



[GUIDEBOOK]

CALCULATING PROFITABILITY FROM THE MEDITECH DATA REPOSITORY



A MEDISOLV PUBLICATION

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INTRODUCTION

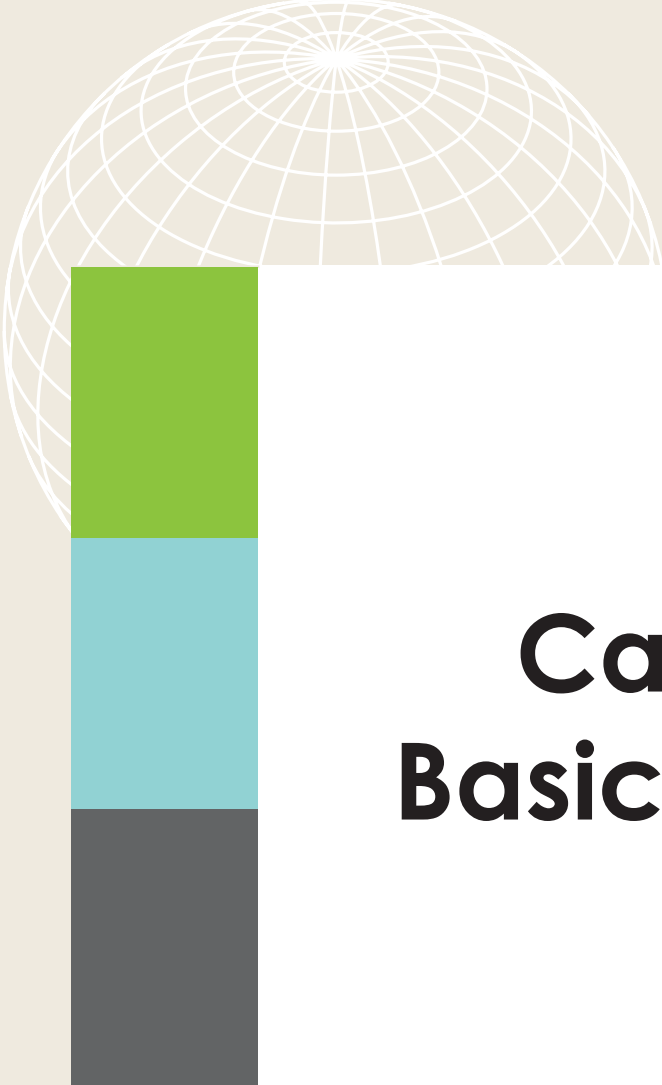
Hospital case costing is a valuable tool for you to identify opportunities to reduce costs and increase profitability within your hospital. With this powerful information, you can more accurately price the products and services that your hospital provides, while identifying opportunities to reduce the cost.

But hospitals today are still struggling with implementing a solution that provides visibility into operational costs without being daunting and overwhelming. With the more recent shift from the fee-for-service model to the pay-for-performance model, hospitals continue to grapple with the rising cost of pharmaceuticals, human capital, administrative costs and technical equipment against the diminishing reimbursement funds each year.

Although, shouldn't it be much easier to understand your hospital's costs in today's world? Never have hospitals had as much data available for analytics at their fingertips. Over the last two decades, hospitals have been transformed with the dawn of Electronic Health Record (EHR) technology and the subsequent government regulations that required the use of these technologies. All of that data captured within the EHR can help piece together your understanding of your hospital's costs. Hospital cost, of course, is a critical component to understanding the profitability of your hospital.

In this guide we examine how you can leverage the data currently available in your MEDITECH Data Repository (DR) to quickly and successfully implement a case costing methodology that will help you understand your hospital's profitability.

Let's get started.

A decorative graphic on the left side of the page. It features a white wireframe dome on a light beige background. Below the dome is a vertical bar with three colored segments: green at the top, teal in the middle, and dark grey at the bottom.


