Lab Quality Confab

New Orleans, LA

DEEP MEDICARE LAB PRICE CUTS COMING IN 2018! PROTECT YOUR LAB'S FINANCIAL STABILITY BY USING COST-PER-TEST STUDIES DONE THE RIGHT WAY TO GUIDE COST-CUTTING EFFORTS

> Steve Stone, Managing Director October 24, 2017



Deep Medicare Lab Price Cuts Coming in 2018! Protect Your Lab's Financial Stability by Using Cost-per-Test Studies Done the Right Way to Guide Cost-Cutting Efforts

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INTRODUCTION



Background

- We have been expecting 2018 Medicare price cuts for laboratory tests for some time
- In September, Medicare officials released draft prices for the Clinical Laboratory Fee Schedule and fee cuts are deeper than originally predicted
- The price cuts to clinical laboratory test fees will total \$670 million in 2018¹
- This amount is almost 70% greater than what the federal agency predicted in statements published last year¹



Background

Observations from the Draft Fee Schedule

- Reimbursement was decreased for a vast majority -75% - of the various lab test codes, with just 10% of the codes getting an increase²
- The price cuts will equal 28% over three years for the 20 higher-volume tests³
- Many experts agree that the cuts will have the most impact on smaller labs



What Can You Do?

- There will be concern about pricing, margins and profitability
- Understanding your true spend, what you spend on testing, can provide a better baseline for decisions





Baseline for Decisions

What To Think About...

- What can we charge?
- Can we lower our costs new method, new contract, new vendor?
- Can we lower our costs reduce waste and improve the process?
- Can we increase testing, gain more economies?
- Do we discontinue the test, create a send-out?





UNDERSTANDING COST PER TEST



Cost Per Test

What is the True Cost Per Test?

- Most labs understand their cost per reportable test, or cost per test, but how complete or current are these calculations?
 Opportunity
- In our experience, many labs have an opportunity to improve their cost per test calculations



An Opportunity

- The traditional way to determine cost per test focuses on easy-to-identify direct costs, such as labor and materials
- Indirect costs are then spread evenly or proportionately across all tests
- The problem is that each test may consume indirect resources at different rates
- Moreover, many indirect cost are not associated with tests and not considered





The Challenge

- How do we allocate our expenses so we have a more accurate picture of true testing costs?
- Activity Based Cost Analysis is one principle that works well



Activity Based Cost Analysis

- Resources are consumed by activities and activities are caused by products and services
- Activity Based Costing identifies activities and assigns the cost of each activity with resources to all products and services according to the actual consumption by each





Activity Based Cost Analysis

- The increased accuracy is achieved by essentially converting indirect costs to direct costs
- This is accomplished by identifying more of the resources consumed by testing
- Also use weighted averages to assign the indirect costs
- Reduces costs distortions from misallocations





COST OF GOODS SOLD



Cost Analysis

- Cost of Goods Sold (COGS) is the model we will use as part of the activity based analysis
- COGS is a common accounting practice utilized in industries such as manufacturing or retail
- It is also utilized by clinical laboratories



Cost of Goods Sold (COGS)

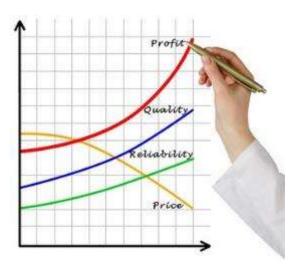
- Cost of goods sold is the accumulated total of all costs used to create a product or service, which has been sold
- Total Sales minus Cost of Goods Sold for an accounting period equals the Gross Margin

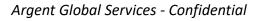
Total Sales – COGS = Gross Margin



Cost of Goods Sold (COGS)

 Many laboratories have adopted the COGS concept to determine their gross margins and true cost per test







COGS & Finance

- The finance department of your hospital or company will use some form of COGS to understand margins
- However, they are looking at total spend for an area and it may not be an accurate reflection of the expense required for each individual test





COGS

Here is the formula to determine COGS for each specific test

Direct Labor





Testing Overhead



What's Different?

