

Costing and Pricing Process Improvements in a Large State Public Health Agency

A Project by:

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Abstract:

The South Carolina Department of Health and Environmental Control uses a complex method of collecting costs. It includes processes to collect personnel cost, operating costs, etc. The results include costing all the way down to individual procedure codes provided. Many of these systems have not had a critical review in over 13 years.

My objectives were as follows:

1. Pull together a group of multidisciplinary staff from all critical levels of the agency.
2. Review processes and develop recommendations for improvements.
3. Develop plans to implement improvements.
4. Implement the plans.

The leadership experiences and challenges include getting staff from the accountants to the program managers to the front line nursing and various administrative levels to come to consensus on process improvements and to work out the details. This included overcoming obstacles such as personal agenda's, communication difficulties, turf battles, and the normal politics of forward progress in dealing with change and all that change entails in a large organization.

From a leadership perspective, I expected that the project would allow for me to enact some very positive and critical changes throughout all levels of the organization. This would happen through leadership opportunities for me in most every venue and every level of the agency. All of the work that was done in this project was completed without my having any direct supervision over any of the participants.

“How’s the weather up there?” or the Introduction / Background

The Department of Health and Environmental Control is a very complex organization with over \$500 Million in expenditures annually. The organization consists of almost 100 sites situated over 46 counties of the state with almost 6,000 employees. The organization is broken down by site, almost 100 spread out through all 46 counties of the state, 8 regions, collections of various numbers of counties, and multiple deputy levels. The largest deputy level in the organization is Health Services. Health Services consists of over 3,000 employees and manages most of the sites in the state.

The budgets for Health Services consist of almost 300 separate fund sources that total more than \$350 Million annually, many of which require separate reporting at a variety of levels.

The agency's costing efforts have been through a number of transitions over the years. The historical build-up of layer after layer of processes and procedures have resulted in a mish mash of complicated, misunderstood, and poor performing systems of information. This information is critical to the performance of the organization in many ways. These include the ability to hold management accountable for operations and cost effectiveness as well as establishing costing methods for determining fair and accurate prices for the services we provide to various payers. Included in these payers is the state level federal Medicaid payer. Our problems in completing the costing information as requested by our contractors have resulted in a number of issues over the years. These include a lack of trust, incorrect data, inconsistent data, over-charges and under-charges for services provided, along with associated financial difficulties from providing services that are not reimbursed.

It was expected that improvements in our costing information would have direct positive financial implications as well as direct improvements in accountability for maximizing services with available dollars resulting in improvements in health outcomes based on available funding.

At the time this initiative was started, there were already a considerable number of unresolved issues with the payers mentioned above. These payers had already started processes to modify our payment streams from cost-based to market-based activities and other initiatives that would reduce revenue paid to the agency. In other words, we were already a day late and a dollar short.

“Threading the Maze” or the Project Description, Objectives and Methodology

The Costing Project is an attempt to improve the agency's costing efforts. These improvements were expected to include more accurate, complete, and timely data. This data was also expected to meet the operating needs of the agency and its contractors.

When the project started, the costing processes for the agency were broken in many ways. The original designs for the way the costs were determined for many of the clinic services were technically sound. These designs were put in place during the early 1990's. Since that time, many things had changed in the services that were being provided in the clinics throughout the state. There were some updates during the following 13 years but some of the premises that the designs were built on were no longer valid.

With this in mind, the first thing the project attempted to do was to start a discourse. The communications for this discourse would start in the project team and bring in additional staffing as necessary in order to impact all the areas needed to make improvements.

Going into the project it was known that the committee's knowledge of the agency's very complicated costing processes was very spotty. This meant that once the group was brought together, a first step would be to get everyone on the same page and closer to the same level of knowledge. In the first meeting I scheduled a training session that would be conducted by the most knowledgeable experts in the agency from the Bureau of Finance.

As they provided the training it became apparent that not only training was needed: we also needed a common language. Many of the team members were health care professionals and were not familiar with many of the terms. We developed common terms or defined them as we went. These included things like indirect cost, overhead, variable costs, and direct costs. Even terms such as administrative costs needed to be clarified as each person brought their own understanding of cost when they walked into the room and very few of those "understandings" were common among the group. This language barrier has continued to be an issue throughout the project. This has also been an area of considerable positive gain for the entire group, as they have learned much about systems as well as other perspectives on ways to improve the various processes.

