



Let's Take a Break!

Cost Analysis Basics

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Presented by  National Technical Assistance Center
Contracting & Reimbursement Expansion with
Medicaid & Marketplace Insurance Plans and  Positive Outcomes
INC.

Building Capacity Among RHWAP Core Medical Providers to Maximize Client Health Outcomes in an ACA Environment ¹

Welcome to today's webinar. Thank you so much for joining us today for our second of three "virtual breaks" for healthcare organizations, such as community health centers, hospitals, university-based clinics, and health departments. We designed these brief, 30-minute webinars, not to teach you everything you need to know about a topic, in the case cost analysis, but to provide you an overview of next steps to take at your organizations.

It is critical that core medical providers have a strong understanding of what it costs to deliver services. Revenue generated from billing can contribute to the long-term sustainability of RHWAP-funded healthcare provider services – but only if the amount of the revenue for delivering services covers the actual costs to provide those services. A cost analysis allows you to determine revenue realized versus billed and study utilization to determine frequently performed services and procedures. Understanding the cost of providing these services will equip you with the information you need to negotiate or re-negotiate contract terms that cover your expenses, as well as allow you to look for areas of improvement and identify ways to reduce costs.

Poll Question

In the past year, what response best describes your HIV program's activities in determine the cost of your services?

- A. Costs for all services were calculated
- B. Costs for some services were calculated
- C. We have not calculated our costs in the past year
- D. Don't know



I'd like to give Dr. Hidalgo a sense of who is on the line today and what your experience with Cost Analysis has been.

In the past year, what response best describes your HIV program's activities in analyzing the cost of your services?

- A. Costs for all services were calculated
- B. Costs for some services were calculated
- C. We have not calculated our costs in the past year
- D. Don't know

Learning Objectives

By the end of this webinar, you will be able to:

- Describe basic concepts to conduct a cost analysis
- Identify the data needed to conduct the analysis
- Identify how to request technical assistance (TA) from CRE to support agency in contracting efforts



The results of the poll are helpful in setting the stage for today's webinar. We designed today's virtual break to address the basic needs of program managers and other key staff that may be unfamiliar with cost analysis, want to sharpen their skills, or learn how to get TA in cost analysis.

Let's quickly review our learning objectives for today's webinar. By the end of this webinar, we hope you will be able to:

- Describe several approaches to conducting cost analysis,
- Identify the data needed to conduct the analysis, and
- Identify how to request TA from CRE to support your contracting efforts.



Our webinar today summarizes information provided in greater detail in CRE's soon to be released CRE resource, *Cost Analysis Basics*. Make sure to join the CRE listerv to be alerted to it's release.

What is Cost Analysis?

- Process to determine the cost for delivering a service
 - Identifies costs per procedure, service, or visit, as well as total aggregate programmatic costs
 - Allocates costs to services provided based on the resources used to deliver services

Cost analysis is a process to determine the costs of a program, including the components contributing to costs.

You can use your organization's accounting system to estimate the costs associated with the services provided, based on the resources needed to deliver those services.

Costs can be calculated per specific procedure, service, or visit. Costs can also be aggregated or summed across services or programs to calculate total programmatic costs.

Cost analysis helps us to identify the various cost inputs that are needed to produce a unit of service. In doing this analysis, factors driving costs can be identified. Factors that are not readily associated with a service may also be identified and addressed to reduce its impact on program costs.

Cost analysis also allows us to compare computed costs to the payment rates of health insurers and other funders, including grant programs such as the RWHAP.

What are the Benefits of Cost Analysis?

- Inform development of charges (setting fees)
- Compare cost for providing a service vs payment received
- Determine if program is generating a profit, losing money, or breaking even
- Determine if costs are higher than health insurance payment levels
 - Assess the factors contributing to the costs
 - Examine ways to reduce costs
- Identify high cost, unprofitable services

Let's address the benefits of cost analysis. Cost analysis helps to develop or refine your fee schedule, including how much you would ideally like to charge health insurers, grant funders, and patients.

There are other benefits as well. As we just discussed, the results of cost analysis allows us to compare the cost for providing a service versus the payment received. Such a comparison helps to determine if your organization or program is generating a profit, losing money, or breaking even.