How is this different than what many labs already do?

- More robust and accurate labor
- More accurate materials
- More accurate overhead through activity cost analysis





Direct Labor

- Direct Labor is how much time is spent on specific testing activities
- Labor can be captured as Fixed or Variable

Direct Labor	
Fixed Time (per Run)	The average labor time required to perform one run, batch
Variable Time (per Sample)	The average labor time required to handle each individual specimen or test that is part of a run or batch





Direct Materials

 Direct Materials include all of the reagents, consumables and supplies utilized for specific testing activities

Direct Materials	
-	Testing or reagent cost for one reportable result - typically a vendor cost
Ŭ	Any additional consumables directly related to testing, items used per test or batch
• • • •	Any testing/lab supply directly related to testing, aliquot tubes, plates, pipette tips, some PPE

Testing Overhead

- We want to capture as much overhead costs as possible
- This is an area of opportunity for many cost per test calculations
- We use activity based cost analysis to accurately disperse these costs across the appropriate tests



Testing Overhead

Testing Overhead					
Maintenance	Summarize all of the labor and supplies required fo all scheduled maintenance, daily start-up, shut-dov and cleaning				
QC	Summarize all of the labor and materials required to complete Quality Control for a period of time				
Calibrations	Summarize all of the labor and materials required to complete Quality Control for a period of time				
General Lab Supplies and Consumables	All of the lab supplies related to operations: DI water, alcohol, gloves, coats, wipes, cleaning, etc.				
Capital Depreciation	The Cost of Capital can be allocated to testing				
Service Agreements	The cost of service agreements for a specific period of time				
Operations Overhead	Cost of laboratory management, compliance, regulatory, other				



GATHERING INFORMATION





Information

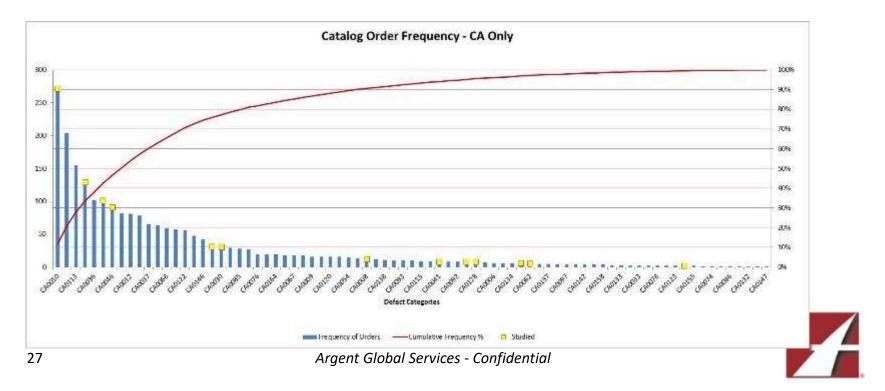
- Let's talk about data collection and information gathering
- Your organization may already be capturing much of the information that you need
- We will look at ways to provide more detail and identify the proper allocation
- <u>Accuracy</u> does require <u>Effort</u>





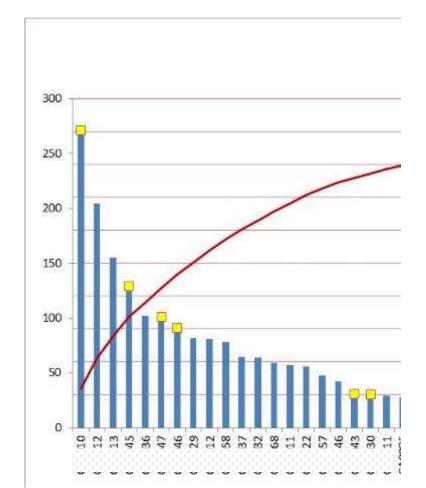
Information Gathering

- To optimize your information gathering efforts, you must first identify the highest volume tests
- List, by volume, all tests for each area or method