Chapter One

Case Costing

Basic Terminology

BASIC TERMINOLOGY

Before we begin, we want to define just a few terms that you'll see referenced in this guide. For our purposes, we define here four basic types of cost – direct, indirect, fixed and variable costs. To help us define these types of costs we are going to use an example of a service that a hospital would provide to a patient. Let's use the example of an *MRI of the Brain with Contrast*.

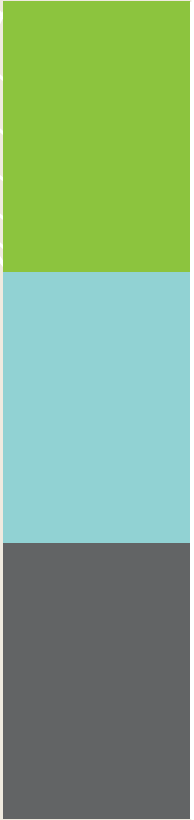


Direct costs: Direct costs are the costs associated with that particular procedure or service that your hospital provided. In our MRI example, the cost of the radiology technician would be a direct cost.

Indirect costs: Indirect costs are costs associated with the procedure you provided to the patient, but which can't be directly tied to that procedure. An example of an indirect cost in a hospital setting is the cost of electricity used by the MRI or other overhead costs.

Fixed costs: Fixed costs are costs that do not change depending upon the procedure you perform. For instance, the depreciation of the MRI machine is considered a fixed cost.

Variable costs: Variable costs are costs that do change depending upon the procedure your hospital performs. For example, the MRI contrast (supply) would be considered a variable cost.



Chapter Two

Case Costing Methodologies

METHODOLOGIES

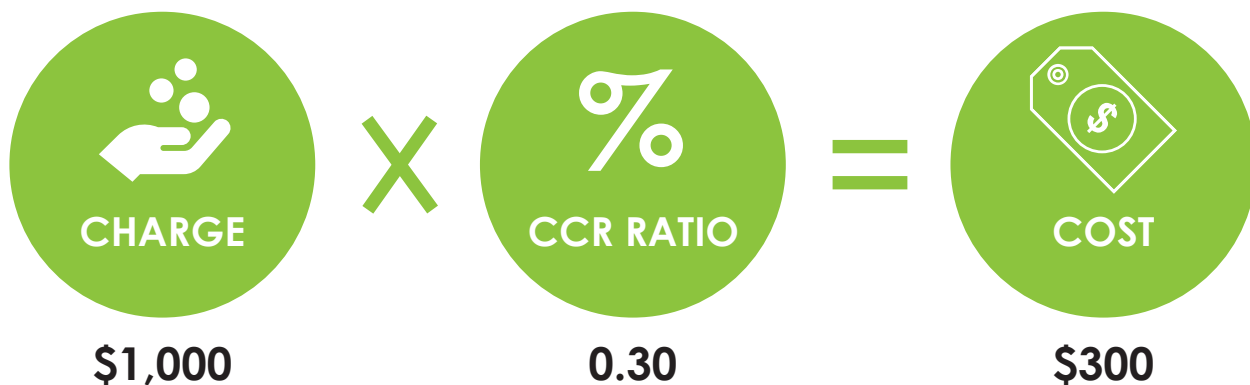
There are several different methodologies for case costing. We are going to review two of the commonly used methodologies followed by a blended approach that combines the two methodologies.

Departmental Cost to Charge Ratio Method

The quickest path to acquiring cost data is using the Cost to Charge Ratio (CCR) by department. This methodology involves applying this ratio against the charge of the service in order to calculate the cost.

In the example below you will see that the hospital charges \$1,000 for an *MRI of the Brain with Contrast*. The Cost to Charge Ratio is 0.30, which means that the cost to the hospital for performing that procedure is \$300.

IMAGING PROCEDURE: MRI of the Brain with Contrast



The Cost to Charge Ratio can be developed internally by the hospital or many hospitals choose to use their annual Medicare Cost Report as the source for the CCR. In the example above, the procedure is performed in Imaging. The CCR for all Imaging departments is 0.30; therefore, this ratio is applied to the \$1,000 charge for the *MRI of the Brain with Contrast* resulting in a cost of \$300 for the hospital. To have an accurate cost for an encounter you must have a cost calculated for every transaction posted to that encounter.