If your costs exceed payments, you should assess factors contributing to costs and identify ways to reduce them. For example, labor commonly drives a large portion of healthcare costs. In your analysis, you might assess the costs of substituting a nurse practitioner for a physician to provide primary care services. You might also assess the cost of employing a health educator to conduct patient education services previously performed by a clinician. You might also consider ways to reduce overhead, such as relocating to a less expensive office.

Your cost analysis may also identify high cost services or programs for which insurance payments consistently fall short of your costs. That service might be discontinued or other approaches used to reduce the costs while ensuring high quality.

Cost analysis is an important activity in this rapidly shifting financial landscape. It should be undertaken periodically to ensure that your program is solvent and that your revenue exceeds or approximates your program's costs!

Real World Applications



University HIV Clinic



Mobile HIV Care Van



Let's discuss several real world examples of the application of cost analyses.

In the first example, an HIV clinic operates in a large university hospital. The clinic was given a fixed budget each year by the university. The hospital recently was sold to a large healthcare corporation. The corporation now provides insurance billing, an EHR, payroll, and other infrastructure required to operate the clinic. The system requires that the clinic pay a "facilities fee" for each patient served to recoup their costs. The HIV clinic's costs must be computed to ensure that grant funds and insurance payments cover their operating costs.

In another example, an HIV clinic operates a mobile HIV care van throughout a large city. In calculating the cost of operating the van, the program did not anticipate that the van would have to idle when operated in the community to use the air condition and refrigerator. They had not anticipated that their gasoline costs would be a significant outlay associated with the van's use and did not include it in the negotiation with their funder.

GETTING STARTED



Let's get started in understanding the basics of cost analysis. A key ingredient to accurate cost analysis is establishing your analysis team, which can differ greatly by organization type and infrastructure.

Getting Ready for Cost Analysis

- Larger institutions may already conduct cost analysis for your program
 - Review the results!
- Review and ensure accuracy of:
 - Data used to develop analysis
 - Cost inputs
 - Computed cost estimates

In large organizations, your institution may conduct external cost calculation routinely for your HIV program or department. It is important to review the data used, ensure all relevant cost inputs are captured, and cost computation is accurate. For example, allocation of costs of staff shared across HIV programs should be accurately estimated. Your payroll system may not allocate front desk staff accurately to capture the cost of those services.

Who is Typically Involved

- Budget and payroll staff
- IT or data management staff
- Staff familiar with health insurer fee schedules
- You

Some agencies have not conducted cost analysis and do not have a finance department to support programs such as yours. In turn, you may not have the expertise needed to gather and analyze data to conduct cost analysis. In this case, it is ideal to convene a team to plan and conduct the analysis.

Accounting and finance staff responsible for your agency's budget and payroll system are needed to generate cost input data. Data management staff are also needed to gather accurate patient utilization data. Finally, someone familiar with insurers' fee schedules is also needed to gather information to determine adequacy of payment.

In small organizations, accounting, payroll, IT, and data management functions may be assigned to a single individual. In fact, that person might be you.

Steps to a Cost Analysis

- Step 1: Define the unit of service
- Step 2: Determine number of service units provided
- Step 3: Determine direct and indirect costs
- Step 4: Determine the full cost of service
- Step 5: Calculate the average unit cost

Here are the basic steps to conducting cost analysis:

Step 1: Define the unit of service

Step 2: Determine the number of service units provided during a defined period

Step 3: Determine direct and indirect costs or expenses

Step 4: Determine the full cost of service by adding the expenses together

Step 5: Calculate the average unit cost.

Step 1: Define Unit of Service

- Established based code sets
 - OAMC (CPT) 99211
 - Office or other outpatient visit for evaluation and management of an established patient that may not require the presence of a physician; usually presenting problem minimal, five minutes
 - Dental (CDT) D0120
 - Periodic oral evaluation
 - Case management (HCPCS) T1016
 - Each 15 minutes of a case management encounter

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Regardless of the cost analysis approach you choose, the key to each approach is the definition of the “unit of service.” Commonly, healthcare providers define their units of service based on definitions established as industry standards- such as CPT, HCPCS, and CDT code sets. It is important to note that the service definitions used in these code sets are much more granular components of the broad service definitions uses by the Ryan White Program.

