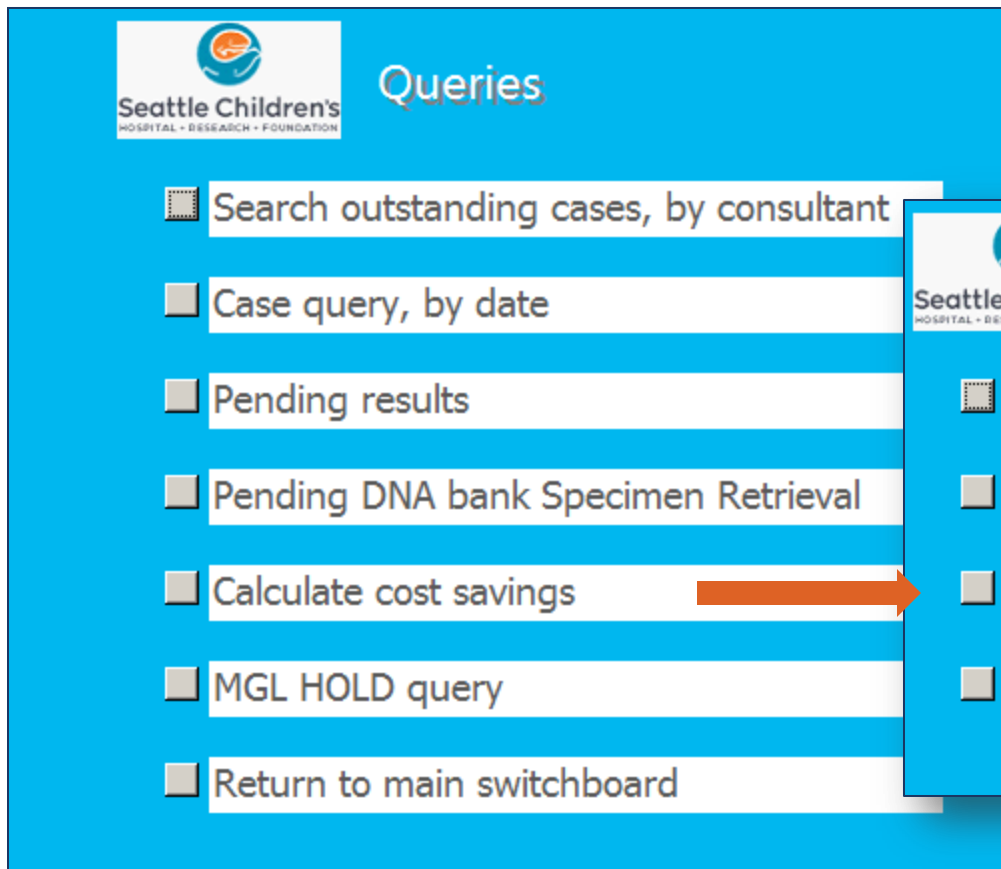
- Add new case
- Search for a case
- All Cases
- Queries
- Close database


Switchboard PLUGS Data

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ID:	(New)	requires_follow-up:	
Patient_Name:		Assigned_to:	
MRN:		Demographics:	
Accession_Number:		Patient_Type:	
Ordering_Provider:		Clinical_Necessity:	
Resident:	<input type="checkbox"/>	Impressions:	
Provider_Specialty_1:		Updates:	
Request_Date:		Preauthorization:	
Handled_by:		Cost_Savings:	
Contact_Mode:		Results_expected:	
Test_request:		Result:	
Genetic_test:	<input type="checkbox"/>	Result_details:	
Reference_Lab:			
Reference_Lab_Sent:			
Cost:			
Specimen_Type:			
Resolved:			
Solution_to_problem:			
MGL_hold:	<input type="checkbox"/>		
Institution:	PLUGS		

