Don’t Sell Your Lab Short

A Business Perspective of Laboratory Outsourcing Arrangements

May | **2019**

ARUP LABORATORIES

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Agenda

Conditions that drive outsourcing arrangements

Pros and cons of different outsourcing models

Economic and operational risks

Articulating the value of the lab

Factors that influence outsourcing activity in the laboratory market

- Goal: Describe *some* of market conditions and perceptions in the laboratory market that influence outsourcing activity

Recap of Part 1 in this series

- Dr. Brian Jackson: “How to make smart insourcing and outsourcing decisions for hospital laboratory services”
  - Common pitfalls in outsourcing at the point of decision
  - Treating outsourcing as a revenue or capital problem
  - The healthcare value equation and importance of quality vs a cost-only perspective

The “customer’s” perception of laboratory services

- Laboratory customers:
  - Patient’s
  - Providers
  - Hospitals/Health Systems
  - Payors
- Perceptions
  - Necessary
  - Service line
  - Cost center
  - Commodity

Consumerism trends

- Consumer access
- Access to data
- Telemedicine
- Point of care testing
- Decision support
- EHR integration

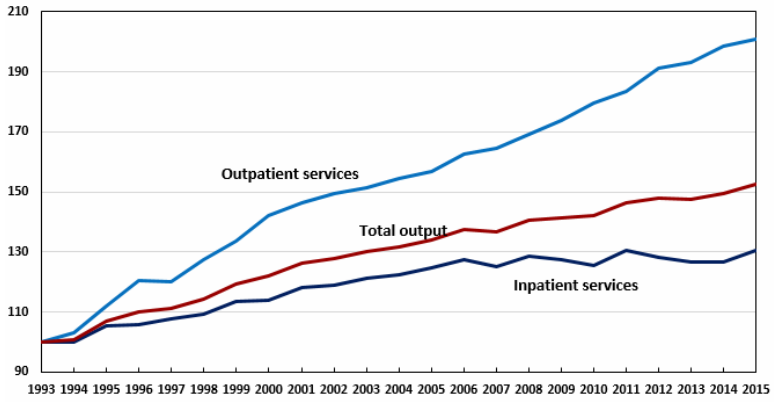
- Clinical trial enrollment

Commodity vs the “Customer Experience”

Transforming a “commodity” service to a premium product by focusing on the customer experience

Provider challenges and government regulations

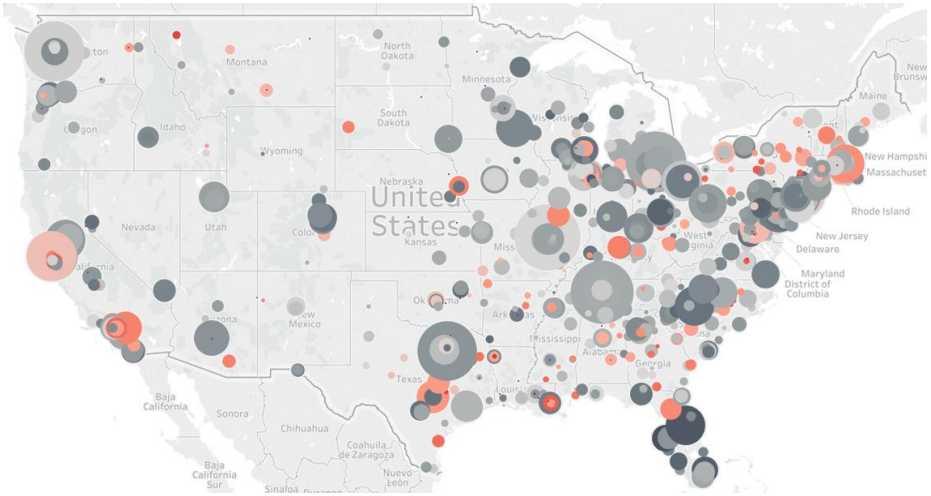
- Recruitment and retention of high-quality employees
- Increase in outpatient services
- PAMA, FDA oversite fears
- Tax reform



Source: U.S. Bureau of Labor Statistics, Office of Productivity and Technology

Health system financial stress

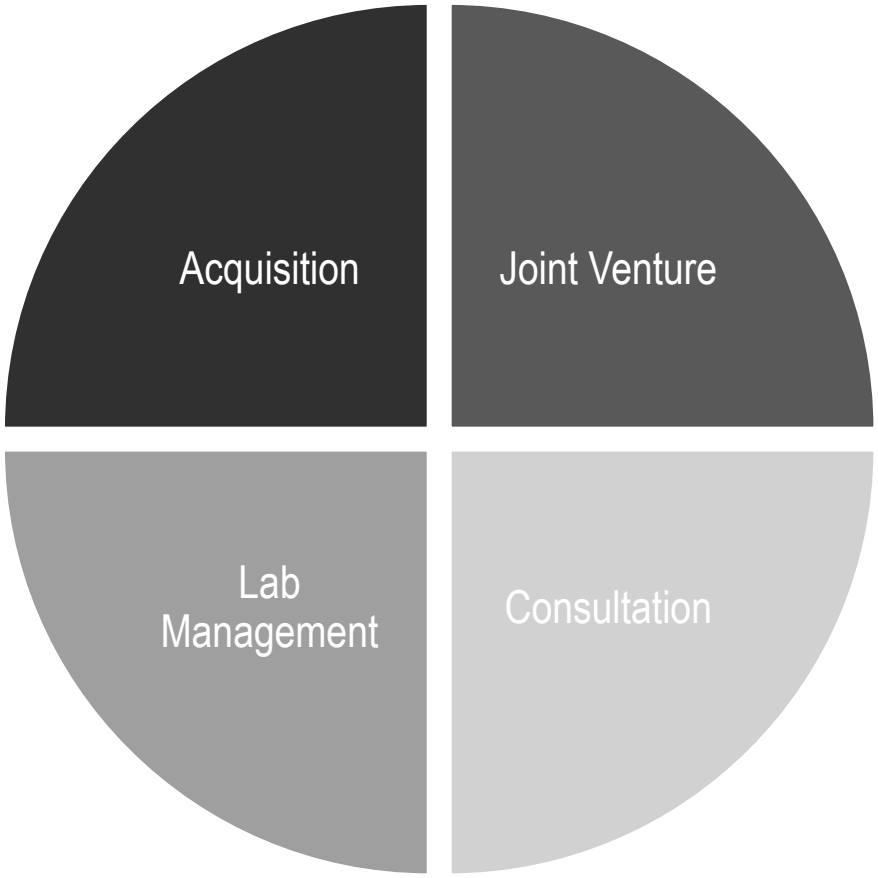
- Analysis of Medicare/Medicaid cost reports/claims
- Designed algorithm to compare health system and laboratory margins
- Evaluation of recent lab/outreach acquisitions