Frequency of Orders – Top 20

Catalog	Frequency	_	Cumulative	
Numbe 🗾	of Order 🛁	Frequency 🔼	Frequency 9	
C	271	12.00%	12.00%	
C	204	9.03%	21.04%	
C	155	6.86%	27.90%	
C	129	5.71%	33.61%	
C	102	4.52%	38.13%	
C	101	4.47%	42.60%	
C	91	4.03%	46.63%	
C	82	3.63%	50.27%	
C	81	3.59%	53.85%	
C	78	3.45%	57.31%	
C	65	2.88%	60.19%	
C	64	2.83%	63.02%	
C	59	2.61%	65.63%	
C	57	2.52%	68.16%	
C	56	2.48%	70.64%	
(48	2.13%	72.76%	
(42	1.86%	74.62%	
C	31	1.37%	76.00%	
(30	1.33%	77.33%	
CULLI	29	1.28%	78.61%	





Identify Processes

- For each test, start by mapping the process and identify all of the labor and resources required
- Look at the entire value stream, which should include pre and post-analytical
- Focus on the three cost buckets:



Determining Labor

Direct Labor

- Use time studies to capture all of the fixed and variable time
- Allows for a more robust calculation for varying batch and run sizes
- Reminder
 - Time per Run equals fixed time for each run
 - Time per Sample equals variable time for each run



Labor Metrics Example

			Time (min.)	
SP Studied	SP Studied Description		Per Run	Per Sample
S <u>::::::</u> ::::::::::::::::::::::::::::::	Nucleic Acid Isolation from FFPE Tissues	C:::::::::::::::::::::::::::::::::::::	103.49	4.70

Labor time to complete a run of 45 samples

Labor Time = One run (1 x 103.5 min) + 45 samples (45 x 4.7 min)

103.5 + 211.5 = 315 minutes of total labor

315 mins / 45 samples = 7.0 mins per sample

How To Conduct Time Studies

- Conduct direct observations
- Utilize a stop watch app or a digital watch
- Capture cycle times for each step of the process
- Fixed Time
- Variable Time



How To Conduct Time Studies

- Capture several cycles
- Different times of day (peak and slow)
- Observe different associates
- Ask the associate to work at a normal pace
- Is the associate following the SOP?





Walk Away Time

- Consider attentive time and walk-away time
 - Should the tech wait for automation?
 - Does the tech have time to walk away and do something else?
- Attentive time should be considered handson time
- Walk away time can be removed
- Try to keep it as realistic as possible



Capturing Labor

- Don't forget to look at Pre-Analytical and Post-Analytical
- Receiving, accessioning, specimen prep and archiving should all be added to the labor time for testing



Looking For Labor Improvements

Consider the following when capturing time study data

- Value Added Time
- Necessary Non Value Added Time
- Non Value Added Time
- Value added (see Lean definition)
- Necessary non-value added are activities that don't add value to the outcome but are unavoidable
 - Traveling to the reagent walk-in may be an example
- Non value added are areas for waste reduction



Analyzing Time

- The time is the time, but understanding your non-value added time will show you opportunity
- You shouldn't remove the non-value time from your analysis until you are prepared to remove it from the process



Time Study Data

What to do:

- 1. Separate each activity by fixed and variable time
- 2. Convert to time per single test
- 3. Average the time study results
- 4. Put time into minutes, use at least one decimal point

SP-00008	Small-Scale Bio-fluid RNA Isolation Batch Record												
							Time Per						
Time Stamp	Element	SOP	Start	Stop	Duration	Repetions	Repetition						
8:56:10	set centrifuge and note use	3.1	8:56:10	8:56:50	0.67	1	0.67						
8:56:50	put on booties and gloves and go into other lab	3.1	8:56:50	8:57:30	0.67	1	0.67						
8:57:30	get ice	3.1	8:57:30	8:58:00	0.50	1	0.50						
8:58:00	get samples from freezer	3.1	8:58:00	8:58:20	0.33	1	0.33						
8:58:20 38	places samples in ice	. 3.1	8:58:20	9:01:15	2.92	24	0.12						
38	Argent Global Services - Confidential												

