Return on Investment (ROI) Approaches and Tools

**CDC Performance Improvement Managers Network Call**

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**Today’s Presenter**: Karl Ensign, Director of Evaluation, ASTHO

**Moderators:**  Melody Parker, CDC/OSTLTS

Teresa Daub, CDC/OSTLTS

**Sherry (Operator):** Welcome and thank you for standing by. All participants will remain in listen-only mode for the duration of the conference. As a reminder, today’s conference is being recorded. If you have any objections, you may disconnect at this time. I would like to introduce your host for the call today, Ms. Melody Parker. You may begin.

**Melody Parker:** Greetings, everyone, and welcome to the March Performance Improvement Managers Network webinar. I am Melody Parker with the Office for State, Tribal, Local and Territorial Support, and I am joined here today by colleagues from OSTLTS. Teresa Daub and I will be co-moderating this call today. So thanks for joining us. This is our third call in 2013. You know that the PIM Network is a forum that supports all NPHII performance managers in learning from each other as well as from partners and other experts that we bring on. These calls are a way for the members of the Network to learn about each other and share information about resources and training opportunities related to our work in quality improvement and performance management. Now today we’ll be hearing more about a topic that has been quickly gaining traction in our work. We’ll be cal...talking about calculating the return on investment in public health. But, before I introduce our speaker today, let’s review some of the technological features of today’s call. Teresa?

**Teresa Daub:** Thanks, Melody. I think most of these are familiar, but...to most of you, but we’ll go through them quickly. For those of you who are not on the call...not on the web portion of the call, you can refer to the slides that were e‑mailed to you yesterday. The slides on the screen are there for those of you on the LiveMeeting site. You can also download these slides via the icon at the top right of your screen if you’re online. This is the icon that looks like three sheets of paper. Also, if you’re on the web you will be able to see other sites participating in today’s call by looking at the attendees under the link at the top left. We will have two ways to take your questions and feedback today. First, you may type in your questions and comments at any time using the Q&A box, which you can find by clicking the Q&A in too...the tool bar at the top of your screen. And then secondly, we will be opening the line after Karl has finished his presentation. So to help us with that, please mute your phone now either by using your phone’s mute button or by pressing star-six on your phone’s keypad. Please note that we will announce the identity of those submitting questions via LiveMeeting. You can indicate that you want to be anonymous in posing your questions by typing anon either before or after your question. The call today will last approximately one hour. It is being recorded and the full presentation will be archived on the OSTLTS PIM Network web page. And now, Melody, we have a few polls to get us started.

**Melody Parker:** That we do. We will be conducting two polls on today’s call and we’re going to go ahead with our first one, our usual demographic poll. It’ll give us some idea of who is participating on the call today. So by indicating by the mouse click, please indicate your affiliation. Are you a state health department, are you a tribal health department, are you a local health department, are you a territorial health department, are you a national public health organization, or are you some other entity that we have not yet named? Please vote now. Thank you for participating. It appears in this case that we have...about half of you are from state, 3% from tribal health departments, 9% from the local health departments, none from territories today, 24% of you are from national public health organizations, and we have 12% from somewhere else. Thanks for participating. We’ll also want to hear your feedback about today’s call so the poll at the end of the hour, the second poll, is where you can tell us what you thought about the call today.

So today we have Karl Ensign from the Association of State and Territorial Health Officials, where he is the Director of Evaluation, and as part of ASTHO’s NPHII work, a return on investment or ROI tool, is currently in beta testing. So today Karl’s going to provide us with an in-depth look at using ROI in public health, and also a little bit about that tool’s development. Karl, the floor is yours.

**Karl Ensign:** Well, thanks so much, Melody Parker, and thanks for having me on this call so I can talk through some of the exciting work we’ve been conducting at ASTHO. As Melody Parker said, I’m the Director of Evaluation at ASTHO. We are one of five partner organizations providing capacity-building assistance to grantees. So if anything here that you hear today raises additional questions or thoughts about how you would like to proceed, you can contact us through your project officer and we can line up some appropriate capacity-building assistance. One of my favorite parts of the job. So I’m going to put that in as a plug for that.