Summary

- Trends influencing patients, providers and payors create outsourcing conditions
- Laboratory services can be perceived as a commodity
- Health system financial stress encourages outsourcing

Potential Partnership Structures



Why do hospitals outsource laboratory?

The New Normal

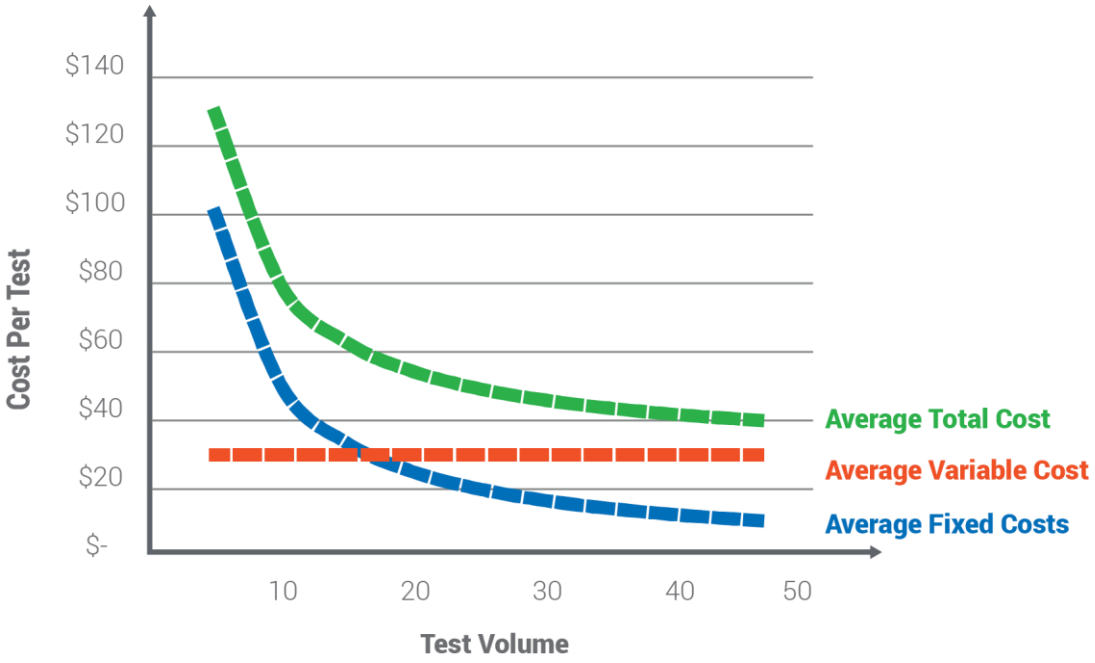
Why do hospitals outsource laboratory?

- Need cash
- Cost savings
- Capital investment
- PAMA fears
- Staffing
- Quality issues
- Lack of leadership

Will outsourcing produce anticipated cost savings?

Test Volume ↓ | Profit Margin ↓ | Per Unit Cost ↑

According to hospital consultants and market analysts, outsourcing reduces lab costs up to **20%**.



Outsourcing lab services can save money, but it's not that simple. 2014. /www.modernhealthcare.com/article/20140830/MAGAZINE/308309895

How does outsourcing impact hospital and laboratory operations?

Outsourcing Errors

Table 1 Examples of Errors Committed at Outsource Laboratories and Their Consequences