Departmental Cost to Charge Ratio Method

BENEFITS:

It's an easy way to get a basic system in place. As charges are posted daily in your EHR, the CCR is applied against the charge to calculate the cost of the service. This provides visibility into the cost of the procedures performed in your hospital.

Medisolv recommends beginning with this methodology for a quick case costing and profitability analysis.

DRAWBACKS:

This methodology generalizes many of the costs associated with the procedures. Applying the same ratio to all BAR Procedures within a department does not allow for the cost variation of priority services within a department. For example, a CCR of 0.30 may be accurate for a MRI of the brain but not for an x-ray of the wrist.

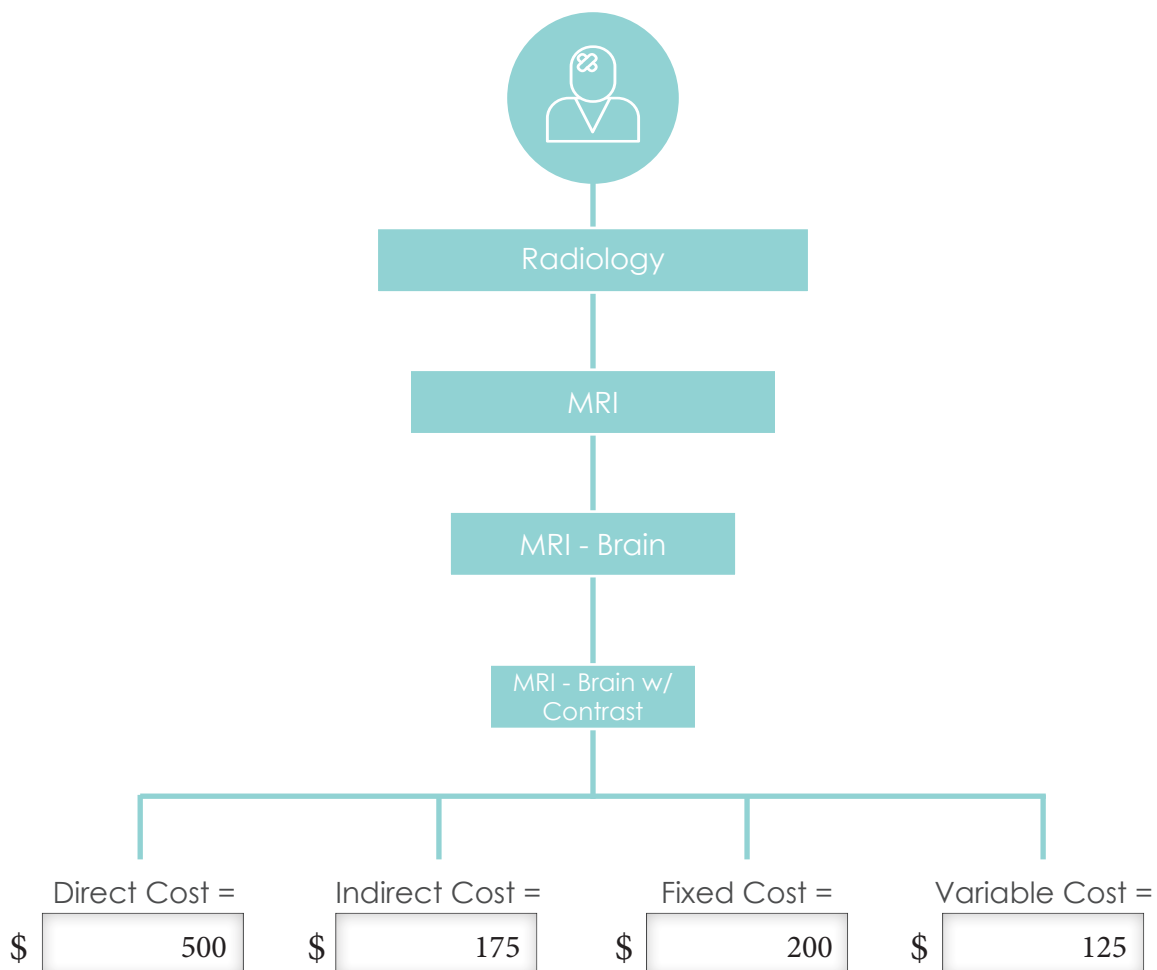


BAR Procedure (Charge Master) Costing Method

A more accurate form of case costing is the BAR Procedure methodology. BAR (Billing/Accounts Receivable) Procedure requires a hospital to upload Direct, Indirect, Fixed and Variable costs associated with each BAR Procedure item.