One of the first objectives for the group was to determine the issues that had to be resolved immediately and to prioritize them. There were a number of beleaguered programs where cost reports were contractually required, some of which had reimbursement rates at cost, but were not accurate or timely. Others had issues with reasonableness of our reported costs for our contractors. Initial priorities were based on dollar impact to the agency.

Each program or set of services was evaluated in a number of ways. These included the way we track our costs. The two parts of costs that we track include the personnel costs and the operating costs. We track the personnel costs through a system called PCAS, or the Personnel Cost Accounting System. We track our operating cost through a financial management system called AIMS, or Administrative Information Management System. AIMS is a statewide financial system which is a real time set of books for the agency. As funds are expended in the system, the costs are captured by tagging an analytical code to each line which tracks back to the activity in a program.

The third major part of the costing system is the way we capture the type and number of services we provide. This is probably one of the weakest links in the system as the capture of units of service is spread amongst many different systems, some which overlap and duplicate the count. The fourth and last major part of the costing mechanism is the actual computations and the formulas that are used. Some of these are very complicated with a number of methods and layers for allocations of levels of costs.

As the group evaluated each program or group of services each of the components was reviewed. Weak areas were identified and solutions or improvements were developed. Once the improvements were reviewed by staff at all of the critical levels of the organization, plans for implementation were completed and then executed. The execution included systems modifications, training, and follow-up.

To date the group has evaluated and implemented improvement plans over nine major program areas in the state. Some of these include the following:

- Family Support Services, a cost based Medicaid service that generated over \$17 million in services during State Fiscal Year 2005
- Family Planning, a Federal Title X service that generated almost \$17 Million in Medicaid Revenue for DHEC in State Fiscal Year 2005
- Sexually Transmitted Disease and HIV Programs
- BabyNet
- Vaccine administration costs and pricing

The following description of the Family Planning evaluation provides a good example of the results of the group.

“You’re Kidding, It Costs How Much?”

One of the first priorities of the group was to evaluate the Family Planning costing. In the 18 months prior to the evaluation, new Family Planning Medicaid education and counseling services had been implemented throughout the state with a corresponding increase in revenue. It did not appear that the total cost of Family Planning services had increased proportionately with the new procedure codes. Medicaid was questioning us as to why the new codes were being billed at a high level with no corresponding patient outcomes.

Upon initial review it became apparent that the costing methods had not been updated since 1993. This included the way we break down the total costs so that we can generate per service costs. Cost for specific procedure codes is not tracked by the agency. The group evaluated each part of the Family Planning cost process.

Starting with the personnel costs, which traditionally makes up over 80% of the cost of a service, it became apparent that there was statewide confusion as to how time should be coded among multiple activity codes that are tracked in our Personnel Cost Accounting System (PCAS).

PCAS is a very complex series of program codes, such as Family Planning, with a number of activity codes, such as clinic or administration. When the project started there were over 5,800 possible combinations of activity and program codes in Health Services alone.

But, back to our example, in addition to the general misunderstanding about how to code time in Family Planning, there were a number of activity codes in the program that were not needed which were adding confusion, since many folks were simply coding how they wanted to, rather than how the manuals or the programs directed staff to use those codes. This makes both the costs for those activities incorrect and also understates the cost for the activity codes they should have coded. The best solution for the group was to delete a number of the unneeded activity codes. This would simplify the codes and greatly

improve the accuracy of the data collected. We developed plans to delete 6 of the 14 codes, a reduction of 43%. We also put three of the remaining codes on the hit list to reduce to 1 once final plans were made. This would mean a final reduction of over 57% of the activity codes.

But one of the real problems with costing out the family planning services came from the way the agency breaks out costs per service. It uses a very complicated service weighting model. The weighting of the services for breaking out the total costs by service had not been updated since 1993. The services had changed considerably since that date. The service weights were based on the relative weight of actual time spent on each service compared to each other. A very small number of simple time studies had been done in 1993. In order to get accurate per service data, new weights had to be established in order to complete that year's cost report, which meant new time studies.