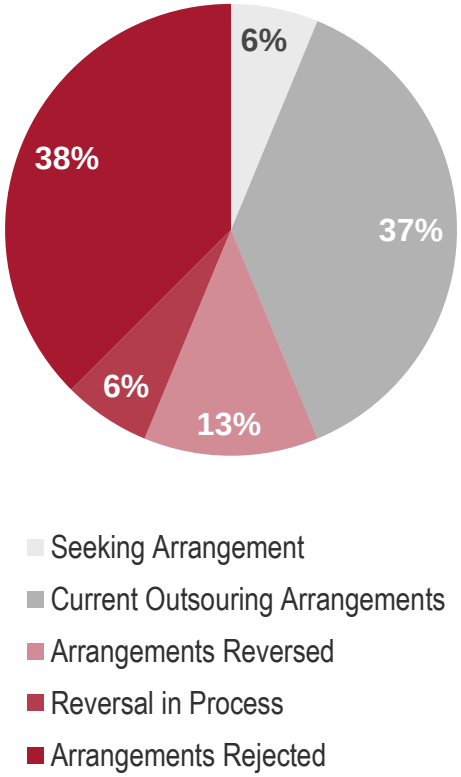
Test Ordered	Outsource Laboratory Report	Consequences of the Error and/or Comments
Any blood or urine test	Specimen improperly collected, inadvertently discarded, request overlooked, and results not communicated in timely fashion	Commonplace mistakes; these errors lead to repeating the test, cancellation of a scheduled outpatient visit, and/or delaying or interfering with therapy
Specific examples		
Viral culture for Herpes simplex	Collection date not noted at outsource laboratory site, therefore, culture discarded	Lesion disappeared and consequently there was no definitive diagnosis
Brucella serology	Test not performed; inappropriate specimen	Patient never had the test performed; refused to drive 90 miles to repeat it
HIV-1 RNA	Wrong test performed; sometimes HIV-1 DNA or HCV RNA are erroneously performed	Physician must recognize the problem and reorder the test
Nitroblue tetrazolium assay	Test not performed; technician unfamiliar with test and unable to identify test code	Diagnosis of chronic granulomatous disease delayed by 2 months due to inability to perform tests at outsource laboratory (test finally performed elsewhere)

Medical Errors Arising from Outsourcing Laboratory and Radiology Services. Am J Med. 2007 Sep;120(9):819.e9-11.

Lessons Learned: Association of Pathology Chairs

Findings from survey regarding experience with outsourcing relationships

Outsource Arrangement Status



- Most JV arrangements were initiated by private lab and health system CEOs and often did not include input from pathology or laboratory leadership.
- Monetary gain was the major driving factor; however, the financial gains often fell short of expectations
  - Test pricing eventually began to increase
  - Lack of utilization control incentive by outsourced lab
  - On-site lab shrank in size to the detriment of patient satisfaction
  - Lack of clinician satisfaction
- Several systems have begun the process of reversing the decision to outsource laboratory

*Association of Pathology Chairs: 170 teaching facilities

Source: Outsourcing of Academic Clinical Laboratories: Experiences and Lessons From the Association of Pathology Chairs Laboratory Outsourcing Survey, Academic Pathology Volume 5: 1-5, February 11, 2018

Exiting the Relationship

- Lab outsourcing relationships typically only last 5 -7 years

- Exiting is difficult and costly
  - Acquire new equipment
  - New management team
  - Re-employ staff
  - Hire and train new staff
  - Operate within non-compete

Communicate the Value of the Laboratory and Communicate it Often

There is still a need to focus on lab specific value

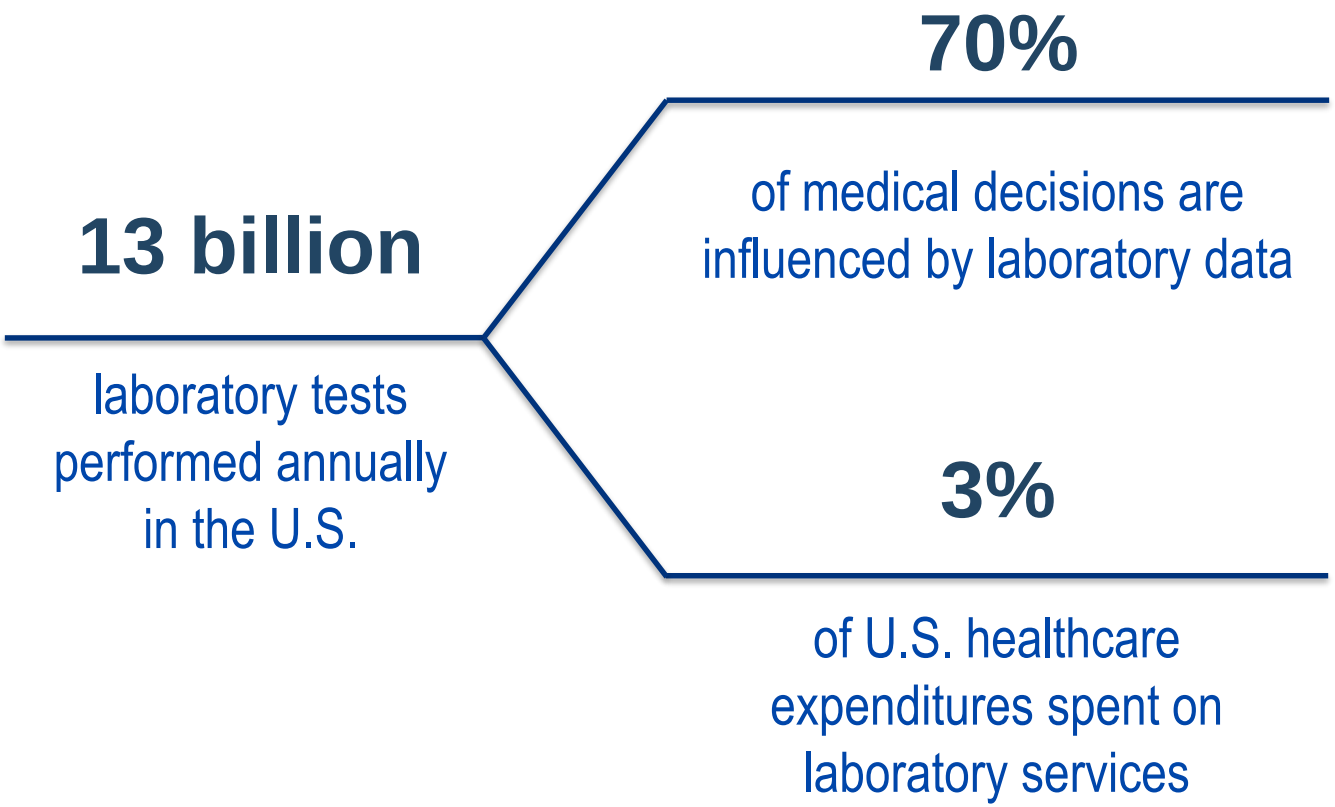
- Things you can do better
  - Quicker TAT
  - Better customer service
  - Access to pathologist
  - Continuum of care/One medical record