In the example below, you'll see how thorough this process can be. For each procedure, there are many expenses to consider. The saying, getting down to brass tacks, is applicable in this situation. It's not just a matter of asking a question such as, "What is the Direct, Indirect, Fixed and Variable cost for the time a patient spent in an Operating Room while having a Total Hip Replacement procedure?" You must also consider what the Direct, Indirect, Fixed and Variable costs are for all charge transactions that were used in performing the procedure. This bottom up approach can have you swimming through thousands of elements to determine the appropriate cost per procedure.

IMAGING PROCEDURE: MRI of the Brain with Contrast





BAR Procedure (Charge Master) Accounting Method

BENEFITS:

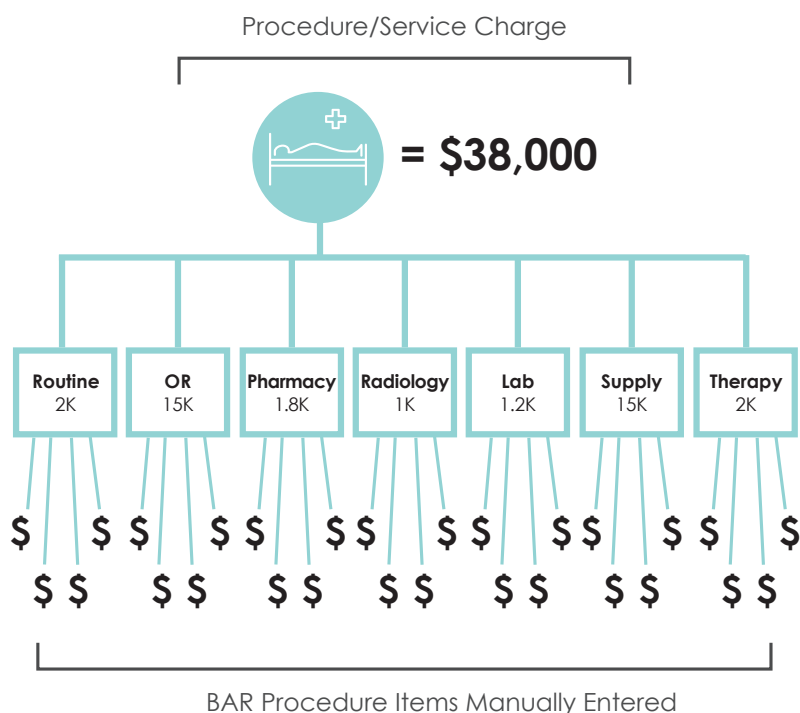
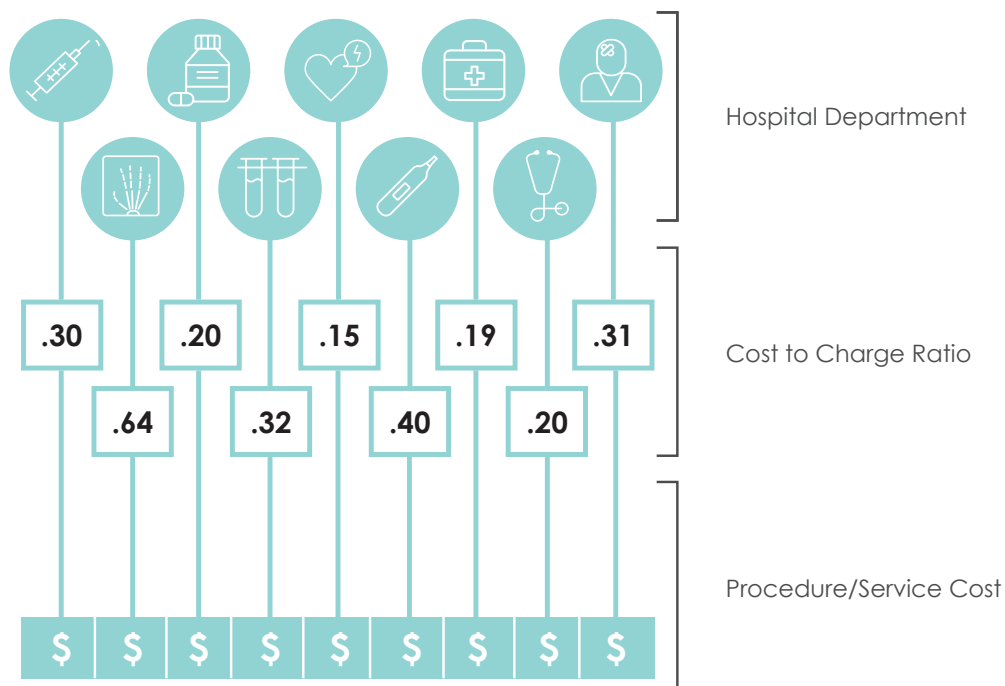
This methodology allows for much more specific costing. By using this methodology, hospitals can see the areas where the costs are uncontrolled and assess what can be managed to lower the cost of the procedure or service.