Just to foreshadow a little bit what we’re going to do here today, we’ve been undertaking work on developing tools and resources in the area of return on investment. Today we will provide an overview of our work to date. Folks, I think, often have some ideas that they...they want return on investment. They want to know the return on investment for some of the activities they’re undertaking. But we’d like to place it within a larger context of evaluation and...and moving thoughtfully forward. We’ll talk through how ROI is used in public health and we’ll talk about some of the particular areas it’s been used as well as some of the advantages and disadvantages to this approach and the powerful aspects of this tool. We will have a formal unveiling of the tool we have developed. I will walk you through some of its domains today in a virtual sense. But we will have a formal unveiling at the NPHII grantee meeting and having one of the beta testers, Brynn Riley, present...in Maine, present how she has used the tool and get some real world working examples. And I’ll mention that at the end of the call that we want to have sufficient time set aside for you all to come with your ideas about ROI, your questions, ways you could use it, maybe even have some sample data we could plug in and see how investment and the return on investment will work for you. Okay. On with today’s call.

You are all well aware of the need for continuous improvement and documenting outcomes in the work you do. These mandates come from federal level, the Government Performance Results Act, which mandates that each federal agency meet certain performance targets and...and talk about the work they’re doing in the context of those targets, Affordable Care Act, such similar mandates would have investments. Multi-state learning collaborative, I guess now that is the open COPPHI forum, continues in its current iteration. We have, of course, the National Public Health Improvement Initiative, under which we have been taking this work today providing investments on how we can continuously improve and document our outcomes. Of course, we have accreditation out there as PHAB. Public health is facing opportunities and challenges. We are all well aware of the budget battles that are going on, so we have to do more with less. We have to look for efficiencies and realize them where we can. We have improved technology and communication advancements, sometimes to the extent that we’re drowning in data, but that can be a powerful tool that we can use to show us what is working, what isn’t, what needs improvement, where we need to focus. And of course, we have an increased need for public health, I think now more than ever.

I want to begin this talk about return on investment by firmly placing it within an evaluation analysis context. Under NPHII as I...I said, we...I’ve been providing capacity-building assistance on evaluation; that is, the formulation of research questions, the building of logic miles, defining what an outcome is and coming up with evaluation plans which include data collection, analysis and reporting strategies. So within that context, ROI is one form of evaluation, and in fact sort of the preeminent elders in the field, if you will. The program evaluation Rossi, Lipsey and Freeman carved out, I guess, five domains of...of how evaluation can be used. It can be used to delineate a need for the program, sort of a pre-evaluation work if you will. The design and logic theory around building logic models, how you would undertake an evaluation in a valuability assessment, looking at fidelity of implementation, looking at outcome or impact which we focus a lot on, and also looking at cost and efficiency. I think ROI falls in that latter domain.

The performance management turning point and framework provides a useful framework for thinking about evaluation that is building performance standards, thinking about performance measures, working through quality improvement processes where we use data for decisions to improve policies, reporting our progress. So that’s kind of the broader context before we turn specifically to ROI.

Outcomes are central to evaluation identification, data collection and analysis. So it’s very important to think about evaluation in a very targeted way, in a very concrete way, where we ultimately compare changes at two-plus points in time. In terms of knowledge, status, behavior, function or values. So that...those concepts really define what an outcome is, which is necessary for undertaking an evaluation. ROI is a specialized form of analysis. So we can think about those same outcomes and in essence we monetize them. So we look for some change and we look for placing a monetary value on that change. More broadly, we compare the costs of an intervention with its benefits in financial terms. And this yields the net return on investment over time. And sensitivity analysis can be...can be conducted looking at different levels of investment and their benefits.

So if I just could stay on this slide for a minute, because I think oftentimes there’s questions about what exactly is cost-benefit analysis and what is return on investment. And really, I think there are differing definitions but it is shades of gray. I think cost-benefit is a little less sophisticated simply looking at the cost of undertaking a certain activity or investing in a certain area and the benefits realized. ROI talks more about perhaps looking at that throughout the life of the project in a way that...that we conduct sensitivity analysis around varying degrees of investment under different scenarios so that we can realize the greatest return on those. And the point is really to maximize our return on investment. So think about ROI as an ongoing process, maybe one that’s more dynamic and less static than a cost-benefit analysis. So how is ROI calculated? Well, we start with the net benefit, and that is the benefit minus the cost. And then we norm that over the cost. So we have the benefits subtracted...we have the...the benefits minus the cost over the cost. Hypothetical values I have plugged in there. You have benefits of $400, $500, $300. You have costs of $150 and $50. You come up with a net benefit. You norm that over the costs and you come up with a hypothetical value of $5. So if we could have the next slide.