- Growth opportunities
  - Inreach/outreach
  - Treat it like a business
  - Know your numbers

- Traditional understanding of utilization management

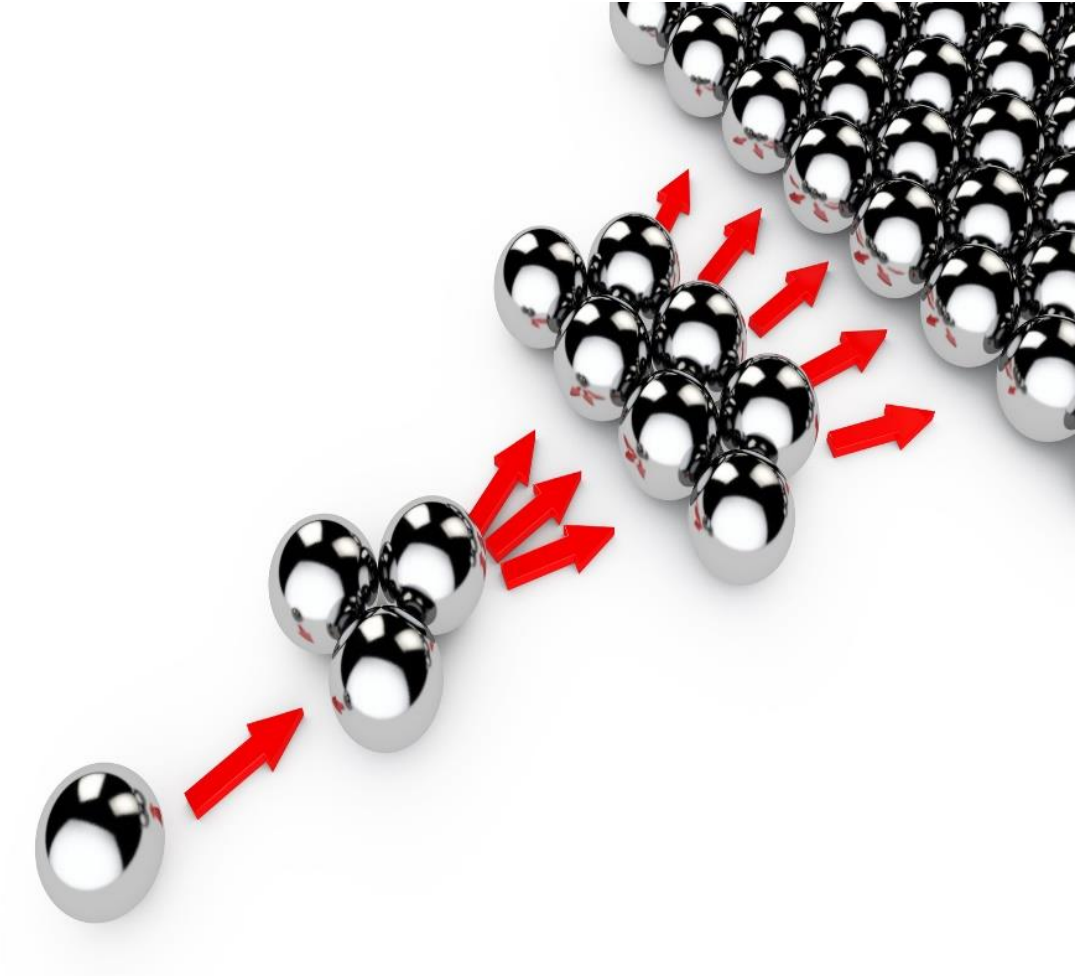
But what is more important is how your lab strategy aligns with the goals of the health system