DRAWBACKS:

BAR Procedure costing is time intensive. It's not just the cost of figuring out the Direct, Indirect, Fixed and Variable costs during the initial set up (although as you can see in the example above, that is a sizable task). It's also the time and resources allocated to maintaining the costs for thousands of Charge Description Master items. This type of case costing is unrealistic for many hospitals that don't have the human resources available to successfully implement and maintain this process.

Blended Approach Accounting Method

This methodology incorporates both the CCR and BAR Procedure costing methodologies. In this approach, most procedures performed in a hospital use the CCR methodology to address the cost. However, for specific high impact or high cost procedures, the BAR methodology is applied.





Blended Approach Accounting Method

BENEFITS:

This blended approach takes away much of the heavy lifting of implementing a case costing system, but still allows you the visibility into some of your high-risk procedures by customizing which procedures have detailed cost figures applied.

DRAWBACKS:

The drawbacks to the Blended Approach are similar to the CCR methodology drawbacks, in that the majority of procedures have generalized costs. As such, it's not a 100% accurate system for accounting for total hospital costs.

Medisolv's recommendation for hospitals that currently don't have a case costing solution in place is to begin with the CCR methodology (using your Medicare Cost Reports as the foundation). This allows your organization to implement a solution very quickly and begin to analyze your profitability. Over time you can move to the blended approach by costing out individual BAR procedures to provide a more accurate cost.



Chapter Three

The Benefits of Case Costing

BENEFITS

Once you have determined the cost of each procedure or service, you are then able to use that cost data to help you streamline your hospital operations. Some of the benefits of a case costing system include:

Pricing your services correctly



Instead of blindly assessing charges for procedures, analyzing your costs will give you a better idea of the appropriate amount to charge for a procedure. Particularly, your BAR Procedure items will offer enhanced visibility into the reason(s) why a procedure costs the price it does. This is quite important in today's world as patients are looking for more transparency when it comes to health care charges.

Understanding your margins



Shrinking hospital margins headline much of the news in the health care industry. But how do you know if your margins are shrinking if you aren't sure what your margins are? By putting a case costing system in place, you can reveal your true margins.