The group had to come up with a way to complete this part of the project quickly and with as much statistical validity as was possible. With the large variances in provider type, clinic location and type, and processes, the only way to complete a statistically correct sample was to do the entire population. Since that was not an option, we settled on attempting to get 100% sampling for a period of time from the three basic clinic types: A large clinic site, Richland County Health Department in Columbia; A medium clinic site, Lexington County Health Department in Lexington; and a small clinic site, Chester County Health Department. The Public Health Districts were going through a regionalization process at this time which meant that the area that we would be looking at was being merged from two Districts into one Region. This added levels of additional complexity. One of the parts of the Region was the previous Palmetto Public Health District. Palmetto was working with a Quality Management System that tracked the amount of time each client spent waiting and being served. After some discussion it was proposed that this system could be modified to capture the data needed. The Region Mgmt Team supported the effort and committed 100% of a full time Information Resource Consultant to the project for the needed 6 months of this phase of the project, which was all the time we had if we were going to meet the cost deadlines.

During the next 6 months, the committee worked with all the levels of the organization to complete the task, all the way from design, system modification, testing, implementation, and reporting. The project was completed on time. Once the system was completed and implemented, we were able to track the exact amount of time that each employee in the clinic came in contact with each client over the time frame. By breaking down the procedures produced during the visit, we were able to average time spent for each CPT procedure code. This led us to a much more accurate service weighting of the cost of each service. The cost reports were completed in a timely manner.

Unfortunately, the Medicaid agency had already decided to discontinue the payment of the education and counseling codes to the agency by that time. The implementation of the use of the additional education codes had been inconsistent and in some cases possibly incorrect. If the data had been available a year earlier Quality Management techniques could have been done that would have ensured proper use of the codes along

with the revenue to increase both the quality of our services in the program as well as the number of participants. It also became very clear that if the program management does not trust the cost data, they won't make the necessary changes in operations to accomplish improved operations. Plus, they won't trust the data if they don't understand where it comes from and are comfortable that the sources are correct. By having the program very involved in the process, tremendous progress was made in trusting the information which resulted in buy-in, plus, a much better understanding of the weaknesses of the systems.

Essentially the same evaluative process was used for each of the programs costing efforts reviewed to date. Each program had its own series of issues necessary to work through for success.

“The Price is Right”

Once costing is complete and hopefully accurate, you still have to price the service. In a number of programs and services this is as much an art as a science. DHEC has state legislative provisos in place that do not allow us to charge more than the cost of our service. This limits our pricing to the range from no charge to the total documented cost. As with any number of state agencies, we receive a number of funds that provide resources for specific purposes as well as general funds that can be used for multiple services. This makes a clean analysis more complicated depending on how you allocate those general funds. Federal funding also adds a level of complexity due to program revenue requirements and the inability to use these funds as Medicaid match.

The culture of our organization has been to never deny services based on ability to pay. Over the years this has become more contentious as we have had significant budget reductions, additional unfunded mandates, reductions in Federal Grant funds and reductions in earned revenue from Medicaid and other sources. This has made pricing much more critical. The Medicaid agency in South Carolina continues to move away from cost-based reimbursement for DHEC for a number of reasons. These include the need to cut Medicaid expenditures, lack of trust in our costing methodology, and in some cases lack of confidence in our outcomes due to untrustworthy or non-existent outcome data.

So, in an environment that requires sophisticated pricing methodologies, we have used a variety of methods. We have much more work to do on this part of the project. As you might imagine, each case has to be evaluated on its own merit. Flu shot pricing is different from the pricing of STD clinic visits. Each market for each service has to be evaluated for ability to pay, cost of providing the service, other funding sources available to cover the cost, federal and state restrictions on charging and who you charge, reasonable exceptions, process for collecting the cash or revenue, etc.

“It Costs An Arm And A Leg” or The Results

The efforts of the Cost Task Force have had a number of results.

They include the following:

1. Identification of critical issues in multiple programs necessary for improvements in costing and pricing efforts.
2. Considerable progress in improving the quality of the processes we use to determine cost data in a number of programs.
3. Improved communications among the diverse parts of the agency, from the front line to the accountants to the program managers.
4. Improved awareness of the need for accuracy in cost data.
5. Forum to work through issues and provide solutions to issues.

There were a number of barriers that the leader had to overcome with the group to make positive progress on the objectives. These included turf protection, attitudes such as “This is my job and I am the only one who can do this!” or attitudes such as, “This area is the responsibility of X, so you have no credibility and stay out of my business.”

Some of the program staff had attitudes that included things like, “If the cost is that high, your numbers are wrong and what are you doing with my money?”

Attempts to sabotage the efforts had to be dealt with on a number of levels along with attacks by members of the group who did not agree with parts of the plan.