Examples of units of service are shown on the slide. CPT codes, or Common Procedure Terminology, are maintained by the American Medical Association (AMA) to define medical, surgical, and diagnostic services in submitting claims to insurers. CPT 99211, for example, is assigned to an office or other outpatient visit for evaluation and management of an established patient that may not require the presence of a physician. This procedure is assigned when the presenting problem minimal and requires a five minute visit.

CDT codes, or Current Dental Terminology, are maintained by the American Dental Association. For example, CDT D0120 is assigned to a periodic oral evaluation.

Medicare uses HCPCS, or the Healthcare Common Procedure Coding System. HCPCS are assigns to each task and service a healthcare practitioner may provide to a patient. HCPCS T1016, for example, is assigned for a every 15 minute increments of a case management.

Step 2: Determine # of Units Provided *Utilization*

Common codes used for OMAC visits

CPT Code	Description	Total Visits Per Year
99202	New Patient - Limited Exam	100
99203	New Patient - Inter Exam	400
99211	Continuing Patient – Brief	500
99213	Continuing Patient - Inter Exam	1,000
Total		2,000

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Your cost analysis also should include patient utilization data that measure the frequency in which procedures or other services are provided to project future utilization. Trend analysis for at least a three-year period helps to ensure that utilization projections are stable and not impacted by staff turnover or other factors driving changes in service use. Trend data for several years also help address services that are infrequently performed or in agencies with low patient volume. Such data should be available through your EHR or client-level data system.

For those of you that are math-challenged, in this application, trend analysis is simply an average or mean of the total procedures in a three year period!

In this example, ABC HIV Clinic is a small clinic. Their EHR was used to calculate the number of procedures conducted in the last 36 months for their most common CPT codes. They computed an average of 2,000 total procedures per year.

Step 3: Determine Direct & Indirect Costs

OAMC CPT Code Example	99202	99203	99211	99213
Time and Cost Inputs	New Patient - Limited Exam (20 min)	New Patient - Inter Exam (30 min)	Continuing Patient – Brief (5 min)	Continuing Patient - Inter Exam (15 min)
Direct costs				
Labor + Fringe	\$6,608	\$39,648	\$8,260	\$49,560
Clearinghouse	\$100	\$400	\$500	\$1,000
Medical Supplies	\$400	\$1,600	\$2,000	\$4,000
Indirect costs				
Indirect Costs (25% of Total Labor Costs)	\$1,652	\$9,912	\$2,065	\$12,390

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It is useful to identify the resources available to collect the data needed to conduct a cost analysis. To assess the approach that is best for your program, it is important to evaluate the availability of detailed data needed to compute cost inputs for specific services. In other words, what are the costs associated with delivering those services?

Cost inputs vary from service to service. For example, mental health services require a minimal amount of supplies. In contrast, oral health services require a substantial amount of supplies, disposable equipment, medications, and costs related to maintenance of dental operatories.

To continue our example, ABC clinic identified their cost inputs. Their staff analyzed payroll records to compute each employee’s hourly wage rate and associated fringe benefits. They applied their indirect cost rate of 25% to wages and fringe benefits to compute their hourly and then per minute cost. Their average cost per minute was \$4.13. They applied their indirect cost rate of 25% to wages and fringe benefits.

ABC Clinic also assessed the cost of a consulting billing service who charges \$1 per submitted claim. They also analyzed their medical supplies expenses and “guesstimated” that they spent about \$4 per procedure.

Step 4: Determine Full Cost of Service

OAMC CPT Code Example	99202	99203	99211	99213
Time and Cost Inputs	New Patient - Limited Exam (20 min)	New Patient - Inter Exam (30 min)	Continuing Patient – Brief (5 min)	Continuing Patient - Inter Exam (15 min)
Labor + Fringe	\$6,608	\$39,648	\$8,260	\$49,560
Clearinghouse	\$100	\$400	\$500	\$1,000
Medical Supplies	\$400	\$1,600	\$2,000	\$4,000
Indirect Costs (25% of Total Labor Costs)	\$1,652	\$9,912	\$2,065	\$12,390
Total Per Procedure	\$8,760	\$51,560	\$12,825	\$66,950

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ABC Clinic staff then calculated the full cost of service by adding the direct and indirect costs together for their most frequent CPT codes. CPT codes are tied to an average number of minutes per procedure, as shown here.