Identifying areas to reduce costs




Year after year it becomes more important for hospitals to reduce their costs, especially as Medicare reimbursements are shrinking. By assessing their cost data, hospitals can determine opportunities to reduce costs in areas such as labor, supplies or overhead.

Marrying financial and clinical outcomes data



Creating a balanced view of your outcomes data involves assessing your clinical data and your financial data together to improve overall outcomes. As this data is analyzed, the top-level administration can piece together a better picture of the health of your hospital.



Chapter Four

Analyzing Your Hospital's Profitability

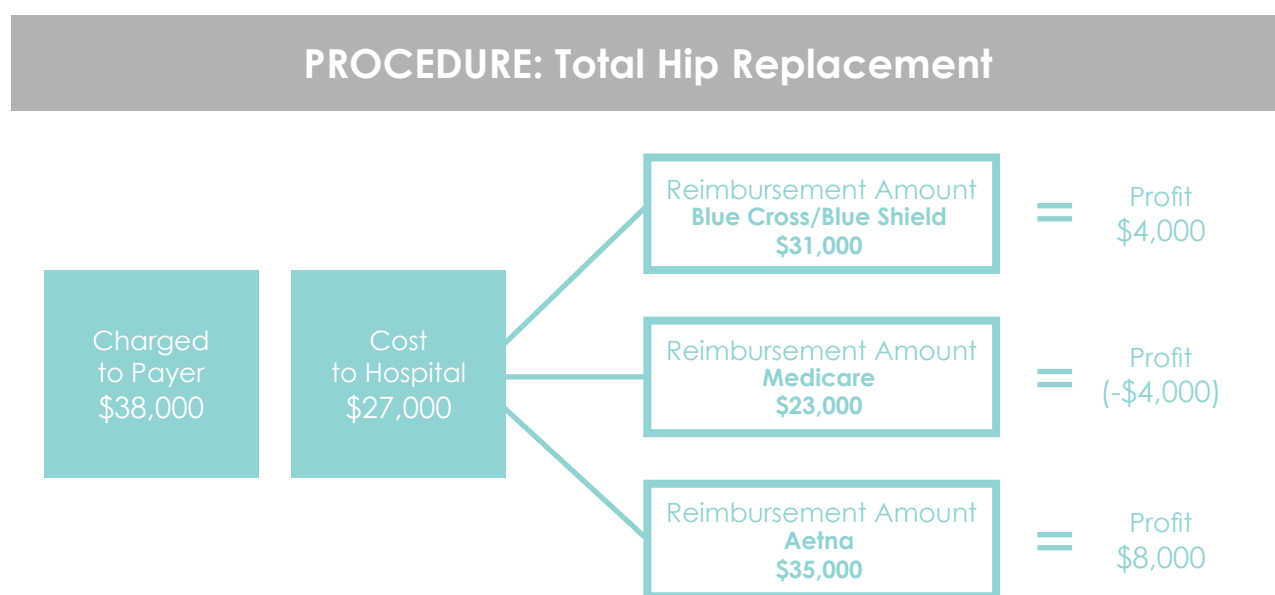
PROFITABILITY

Increasing the profitability of your hospital

The previously stated benefits allow you to assess and hopefully improve your hospital's operations. One of the biggest benefits that we will now review is the capability to understand the profitability of your hospital.

Calculating Profitability

Calculating your hospital's profitability is pretty simple; you must weigh your costs against your reimbursements. This can be complicated by the fact that each payer may reimburse you differently for each procedure that you perform. For instance:



In the example above, you can see that hospital profitability can vary based upon the particular payer. This is why having a proper case costing solution for your hospital is important because it can give you visibility into your profitability performance. If you didn't know what the case cost for performing the Total Hip Replacement procedure was, then you wouldn't know if that surgery was profitable either in this one instance or as a whole for all Total Hip Replacements performed in a year. And at a macro level, without a case costing solution you couldn't tell if your hospital was trending to be in the black or in the red at any given time of the year.

