Taking Costing to the Next Level

Roger Crook
Yardley Management Solutions, Inc.
rcrook@yardleyconsulting.com
Outline

Perspective: Review the costing landscape
Set a path to improving your cost process
Educate your executives and managers
Using new Performance Manager features for costing
How are we using Cost Information?

Service Line Profitability
Pricing
Identify and Eliminate Waste
Operating Budget Decisions
Capital Allocation Decisions
Productivity
Perspective:
Cost Management Information Milestones

Frederick Taylor
Scientific Management
Time and Motion Studies

Alfred Sloan
Cost Accounting, Flexible Budgeting

Walter Shewhart, W. Edwards Deming
Plan-Do-Check-Act
Process Control Charts

Peter Drucker
Management by Objectives
“What gets measured gets managed”

Robert Kaplan and David Norton
The Balanced Scorecard
Activity Based Costing, Activity Based Management
More Recent Variants

Time Driven ABC, Process Mapping
Lean: Lean Accounting, Value Stream, Box Scores
Value Chain Analysis
Theory of Constraints
Economic Value Analysis
Process Based Costing
Continuous Performance Improvement
Six Sigma: Define, Measure, Analyze, Improve, Control
Basic Premise

All things break down into smaller and smaller constituent parts. We know this is true from examples like physics and the nature of matter. Atoms were previously thought to be the smallest unit, but then sub-atomic particles were discovered. Now we know even these are made up of elementary particles.

Care processes also break down into smaller and smaller parts that each have cost and may or may not add value for the patient. If we can detect the parts not contributing value, we can drive them out.
What is the Cost Driver?

The activity that is the root cause of cost being incurred

A diagnostic test
A surgical procedure
A supply item
An activity like administering IV fluids

Many activities are really a collection of sub-activities
When you dive deeply enough, automated supporting data does not exist
Key Characteristics

Actual versus Unit Costing
Absorption versus Standard Costing (Top down vs. Build Up)
Costing Actual Activity versus Full Capacity (Real vs. Ideal)
Allocating versus Directing Overhead
Use Available Data versus Collect New Data
Cost System Design: Dynamic Tension

<table>
<thead>
<tr>
<th>Reflects Reality</th>
<th>Complexity</th>
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</thead>
<tbody>
<tr>
<td>Data acquisition</td>
<td>VS.</td>
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<tr>
<td>Timeliness</td>
<td>Cost of Ownership</td>
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<td></td>
<td>Sustainability</td>
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Be careful to ensure a positive ROI on cost data – it is possible to overinvest in precision you will not benefit from and/or cannot afford to maintain.
Trends Hurting Costing Activity Measurement

Avoidance of zero charge items in CDM
Simplification of the patient bill
The idea that bundled payments means you can stop charging accurately
State of our Data Sources

Data required for costing should be a by-product of other clinical or business processes; caregivers will resist collecting data just for costing.

Fortunately we have more and more good data available to us that we can use to improve costing, such as:

- Pharmacy detail
- Supply detail
- Surgical system detail

*The improved detail is available, but we have to dig for it. Patient accounting alone will not suffice.*
New Demands

Costing provider practices
Costing the continuum and episodes of care
Costing a population

These are variations on costing that we can view as part of a broader costing framework.
We are already Costing Activities

Since we can always roll up to patient and groups of patients for analysis, what is the lowest level of activity we can economically obtain?

- Actual supply, implant and drug items
- Actual Minutes of treatment or operating room time & team
- Average cost per RVU for a specific provider
- Average cost of specific diagnostic procedures
- Average cost of a patient day on a specific unit
- Average cost of patient registration

Increasing specificity in costing
Activity Based Costing (ABC)
The Formal Definition

Developed and promoted in the 1990’s
Companion to TQM/Continuous improvement efforts

Identify waste:

- Develop direct unit costs at full capacity
- Difference from GL cost and built up unit cost = unused capacity = waste
- Find better drivers for overhead, and keep careful track of overhead to understand its sources
- Push overhead into the realm of variable cost where it can be exposed as waste

Another, perhaps even more valuable use today: marginal pricing of new services agreements, so as to not overprice.
Moving Toward ABC

Ways to use ABC principles in your Performance Manager costing

A. When appropriate, **cost using an estimate for full capacity.**

B. Square footage, FTEs and direct expense are typical ways to allocate overhead. While convenient, they have a weak relationship to the costs being allocated. In ABC, **improved cost drivers are used.** Examples would be patient admissions, patient days in the cardiac service line or having care managed by a hospitalist. Note that these are patient characteristics, not charge codes.