For the most part, the obstacles that we had to overcome were handled with communications, training, patience, and listening. As understanding grew, a number of the issues were addressed and positive progress was made.

I’ve really had two mentors in this project, Ben Lee, the previous Director for Health Services Administration, who retired earlier this year, and Stephen Orton, at the University of North Carolina. Ben provided early guidance and support. Steve provided access to folks in other states who might have some experience with pricing.

In addition, Steve reviewed the final project report and offered feedback on improvements.

“You did what?” or the Conclusion

In conclusion, two of the best words in a project, there were a number of positive outcomes, lessons learned, and identified areas for further work.

Many of the weaknesses in the costing methods of the agency have been identified. Costing data is more accurate in a number of areas and costing information that has never been available is being produced. With the development of the group and its efforts, costing has become more visible in the organization and this has helped accomplish efforts for improvements.

There is a need for considerable more effort in breaking out costs. The agency is moving towards performance management and this will require more accurate data in order to hold people accountable for what it is that they do.

Our systems for capturing the numbers of services that we do continues to be a considerable weak spot. Further work in defining how we capture this data, where we put it, and what level of the organization is held accountable for it, is critical for proper management. A number of systems used to capture this data, such as the Medicaid billing system, private pay billing systems, and outdated legacy mainframe systems, are in the process of being updated and in some cases replaced with new systems or combined systems. This will be a major step forward in our management of a service-driven organization and will lead to further improvements in costing.

A willingness for traditional costing staff to continue to work as a team to make sure data is accurate will be critical as well. Many of the processes in the agency are very complicated and no single group has all the pieces. Modifications in processes across the board will be required to make sure that all the pieces work together. Attempts at negative behaviors such as “gotcha” and finger pointing don’t bring value to the table and are destructive to positive progress.

Further simplification in the processes we use, in particular for the front line staff, are required in order to ensure the data we collect is accurate. Automation can be a considerable positive if it releases staff from widget counting, which continues at an excessive amount.

Simplification in processes like time reporting and capturing operational costs is also critical. Each time we add another level to the reporting requirements, it becomes less accurate. As we have reduced layers and trained staff on what the requirements are, the quality of our data has improved.

Improving the reporting of layering the costs of upper levels of the organization also needs to happen. Much of the trust issues come in due to a lack of transparency on this issue. Multiple layers of reporting at each break point become necessary for managers to understand what they are being charged for various operational costs. By further defining and breaking costs down in direct costs and indirect costs, front line managers can be better informed and will have better tools to hold their staff accountable.

The Cost Task Force continues to operate and to make positive recommendations. There are a number of programs that have not yet been evaluated. Some of the future efforts include clarifying the capturing of time and personnel cost data for Title V reporting and clarification of cross-over programs such as Child Health and Immunizations.

Additional work needs to be done to establish pricing models based on costs with quantitative criteria for adjustments beyond the cost of providing the services.

“What about me?” or Leadership Development

Managing the Cost Task Force project has allowed me to work on a number of areas for personal and professional development in leadership skills. Since I had no direct supervision of any of the staff working with the group, I had to use a number of techniques. The Cost Task Force gave me an opportunity to practice many different leadership skills on many occasions.

The first step was to increase my knowledge and to trust the experts. In order to get everyone moving in the same direction, which we actually accomplished on a number of occasions, I had to build trust and understanding among the group. I had to help them overcome language barriers and avoid turf protection. I had to continually move them towards goals while ensuring each of their needs was met and their input valued as much as any other member of the team. I had to constantly remind the group of the vision that we were striving for.

I also had to deal with bad behavior from some of the group members. These included certain members not being flexible in changing the way things are done, control issues, personal agendas, team members working outside the group to influence the outcomes, outright disrespect to other team members, etc.

I had to set examples on how to deal with others, follow up with staff outside the group to enforce positive behaviors, use patience, good communications and keep my eye on the goals. By not overreacting, we were able to move through most of these issues and still make significant progress.

My belief is that I am a stronger leader for the experience and clearly the agency has benefited.

Review of the Project Report Came From the Following:

Darbi Macphail, MHA, Director, Health Services Operations, DHEC

Ronnie Belleggia, Assistant Director, Bureau of Financial Management, DHEC

Steve Orton, Phd, Deputy Director, Executive Education, NC Institute for Public Health