Types of Reports to Assess Profitability

Here are some additional examples of reports you could run to help you assess your hospital's profitability.

Profitability

- Trending profitability of the hospital or individual department
- Profitability of your entire inpatient population
- Profitability by individual procedures
- Profitability by DRG
- Profitability by payer
- Profitability by provider
- Profitability by location

Cost

- Cost of a patient's entire stay
- Cost per procedure by department
- Cost per procedure by Attending or Surgical Provider
- Cost per procedure for CPT procedures

Executive leadership and department heads can use this information to assess the profitability of these elements and determine the costliest of hospital procedures, providers, payers, etc.





Chapter Five

Getting Started with Hospital Case Costing

GETTING STARTED

While this guide attempts to simplify the methodologies of case costing, it's obviously not as simple as just picking a methodology and diving in. You're probably thinking, "tell me something I don't know." To get started we recommend that you consider the following factors:

Determine Your Goals



While it seems like an obvious place to start, this can take some time to do correctly. It may involve figuring out where you currently stand and then determining what you want to achieve. Is your goal to cut costs by 10%? Perhaps your goal is just to get a system in place and then reevaluate after a year. Or maybe there are specific high-cost areas that you want to try to control. Decide on your goal before implementing hospital cost accounting and make sure everyone who is involved with the project understands that goal and is using that goal to focus their energies.

Decide on the Balance Between Methodologies



During your evaluation of your current state, look for the areas where you can make the most impact to cost. This evaluation should contain an assessment of the opportunity that's available balanced with the effort it would require to get accurate results. Some procedures may be not worth the effort of using the BAR Procedure method because of low return on investment or complexity of set up and maintenance. Determine which procedures you will use the BAR Procedure methodology for and use the CCR methodology for the remaining services.

Set a Realistic Timeline



Do you have other major projects coming down the pipeline? What else does IT have on their plate? Keep in mind that it's not just IT that needs to be considered. You should understand what resources are available and what is required from each of the departments that will be involved with this project. Weigh these obstacles against your goals to determine a realistic timeline for implementation. Going too fast may cause some critical oversights that could ultimately affect the performance of the project or even cause failure.

Assign Ownership

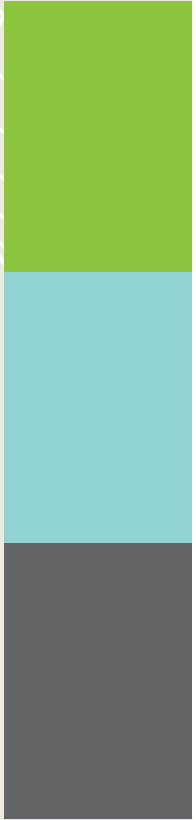


As with any project, ownership is a big part of why your goals ultimately succeed or fail. The right person in the ownership position will ensure that the project is moving along, that internal deadlines for implementation are being met and that communication is effective to all parties involved. The owner can help bridge gaps between finance, IT and clinical departments that will use the cost data.

Get Executive & Staff Buy-In



No one wants to be floating out there on their own. Given the fact that this project will hopefully bring your hospital more money by reducing costs and increasing profitability, executive leadership buy-in might not be that hard to achieve. But your executive team will need to understand the scope of the project and ultimately have a clear picture of how this will benefit the hospital in the long run. Consider who from leadership, finance, IT and clinical departments will need to be involved and keep in tight communication with them. Consider staff buy-in while deciding on how to prioritize the elements of this project. Those that are ready and willing could go first, while those who need more time can come along later when many of the initial wrinkles have been ironed out.



Chapter Six

An Easier Case Costing Solution


SOLUTION


Medisolv has simplified the process of setting up an effective case costing solution with our RAPID software. Our software allows you to load Cost to Charge Ratios for departmental charges as well as at the BAR Procedure level.