Based on their calculations, a total cost of \$8,760 was estimated for CPT 99202- new patient with a limited exam. The cost for other procedures is also shown in the slide.

Step 5: Calculate the Average Unit Cost

OAMC CPT Code Example	99202	99203	99211	99213
Time and Cost Inputs	New Patient - Limited Exam (20 min)	New Patient - Inter Exam (30 min)	Continuing Patient – Brief (5 min)	Continuing Patient - Inter Exam (15 min)
Total Direct	\$11,195	\$39,170	\$10,244	\$51,462
Indirect Costs (25% of Total Labor & Fringe)	\$2,065	\$12,390	\$2,581	\$15,488
Total Per Procedure	\$8,760	\$51,560	\$12,825	\$66,950
Total Visits per Year	100	400	500	1,000
Average Service Unit Cost	\$87.60	\$128.90	\$25.65	\$66.95


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ABC Clinic staff then calculated their average service unit cost by dividing their total procedure cost by the number of visits, or number of times that code had been used, that year.

Based on their calculations a unit cost of \$87.60 was estimated for CPT 99202- new patient with a limited exam. The cost for other procedures is also shown in the slide.


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Optional: Cost per Visit Using Relative Value Units (RVUs)




New patient,
expanded visit

Work RVU	Overhead RVU (Facility)	Malpractice RVU
0.93	0.44	0.07



Destruction of penis
lesion

Work RVU	Overhead RVU (Facility)	Malpractice RVU
1.29	1.69	0.16



Everything is relative!

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So far we have discussed an approach to cost analysis that programs can undertake. We want to give you an overview of another approach that you might undertake with your accounting and finance staff. Medicare uses the Relative Value Unit (RVU) to calculate their fee schedule for physician services. Medicare pays physicians for services based on CPT codes. Therefore, it may be advantageous to calculate your unit costs using RVUs. Each CPT code has a RVU assigned that is multiplied by a conversion factor and geographic adjustment to set payments for the service. An RVU is a conversion factor, NOT a dollar amount.

In this approach, physician work, practice expenses, and professional liability insurance are accounted for to determine the relative costs of one type of physician service versus others. Physician work RVUs adjust for the relative level of time, skill, training, and intensity required for each service. Practice expense RVUs address the cost of maintaining a practice such as rent, equipment, supplies, and non-physician staff costs. Malpractice RVUs represent payment for professional liability expenses.

Here is an example of how RVUs modify the CPT code, as the work, equipment and malpractice insurance is understandably higher for a medical procedure than a new patient visit.

Regardless of the approach taken, it is important to be aware of your organization's costs and to calculate routinely to account for cost of living adjustments (COLAs), increases in overhead due to increased rent or malpractice insurance, and other factors. It is also important to use cost analysis in planning new services to ensure adequate payment.


Using Cost Analysis Data: *Next Steps for Analysis*

Let's move on to application of cost analysis data for contracting.

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Comparing Cost to Payment

CPT Code	Description	Total Visits Per Year		Cost Per Service Unit	=	Total Cost Per Year	Medicaid FFS \$ Per Visit	Medicaid FFS Total Payment	Difference Cost Versus Payments
99202	New Patient - Limited Exam	100	X	\$87.60	=	\$8,760	\$35	\$3,500	(\$5,260)
99203	New Patient - Inter Exam	400	X	\$128.90	=	\$51,560	\$45	\$18,000	(\$33,560)
99211	Continuing Patient - Brief	500	X	\$25.65	=	\$12,825	\$30	\$15,000	\$2,175
99213	Continuing Patient - Inter Exam	1,000	X	\$66.95	=	\$66,950	\$40	\$40,000	(\$26,950)
Total		2,000				\$140,095		\$76,500	(\$63,595)


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Now that we know the total cost of services provided by ABC Clinic, does payment received from Medicaid cover their costs?

Using our example, ABC Clinic staff obtained the Medicaid fees paid for each procedure. The data were found in their State Medicaid program's fee schedule, which is posted in on their provider website. The Clinic staff compared the total amount of Medicaid fee-for-service revenue anticipated for 2015 and compared those estimates with their calculated costs. They computed the Medicaid payment expected for each procedure based on their estimated total visits per year and summed across the procedures.