C. ABC also retains **more detailed overhead pools,** so that the source of the allocation can be understood and given appropriate cost drivers.
A. How to Develop and use Full Capacity Costing

1. Estimate full capacity using the highest capacity/most efficient part of recent history and annualize it.

2. Then use your existing costing setup and standards, substituting new volume and price, and possibly GL data.

3. If your need for pricing was just about marginal new service item activity, like an outside lab contract, you would use the resulting direct units costs by service item.

4. If your need for pricing was about incremental inpatient or outpatient encounters, you would copy your encounter dataset and encounter cost using the new full capacity estimated results, and perhaps use mainly direct costs in your reporting.

5. If your proposals might cannibalize existing patient volume, your bids need to also cover your indirect costs.

6. If you are trying to expose unused capacity, run worksheets comparing baseline to the full capacity costs.
B. How to Develop Improved Cost Drivers

1. Move candidate overhead departments to a direct assignment to the patient. Examples include
   a. Cardiology program to patients with cardio diagnosis on days
   b. Bariatric program and marketing cost to bariatric patients on cases

2. Seek out the unbilled activities that are performed for patients and find a basis for them defined by patient specific data. Examples include
   a. Patient registration based on registrations IP vs. OP
   b. Robotic costs to patients using the robot on cases

3. Implement in Performance Manager
   a. Change the departments to patient care
   b. Add new synthetic charge codes to the charge table
   c. Add standards for these items
   d. Use a Model Builder rule to generate the items in patient records based on the chosen criteria
C. How to Develop and use Better Overhead Pools

1. Redesign your cost components to reflect their origins by the remaining overhead departments. Examples include

<table>
<thead>
<tr>
<th>Building Depreciation</th>
<th>Allocated Building Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>Allocated Equipment</td>
</tr>
<tr>
<td>Facility</td>
<td>Allocated Facility</td>
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<td>Malpractice</td>
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<td>Dietary</td>
<td>Allocated Dietary</td>
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<td>Clinical Support</td>
<td>Allocated Clinical Support</td>
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<td>Information Systems Mgt</td>
<td>Allocated Information Systems Mgt</td>
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<tr>
<td>Department Administration</td>
<td>Allocated Department Administration</td>
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<tr>
<td>Medical Education</td>
<td>Allocated Medical Education</td>
</tr>
<tr>
<td>Residents</td>
<td>Allocated Residents</td>
</tr>
<tr>
<td>Administration</td>
<td>Allocated Administration</td>
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<tr>
<td>Interest</td>
<td>Allocated Interest</td>
</tr>
<tr>
<td>Corporate Allocation</td>
<td>Allocated Corporate Allocation</td>
</tr>
</tbody>
</table>

2. Use GL remap to map the department numbers to accounts that look like the overhead components, then map these accounts to matching components.

3. While you are at it, consider changing your overhead areas so they reflect the statistical base used (this is simplifies the structure and maintenance)

4. Keep the detail when doing summarized component mapping, and these components of overhead will be available for worksheets at the patient, procedure and service line, giving you excellent transparency on how your overhead flows.
Pros and Cons of ABC

Pros

• Improved accuracy
• Transparency
• Logical and easy to explain
• Adds to the credibility of your solution
• Further refinement of price bid process
• Identify potential waste

Cons

• Adds some complexity to your process
Time Driven ABC (TDABC)

TDABC updated ABC around 2005

TDABC adds

- Labor cost rates per minute at full capacity
- Other resources cost per minute at full capacity
- Process mapping of each activity