Demonstrating Value in New Ways

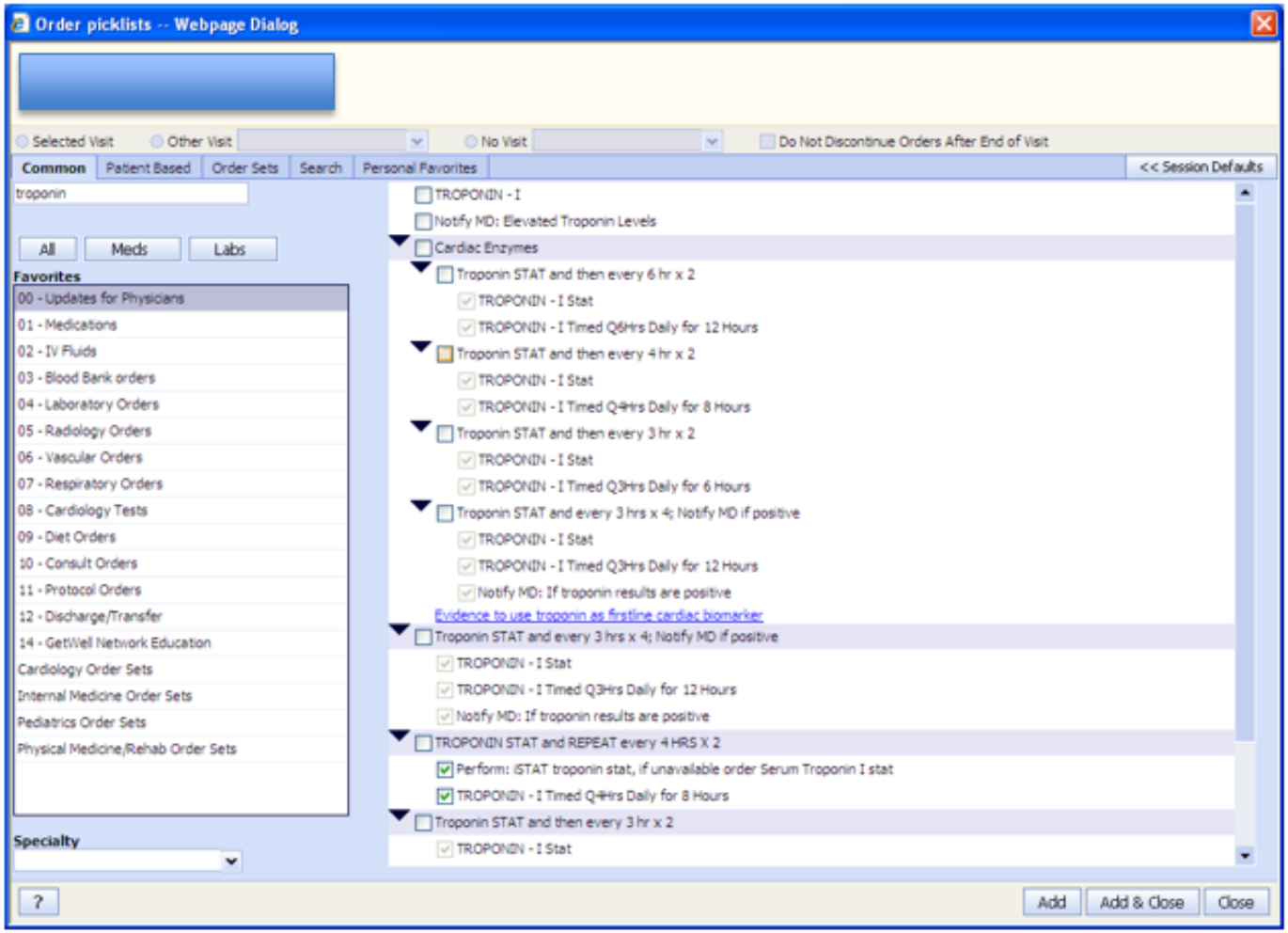

70%
of medical decisions are influenced by laboratory data
13 billion
laboratory tests performed annually in the U.S.
3%
of U.S. healthcare expenditures spent on laboratory services

Downstream Impact

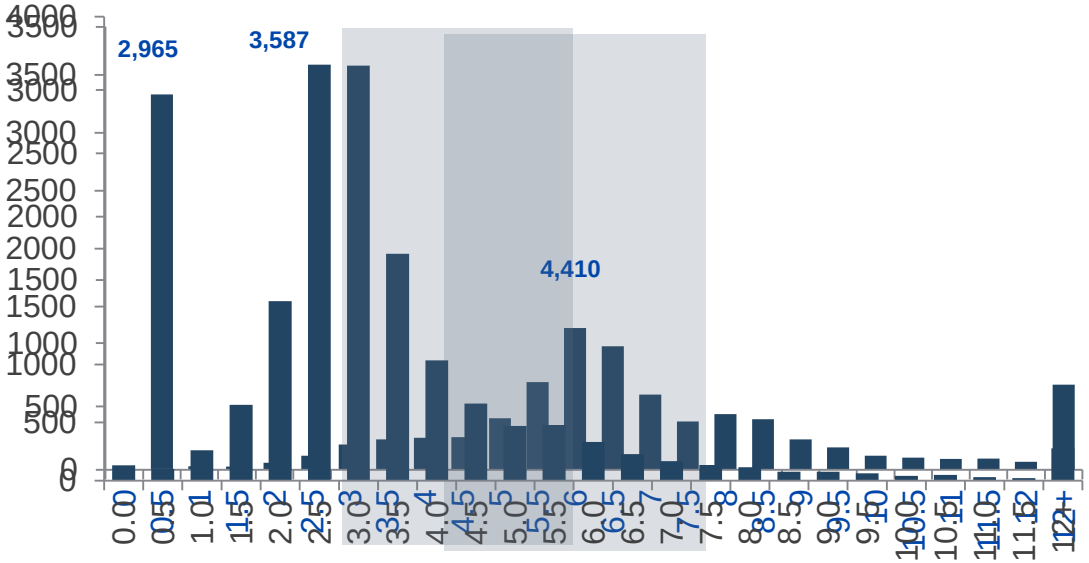
- Case Management
  - Length of stay
  - Denials of payments
- Pharmacy
  - Expensive biologic agents
  - Pharmacogenomics
    - Coagulation
    - Pharmacogenetic panels