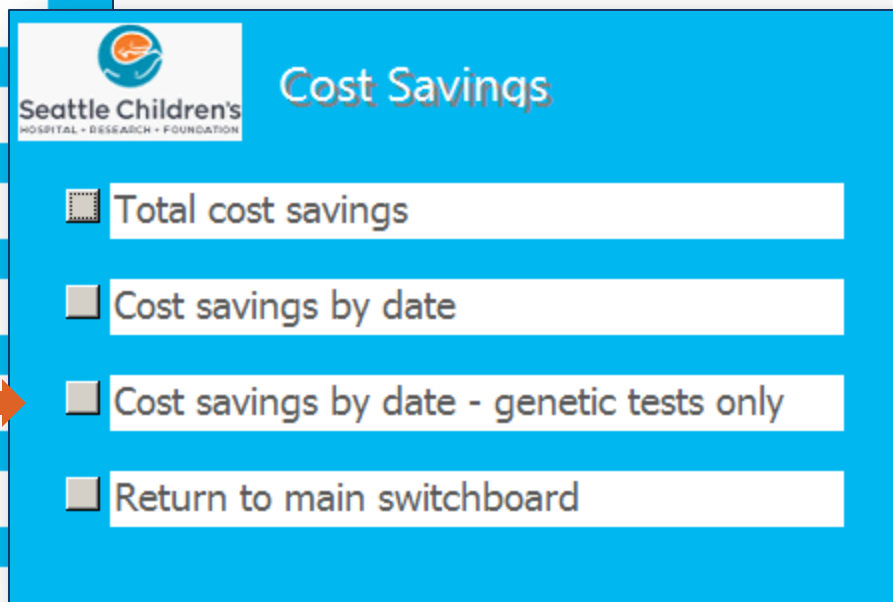
This data base allows you to create queries to track metrics





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Queries

- Search outstanding cases, by consultant
- Case query, by date
- Pending results
- Pending DNA bank Specimen Retrieval
- Calculate cost savings
- MGL HOLD query
- Return to main switchboard




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Cost Savings

- Total cost savings
- Cost savings by date
- Cost savings by date - genetic tests only
- Return to main switchboard

As a member you receive: Access to Office Hours

Participants talk to a genetic counselor or doctoral-level provider regarding:

- Specific tests / algorithms
- Tips for communicating with docs
- How to implement UM strategies
- Advice about a group of cases



As a member you receive: PLUGS Education Toolkit, Tips & Tricks

Examples of topics that are explored through print format, short-video segments, & subsections of the weekly PLUGS newsletter

- Utilization Management Pitfalls
- How to talk to providers... the “BE” series
- How to start a UM program in three easy steps
- The UM Committee: More than just a fling

Pediatric Laboratory Utilization Guidance Services (PLUGS)

How to Start a UM Program in 3 Easy Steps

Introduction

This new series, brought to you PLUGS and Seattle Children’s Hospital, consists of brief learning modules focused on important and interesting topics related to test utilization management (UM). This module - **How to Start a UM Program in 3 Easy Steps** - will discuss three easy steps for implementing your very own test utilization management program.

Faced with a rapidly growing laboratory send-out bill, many laboratories feel pressure to get going on a UM program in order to save money. It’s easy to be overwhelmed by the concept of starting a UM program and laboratories may be paralyzed by where to begin. Let’s use the analogy of an airplane getting ready for take-off to describe how to get the lift you need to start a successful UM program.

Step 1: Captain & Crew

Form a UM Committee. Identify a champion (your Captain) and involve key stakeholders (your Crew) within the lab. Consider including laboratory medicine faculty members, such as clinical chemists and pediatric pathologists, as well as the laboratory billing and compliance officer and managers who understand the clinical operations. It is important to strike a balance so that the right people are at the table to make decisions, but you aren’t weighed down by too many opinions – remember, the goal is lift! Once the permanent UM program is in place, you could consider including inter-departmental members, such as key clinical specialists in medical genetics or neurology.

Step 2: Pilot, pilot, pilot

Taxiing around a run way in an airplane is no fun - you want to take off and FLY. So, we suggest starting with a pilot program - start small (think Cessna, no flight attendants) and gather data so you can make your case for additional resources to support and expand a permanent UM program. Consider using a cost-threshold that leads to a controllable review of only 2-3 test requests each week. Another option is to select “low-hanging fruit” and flag specific tests for review. The method you choose needs to work with your specific institution and available resources.

Step 3: Get clearance for take-off

Safety first - ensure a “safe” environment for implementing your UM pilot program by creating and reviewing your checklist. The burning platform for starting a UM program is important and messaging is critical. Your checklist might include: 1) Set appropriate expectations with impacted providers and educate them of the goal of the program: to improve the value of the testing for the patient. 2) It is also important to track cases during your pilot program using a simple spreadsheet or database. You’ll be glad that you spent a few minutes documenting each case because at the end of the pilot, you’ll have data to demonstrate the financial impact of your pilot UM intervention. 3) Finally, stow your luggage - don’t bring your extra baggage of fears of failure and ridicule, and fixed-false belief that there is only one path to success.