CCR Data


For most of your charges, you'll upload your Medicare Cost Report to specify the Department Cost Ratio. Once this percentage is entered in, your daily charges posted within your MEDITECH DR will apply this ratio and calculate the cost. CCRs also have an effective start and end date which allows the CCR to be updated as frequently as needed.


medisolv
RAPID


Administration

Dashboard

Home

Indigo











Search

Help

NOTE : Cost Data in Summary Reports is only available after the nightly Update Runs

Departments

01 4240 - BMH MRI
01 4250 - BMH PET SCAN
01 4260 - BMH NUCLEAR MED
01 4270 - BMH WOMEN'S CENTER
01 4280 - BMH ANGIOGRAPHY
01 4290 - BMH CATH LAB
01 4300 - BMH RESP THER

1	Start Date	End Date	Department Cost Ratio	Edit
	10/1/2016	9/30/2017	0.098102	 
	10/1/2015	9/30/2016	0.098102	 
	10/1/2014	9/30/2015	0.098102	 
	10/1/2013	9/30/2014	0.110104	 
	<input type="text"/>	<input type="text"/>	<input type="text"/>	  Add
1				

BAR Procedure Cost Data

BAR Procedure costing works in a similar way. You first narrow down which department and then specific procedure you are entering costs for. You then enter the Direct, Indirect, Fixed and Variable costs for each procedure. You can also apply a date range for these costs to be active. For calculating BAR Procedure cost data, Medisolv first calculates the BAR Procedure items that have cost information entered and for the remaining BAR Procedure items, the CCR from the previous page is applied.

The screenshot shows the Medisolv RAPID interface. At the top is a navigation bar with icons for Administration, Dashboard, Home, Indigo, Search, and Help. Below this, there are two dropdown menus: 'Bar Procedure' and 'Department'. The 'Bar Procedure' dropdown is open, showing a list of procedures including '4240092055 - BRAIN W CONT'. The 'Department' dropdown is also open, showing a list of departments including '01.4240 - BMH MRI'. Below these dropdowns is a 'View' button. Below the 'View' button is a table titled 'Cost Data for Bar Procedure: 4240092055 - BRAIN W CONT and Department: 01.4240 - BMH MRI'. The table has 8 columns: Start Date *, End Date, Direct Fixed Cost, Direct Variable Cost, Indirect Fixed Cost, Indirect Variable Cost, Standard Cost, and Edit. The table contains 7 rows of data for the year 2014, with dates ranging from 1/1/2014 to 7/1/2014. Each row has a yellow pencil icon and a red 'X' icon in the Edit column. Below the table, it says '7 records found'.

Start Date *	End Date	Direct Fixed Cost	Direct Variable Cost	Indirect Fixed Cost	Indirect Variable Cost	Standard Cost	Edit
1/1/2014	1/31/2014	\$7.62	\$148.23	\$142.40	\$0.00	\$298.25	
2/1/2014	2/28/2014	\$5.30	\$102.01	\$110.09	\$0.00	\$217.40	
3/1/2014	3/31/2014	\$5.98	\$89.67	\$113.14	\$0.00	\$208.79	
4/1/2014	4/30/2014	\$5.41	\$91.95	\$120.29	\$0.00	\$217.65	
5/1/2014	5/31/2014	\$5.08	\$93.23	\$105.10	\$0.00	\$203.41	
6/1/2014	6/30/2014	\$5.85	\$83.54	\$104.46	\$0.00	\$193.85	
7/1/2014	7/31/2014	\$5.25	\$91.20	\$99.88	\$0.00	\$196.33	

7 records found

Reporting

Medisolv offers a wide range of customizable reports that give you visibility into the cost and profitability of your hospital, including all reports listed on [page 17](#). But the best part is that you don't have to do it alone. Medisolv consultants will walk you through the entire process including helping your team to locate the reports that are most important to your hospital.

INTERESTED IN OUR SOLUTION?

Let Medisolv help you with your hospital's profitability troubles. To find out more about our solution or to see a demo of our product, please visit our website.

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