Troponin orders and Chest Pain LOS



Troponin I



1. Identify order mechanisms that drive the repeat interval
2. Modify the repeat time to be 3-6 hours after

Improve the time-to-decision by improving the test interval by up to **3 hours**

American College of Chest Physicians and American Thoracic Society

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Released October 27, 2013

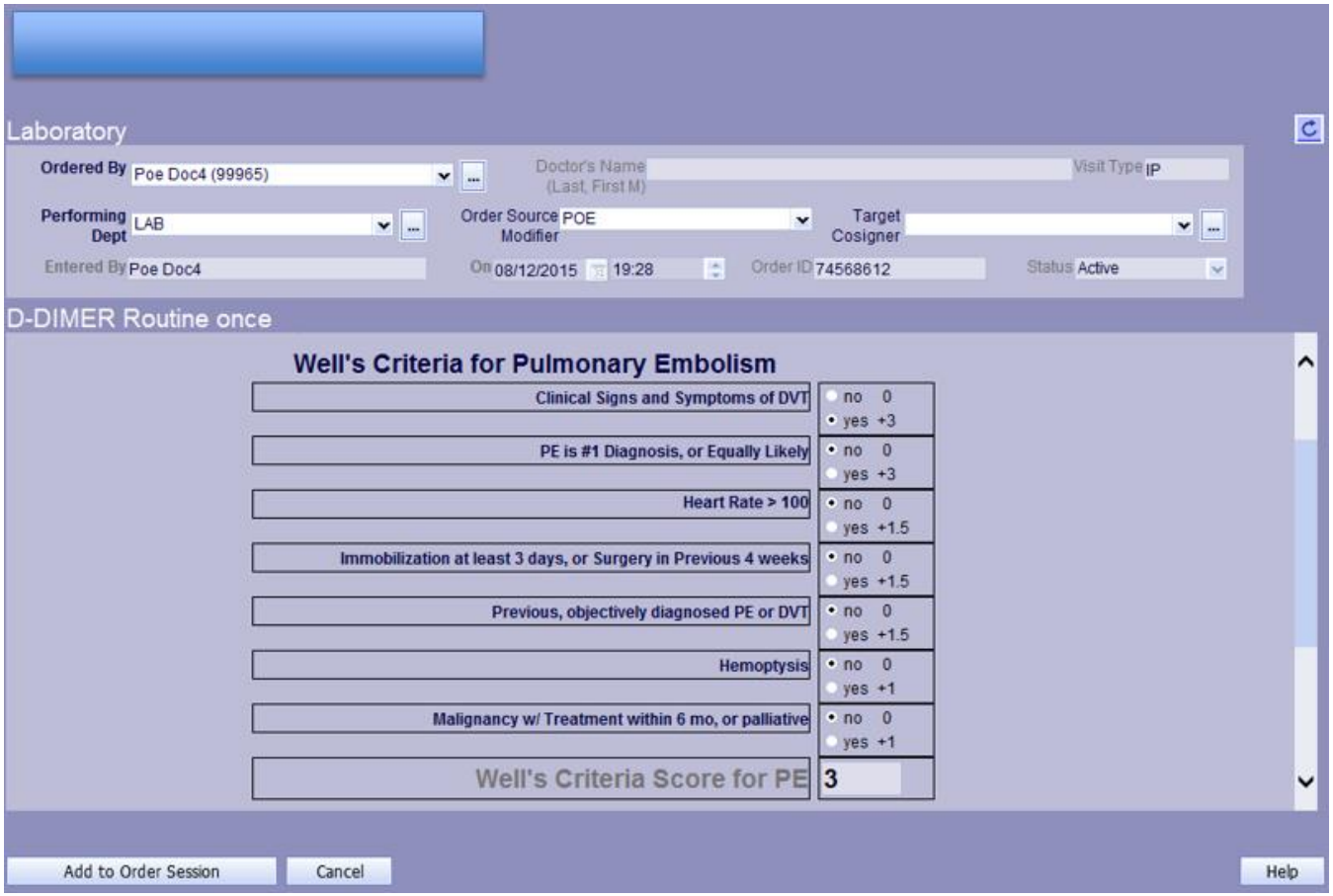
Don't perform chest computed tomography (CT angiography) to evaluate for possible pulmonary embolism in patients with a low clinical probability and negative results of a highly sensitive D-dimer assay.

Clinical practice guidelines for pulmonary embolism indicate that the cost and potential harms of CT angiography (including radiation exposure and the possibility of detecting and treating clinically insignificant pulmonary emboli with anticoagulation) outweigh the benefits for patients with a low pre-test probability of pulmonary embolism. In patients with a low clinical prediction score (e.g., Wells or Geneva score) followed by a negative D-dimer measured with a high sensitivity test (e.g., ELISA), pulmonary embolism is effectively excluded and no further imaging is indicated for pulmonary embolism evaluation.