Surgical procedure
Pros and Cons of TDABC

Pro

• Provides perfect-world marginal cost
• Factors in resource constraints and trade-offs
• Process maps assist in identifying non-value added activities

Cons

• Costly to construct process maps
• Requires manually collected data
• Ideal cost <> actual cost

Reminiscent of standard costing and clinical pathways. Helpful in selected areas, but not everywhere.
TDABC Experience

Quotes from Cleveland Clinic HFMA Magazine case study (June 2014 pg 84) on their TDABC experience

“TDABC…does not allocate the cost of unused capacity or waste, nor does it account for ….activity such as research or education. TDABC therefore cannot be used to calculate all of an organization’s costs.”

“We do not believe these results warrant a wholesale replacement of our current system”

“We found opportunities to…accurately identify unbilled activity…one possibility is the creation of zero-charge items to more closely reflect the work being done.”
Unit Cost vs. Actual Cost

Unit costing has been the norm in healthcare costing. It sometimes causes problems when the meaning of a service item rapidly changes. Examples include:

- Oncology drug that used be billed at $5000 per unit suddenly changes to being $5 per unit, with units skyrocketing.
- Catch-all implant charge code could mean a bundle of supplies that range from $500 to over $40,000.
- One-off mistakes in charging that cannot seemed to be fixed.

We have had ways to cope with some of it, such as a custom interface lookup to price ranges with standards, and MEE.

These solutions are problematic on several fronts:

- New items added without your knowledge – you often find them when the analysis takes an ugly turn.
- Corrections require MEE or reintegration of whole record.

*We need a better way to detect and cope with these items.*
How can you Detect Highly Variable Items?

1) Extended service item record to hold average cost and or average price per unit
2) Model Builder rule to fill this field on each transaction
3) Worksheet to report on min and max values in this field, and flex it by volume to highlight potential magnitude of the problem.

Before Model Builder, you could not use worksheets with Min Max features to find these records – Min and Max do not work on calculated worksheet fields like cost per unit.
Solutions for Highly Variable Items?

When the problem is a one-off error, and the billing system can’t fix it

• Model builder rule to change the charge or price or encounter service item supply cost on a single patient record seems faster than MEE

When the problem is that the meaning simply changed, like the oncology drugs

• Unit costing will no longer work. You must use the actual cost. This can be loaded in the Encounter Service Item Supply Cost field in a variety of ways using Model Builder, and will reflect the actual cost for each patient transaction

When the price varies too much

• Same answer
Some More Details on Solutions

You can send actual cost on the service item record…
You can only get price and know the markup…
The markup is tricky…
The actual invoice amount is available by service item…
We can get a feed of the supply items for each patient…

*Unless your charge detail is a random number generator, we should be able to get to the truth using independent objects and model rules.*
The Importance of Unit Cost vs. Actual Cost

Some hospitals are tempted by department/service item costing solutions, with the idea of marrying this data to their business intelligence tool.

The fatal flaw is in that such a solution can only handle unit costing, not actual patient costing.

We are growing more dependent on patient level actual costing, with data from other sources frequently involved. Performance Manager with Independent Objects and Rule Builder is the only practical solution.
How do we Educate Others?

Assemble a library of readily available resources:

- High level documentation of your process
- FAQs on your process
- White papers
- PowerPoints
- Web meetings

Anticipate your users needs and questions – they are continually being marketed to and distracted by others.

Your role includes defending your solution. Otherwise the investment that you and your organization has made could be wasted.
Conclusions

• Beware “old wine in a new bottle.” Most of what is purported to be new and a breakthrough is new spin
• Resist the temptation to go “over the top” and build an unsustainable solution
• A hybrid costing solution uses methods appropriate to the situation in each department
• PM costing supports multiple approaches, each of which can be useful in a given situation
• Improved ABC compliance strengthens your PM costing solution and improves your ROI
• Improved attention to overhead costing is long overdue
• By adopting the best methods where appropriate, improving your solution, you are building credibility for your data, ultimately advancing your department and yourself