What Does A Minute Cost

- Take the appropriate level of employee and convert their fully burdened wage into minutes
- Examples
 - \$42.50 per hour = \$0.708 per min

\$67,000 per year = \$0.537 per min





Direct Materials

Direct Materials

- This is an easier area
- Count everything that is utilized for each batch or test
- Even inexpensive, common supplies will add up
- This is based on what you use, not what you buy
- Don't forget to capture repeat tests
- Detail will pay off





Direct Materials

- Convert every item into a unit cost
- Example

Case cost is \$68.32 (200 per Case) = \$0.342 per Unit

 Apply the total count and unit cost on a per run and per test basis



Testing Overhead

Testing Overhead

- Many labs will allocate some overhead to testing, we are suggesting a more detailed look
- We don't want to proportionately spread our cost over all tests
- Take the Activity Based Cost Analysis approach



Allocating Overhead Resources

- List all of the overhead items that can be linked to the test or the laboratory area
- Determine the cost of each item for a period of time
- For the same period of time, what is the total volume for the test
- For each overhead item, what % is utilized by the test
- Example:
 - C.diff test is 18% of the total volume of our molecular analyzer
- The goal is to capture a Weighted Average



Calculating Testing Overhead

Example

Test		BMP			Annual Volume	12,00
	Α	nnual Cost		Allocation		
Analyzer					Item	% Volume
Maintenance	\$	10,000.00	\$	500.00	Analyzer	5.0%
QC	\$	8,500.00	\$	425.00	Lab	0.8%
Calibrations	\$	4,000.00	\$	200.00		
Capital depreciation	\$	16,666.67	\$	833.33		
Service agreements	\$	8,990.00	\$	449.50		
Lab Overhead	-					
General lab consumables	\$	7,000.00	\$	56.00		
General lab supplies	\$	11,000.00	\$	88.00		
Operations overhead	\$	60,000.00	\$	480.00		
Sum			\$	3,031.83		
Overhead Per Test			\$	0.25		



Overhead Tips

- Look at the test as a percentage of the total work
- We hope to convert indirect costs to direct costs
- Try to be as detailed as possible for each item, don't just apply the % to the total cost, but look at each line item
- Some activities may just be an estimate, but it should be closer than the current method





Calculating Your Results

 Convert all of your buckets into a cost per single test and summarize

Direct Labor

Direct Materials

+ Testing Overhead

Cost Per Test



You Are Going to Get Better at Excel

- Use your information and analysis to build Cost Per Test worksheets
- You can build this over time, focusing on the highest volumes areas first
- Much of the work, such as overhead, may only need to be done one time. You can adjust volumes and cost by time period if necessary



Summary: What's Different?

How is this different than what many labs already do?

- More robust and accurate labor
- More accurate materials
- More accurate overhead through activity cost analysis





TRUE COST PER TEST APPLICATION



How To Use

- Your True Cost Per Test may look higher than your current numbers, this is because you have shifted indirect costs into the CPT calculation
- Your True Cost Per Test will provide a more accurate baseline for decisions
- Will also provide better inputs for dashboard and financial software tools

Outputs are typically only as good as the inputs



Tips

- Work closely with your CFO or Finance Dept.
- They may provide you Expenditure or Cost Center type reports, but they probably have more information available
- Communicate and work with finance to better distribute your expenses (activity-based)
- Finance may need to adjust how they allocate expenses, make sure you are working towards the same objectives



Are We Making Money?

- Test Revenue minus the True Cost Per Test will give you the Gross Margin for that specific test
- Your Finance depart should include additional expenses to determine profitability
- These expenses are typically more difficult to assign to individual tests





Drive Improvement

- If you choose to keep the test inhouse and want to look for ways to reduce cost, this analysis will help drive improvements
- As you determine the direct labor required for testing, indirect labor is a good place to identify cost saving and improvement
- Also use to analyze new tests or varying batch sizes



Summary

- This is an activity that should be driven by managers
- Will require a team effort, work closely with the techs and finance
- Use more accurate cost per test as a baseline for decisions as your lab is impacted by next year's cuts





Thank You For Your Time!







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