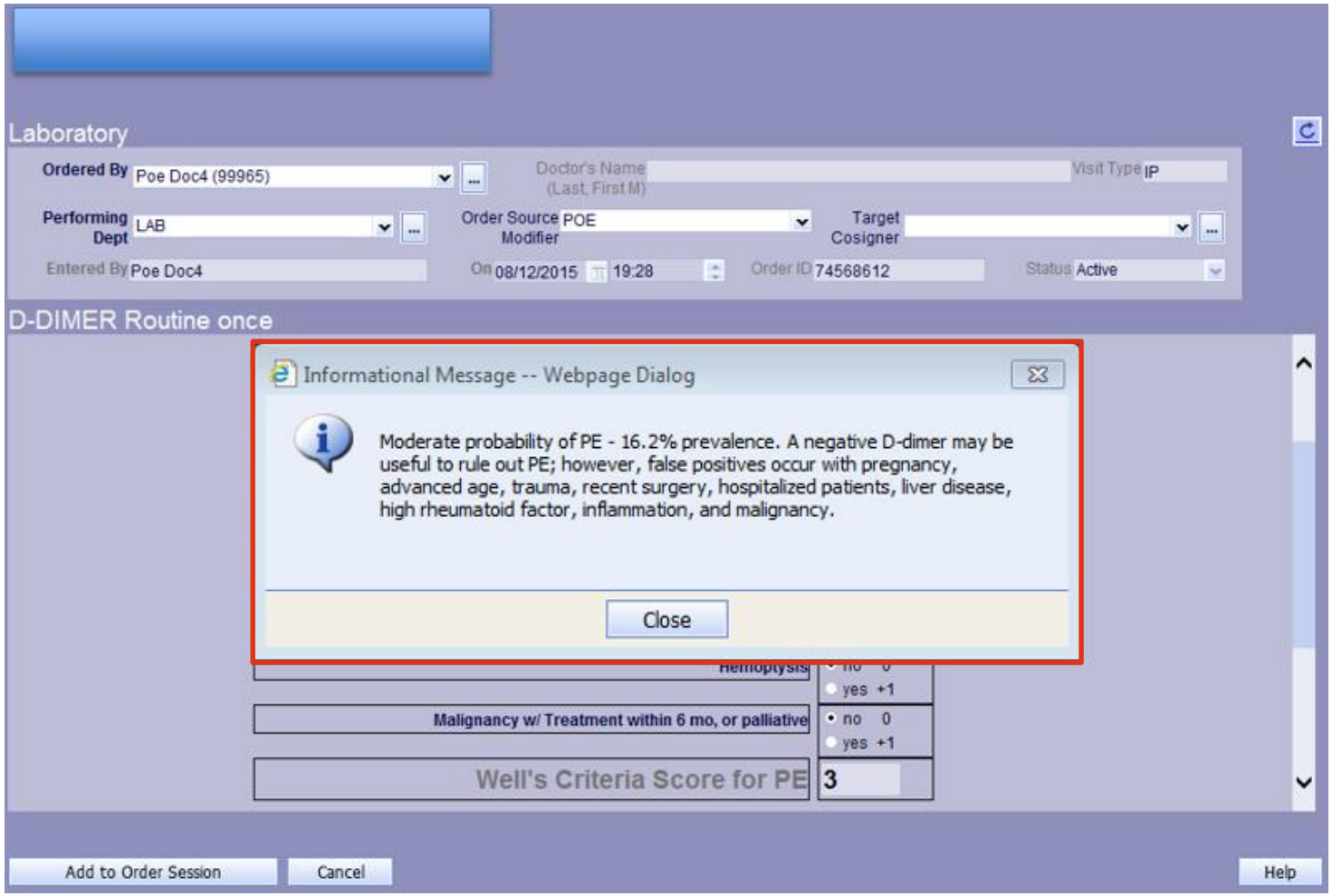
Patient Materials

- Search patient-friendly resources by Consumer Reports.

D-Dimer and CT PE Protocol



D-Dimer and CT PE Protocol



Pharmacy-Related Projects

- Pharmacy & Lab Workflow Analysis
  - Create collaborative efficiencies with shared workflows
  - Time drug administration with associated lab collections
  - Budget planning teamwork
- Therapeutic Drug Monitoring
  - New and specialized ways to monitor certain drugs
- Population Health Topics
  - Improve the health of those in the community
  - Refine medication use

- Pharmacogenomics
  - Implementation of drug-related genetic tests enhances patient care and brings overall cost savings
  - Quickly growing area for individualized patient care
  - Increasing public awareness and focus on genes (23andMe, Ancestry.com)
  - Stabilize patients on a therapeutic drug/dose combination more quickly

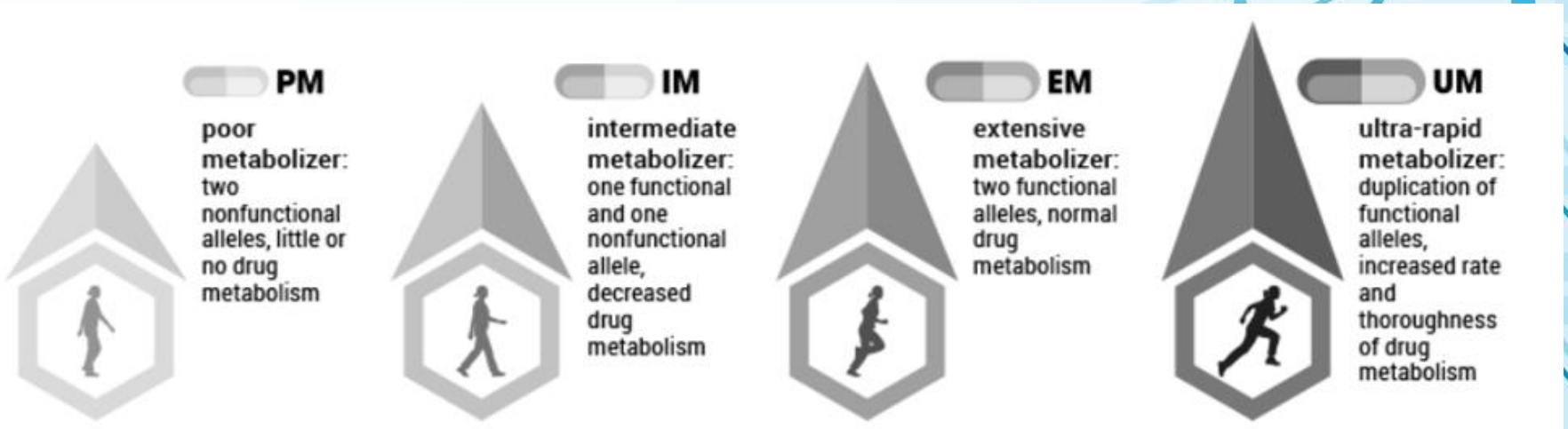
Therapeutic Drug Monitoring (TDM) Tests

- Monitoring drug efficacy through TDM brings:
  - Reduced toxicity | Increased efficacy
  - Cost savings - by being able to:
    - Give the minimum amount drug necessary
    - Reach the right dose in less time
    - Switch therapies sooner when lack of efficacy is proven
- Examples
  - Remicade (inFLIXimab) and Humira (adalimumab) - drug concentration & neutralizing antibody production
  - Gleevec (imatinib) - drug concentration
  - NS5A inhibitor - sensitivity