For the four procedures shown here, the Clinic's total estimated cost is \$140,095 and their expected Medicaid payments total \$76,500. Thus, the Clinic would lose about \$63,595. Faced with this shortfall, Clinic staff must consider how to decrease their costs or increase their revenue. Since they participate in Medicaid fee-for-service, it is unlikely that they can negotiate an increase in their payments. Other strategies might also be considered.

Poll 2

What might ABC Clinic do to break-even in the future?

- A. Reduce the amount of time the MD spends with each patient
- B. Substitute a less expensive clinician, such as a PA or NP
- C. All the above

Based on this simple example, ABC Clinic would experience a short-fall in Medicaid payments of \$63,595 next year. Based on this analysis, what might ABC Clinic do to breakeven in the future?

The answer is C- both approaches can be taken. Their most expensive cost input is their physician's salary. A NP or PA might be substituted instead. The amount of clinician's time per patient per visit might also be reduced by shifting some activities to their RN.

Key Resources

- TA Costing Tool (TACT)
<http://hab.hrsa.gov/deliverhivaidscare/tactoverview.html>
- Determining the Unit Cost of Services:
A Guide for Estimating the Cost of
Services Funded by the Ryan White
CARE Act of 1990
<https://careacttarget.org/library/determining-unit-cost-services-guide-estimating-cost-services-funded-ryan-white-care-act>



Our webinar has addressed the basics of cost analysis. You may need to take more in-depth approach to address the various services provided by your agency. With such an approach, additional detailed data may be needed and cost calculations required to estimate accurate costs. Don't be put off by the need to use data and detailed computations! HAB supported the TA Costing Tool (TACT) to help your organization to compute detailed cost analyses.

TACT is an Excel-based tool that helps providers organize basic information to calculate costs. TACT is posted on the HAB TARGET Center, along with instructions and a training video.

Also, today's webinar draws upon the resource "Determining the Unit Cost of Services: A Guide for Estimating the Cost of Services Funded by the Ryan White CARE Act of 1990".

Webinar Highlights

- Identify if a cost analysis has been done by your organization
- A basic cost analysis can be completed with some key information
- RVU method is best practice for conducting cost analysis
- Use cost analysis data to assess cost vs. reimbursement
- CRE TA is here to assist you



To wrap up, here are some key highlights from today's webinar.

I hope that we have convinced you that cost analysis is an important step in expanding your efforts to contract with health insurers. We highlighted several approaches to calculate costs. In starting your analysis, it is important to define the units of service to be addressed. It is also important to use accurate, detailed accounting data to ensure reliable analytic results. It is also important to compare your unit costs with insurance payment rates to determine if your organization is losing money, making money, or breaking even.

Finally, we have identified several resources to help you conduct your analysis. Still unclear how to proceed? Contact CRE for TA.



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**Contact us
today!**

✉ **Contact us:** CRE.TA@caiglobal.org

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CRE provides free TA to RWHAP-funded core medical providers. Contact CRE today to schedule a call with one of our TA experts, like Dr. Hidalgo, today's presenter, to get answers to your billing and reimbursement questions or get your own cost analysis underway. Our experts can help you identify billable services, strategize marketing your services to insurers, and develop a plan to initiating or expanding contracting. We have several self-learning tools and resources already available on the TARGET Center website, such as the Resource Roadmap, Organizational Self-Assessment, and the 8 Essential Actions for Contracting. Email us today to get started Before we get to the Q&A, let me tell you briefly about our upcoming webinars.

CRE Webinar Series

Health Care Organizations

(30 minute "Virtual Breaks")

- April 2016: Negotiating Contract Terms *Stay tuned!*

Community-based Organizations

(60 minute webinar, co-presented with the HIV Innovation Center)

- How to Market Your HIV Program's Services to Insurers: Putting Your Best Foot Forward *Feb 25th*
- Strategies to Support Billing *May '16*



We do have a few upcoming webinar I wanted to mention some of our upcoming webinars.

Our last installment of the virtual break series will be later this spring on negotiating contract terms.

Our series for community-based organizations continues later this month with *How to Market your HIV Program's Services to Insurers – Putting Your Best Foot Forward*.



Thank you!

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