If you follow these three easy steps, you’ll quickly master the Cessna and be on your way to flying a 787!



Pediatric Laboratory Utilization
Guidance Services

PLUGS

Utilization Myth-Management!

Commonly asked questions/concerns:

1. Am I hurting my laboratory business by cancelling or deferring tests using utilization management?

- In the short run, you may lose some revenue by preventing unnecessary or incorrect test orders from your providers and clients. The PLUGS principals justify this short term loss as it is ultimately the right thing to do for the patient. In the long run, with anticipated reimbursement changes and a shift away from a fee-based model, test utilization will be necessary and will save money.

2. We serve an adult population; can PLUGS still help us?

- Absolutely! Although PLUGS is being developed in a pediatric setting, the principals of our UM approach are not unique to pediatrics. We work with each institution to develop a customized strategic UM assessment to achieve your specific UM goals, regardless of the patient population you serve.

3. We already have a UM program – do we still need PLUGS?

- Yes! Even the best UM programs can learn from a collaborative network of other institutions. Being part of a national collaboration is necessary to impact national policies. As PLUGS grows, so will access to the latest UM interventions and data – keep a pulse on UM by joining PLUGS.

4. How do I convince my institution to pay money for PLUGS membership, when the goal is to save money?

- The cost of a PLUGS membership is quickly recoverable. On average, PLUGS members who have implemented active UM programs recognize a savings of at least 10% on their total send-out bill – this is about \$400 per genetic test request that is under management. Cancel or modify an average of ten tests and you've paid for your membership!

PLUGS is academically important

Abstracts:

- Conta JH, Sternen DL, Wellner MA, Wallace, SA, Dickerson JA, Cole B, Jack RM, Astion ML. 2013. **Lessons Learned & Practical Tools for Genetic Test Utilization Management: An Update on the Seattle Children's Hospital Experience.** *Journal of Genetic Counseling*
- Cole B, Dickerson JA et al. 2013. **A prospective tool for risk assessment of send-out testing.** *Clin Chem.*
- Dickerson J, Jack RM, Astion ML. 2012. **A Systematic Approach to Improve the Quality and Economics of Laboratory Send-outs in a Pediatric Reference Laboratory.** *Modern Pathology*;25:342-343.
- Dickerson J, Astion ML. 2012. **A door not closed: a systematic review of unacknowledged sendout results.** *Clin Chem.*
- Conta JH, Cole B, Dickerson J, et al. 2012. **A strategy to improve the quality and economics of laboratory send-outs at Seattle Children's Hospital: the role of the laboratory genetic counselor.** *Journal of Genetic Counseling.*

Papers

- Cole B, Dickerson JA, et al. **A prospective tool for risk assessment of sendout testing.** *Clin Chim Acta.* 2014 Mar 29.
- Dickerson JA, Cole B, Conta JH, et al. **Improving the value of costly genetic reference laboratory testing with active utilization management.** *Arch Path Lab Med.* 2014 Jan;138(1):110-3.
- Dickerson J, Cole B, Jack R, Astion M. **Another laboratory test utilization program: our approach to reducing unnecessary 1,25 Vitamin D orders with a simple intervention.** *Am J Clin Pathol.* Sep;140(3):446-7.
- Kotzer KE, Riley JD, **Conta JH**, Schahl KA, Goodenberger ML. **Genetic Testing Utilization and the Role of the Laboratory Genetic Counselor.** *Clin Chim Acta.* 2014 Jan 1;427:193-5.

Editorials

- Sternen DL, Conta J. **Utilization Management Rounds: Be Realistic When Trying to Persuade Doctors to Improve Their Test Ordering.** *Clinical Laboratory News.* 40(4):15.
- Sternen DL, Conta J. **Guiding Providers to Improve Their Test Orders: Laboratory Utilization Management Tips and Tricks.** *Clinical Laboratory News.* 39(10)
- Dickerson J, Cole, B and Astion ML. 2012. **Ten Ways to Improve the Quality of Send-out Testing.** *Clinical Laboratory News.* 38(4): 12-13.
- Epner P and Astion M. 2012. **Reducing Diagnostic Errors by Focusing on Test Ordering Practices.** *Clinical Laboratory News.* 38(7).