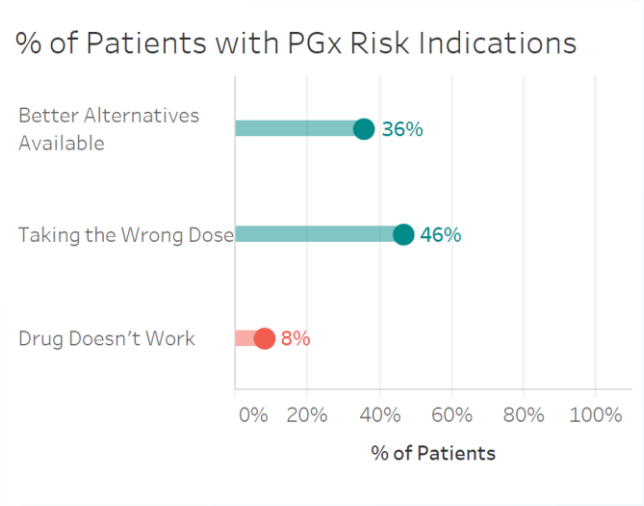
Pharmacogenetics Dosing

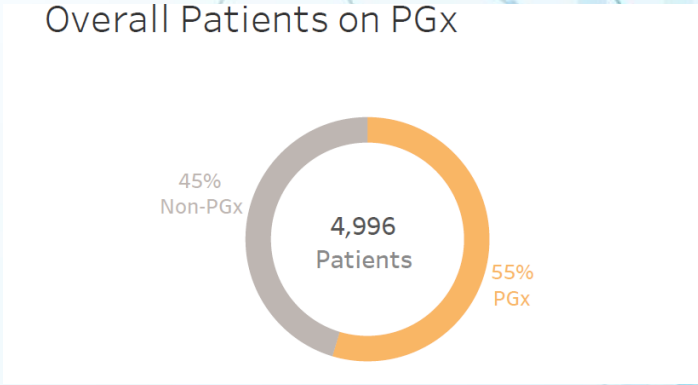
- Implementation of drug-related genetic tests enhances patient care and brings overall cost savings
- Quickly growing area for individualized patient care and more accurate prescribing
- Increasing public awareness and focus on genes (23andMe, Ancestry.com)

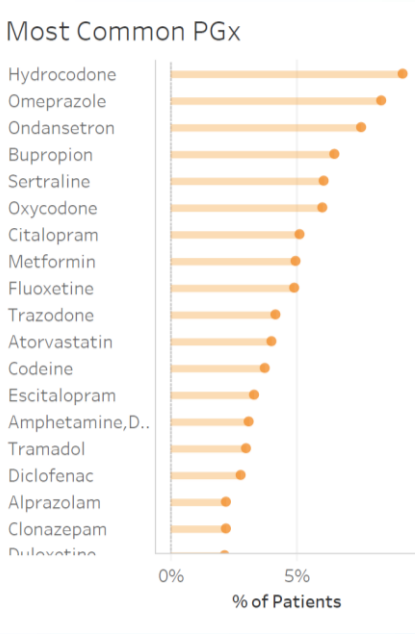
e.g. Plavix (clopidogrel) – genetic metabolism determines whether the drug will be activated. If it's not activated patient is not protected against a stroke.



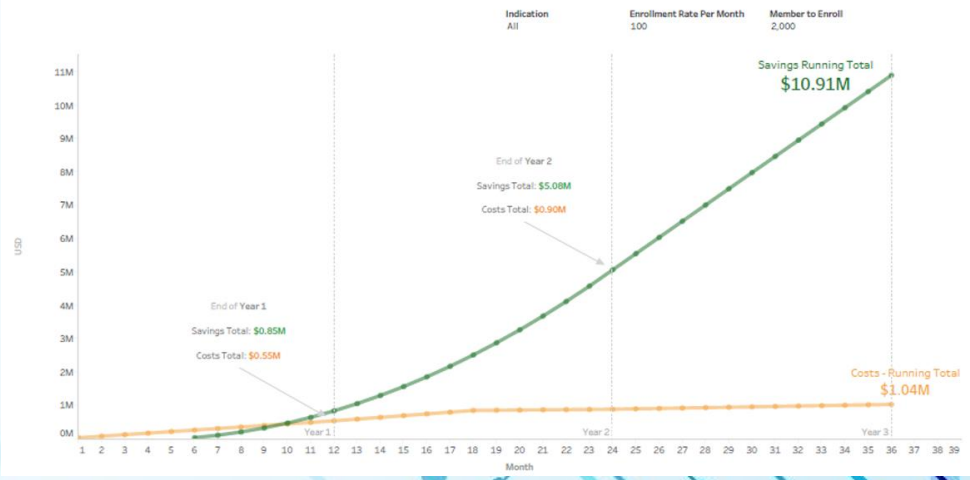
ARUP Health Clinic Pharmacogenomics Project







Not everyone will enroll however. Using experience with other large member populations as a measure, the following return over 3 years is projected for this population.



From the System's Perspective

"We've watched carefully as other organizations have gone to Quest and LabCorp and obviously we have concerns. I would have concern about alignment of mission. **We think the lab is integral to the care of patients, and it will become rapidly more so with personalized medicine and the ability of information systems to deliver data in ever more powerful ways**."

—Robert Stallone
VP Laboratory Medicine, Northwell Health

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