We look at an actual study that was conducted. They looked at the ROI on pediatric immunization in terms of treating preventable illness. So here it was found that looking across different vaccines and...and different implementation policies you could come up with the economic benefits and costs associated with the target vaccine analysis. I just want to stay on this slide for a bit, because I think this is very powerful. But it shows you, sort of in a very tangible way, what ROI is and what it is not, quite frankly. It’s about the economic benefits and impact of pediatric immunization in this...in this instance. We are not talking about clinical outcomes related to more vivid...I mean, we are, but they’re...they’re just used to get to the ROI analysis. We’re not focusing on morbidity aspects, we’re not talking about quality of life, et cetera, et cetera. Those are very real outcomes that one could study within a vaccine program, in fact they have been. And we come up with a valuable outcome as well, a valuable message as well. So here, if you want to show the value of focusing on pediatric immunization and conducting immunizations in a certain format in a certain way, targeting them, you can come up with the economic benefits of treating preventable illness. That is just one example of...of an evaluation outcome. And so it’s...it’s really important that you think through what the perspective is needed from an evaluation perspective and whether or not ROI is the most useful or one of several tools you would want to use.

So let’s turn now to how ROI has been used in public health. As we have looked through the existing studies and literature, we really find that it boils down to three areas. Programmatic outcomes, those are targeted investments, if you will. More aggregate public health spending, broadly based in this investments at a community or national level. And a fairly new area, which is what we’re focusing on, looking at the return on investment for QI projects undertaken by agencies. So let’s run through each of these very quickly. ROI program examples. Folks are probably aware of the injury prevention work that’s been done the tobacco prevention and control. Here we have (inaudible) doing some actual work, a $14 child bicycle helmet can prevent $580 in medical expenditures on average, representing a return of $40 for every $1 invested. Summarily, Robert Wood Johnson Foundation looking at tobacco prevention and control, state programs including smoke-free workplaces, rules and higher taxes on tobacco products consistently show positive return to the state-by-state study and found that California’s efforts showed the high...highest ROI of $50 in personal health care expenditures for every single dollar invested. So those are some examples of some more targeted program specific ROI that’s been conducted to date. And note that both of these focus on clinical outcomes, if you will, or general population outcomes. We’ll...we’ll cycle back to that later.

Aggregate public health spending. So Glen Mays, who we’ve been working closely with in our development of this tool, looked at...analyzed over a decade of public health spending and mortality rates. He estimated that for each 10% increase in spending there were significant increases in infant deaths, deaths from cardiovascular disease, deaths from diabetes, deaths from cancer. So he was looking at the investment in terms of mor...mortality outcomes. And looking at that for very broad-based expenditures. He didn’t break it down on a program specific level but looked at it more in the aggregate. So those are some examples of ROI that’s being conducted both in a programmatic area and...as well as an aggregate area. If we could have the next slide.

I think the challenges from an agency perspective, and I tried to foreshadow this just a little bit earlier, are several. The investment may take years to produce benefits. They may not be immediate. The benefits may be difficult to link back to a specific public health program or function, especially with...with respect, for instance, to...to the tobacco. Examples: we saw variation from state to state so that would begin to tell us what’s making a difference. But it’s difficult to link back these monetized long-term outcomes to specific agency practices or interventions. Third, very important, these benefits may and probably do accrue outside the agency. They are general population or clinical health outcomes that impact the agency budget only indirectly and not directly. And yet these clinical population health outcomes do yield the largest bang for the buck. But from an agency perspective we want to keep that in mind when we’re undertaking ROI, especially in the programmatic and aggregate function areas.

So now let’s turn to ROI of QI. And here, this has become our focus. When we started working with undertaking ROI, and that would be of use to our NPHII grantees, we started fairly broadly. And we were reminded that since we had funding under NPHII that we really needed to come back and think about a tool that would be directly relevant to the NPHII activities being undertaken, especially with regard to the...to the QI efforts that grantees were undertaking. So we...we did some additional work in that area and found that actually very little had been done in this area, and it was actually an area that was fertile for additional investigation and tool development. If I could have the next slide, Melody.

So what are the advantages and disadvantages to conducting ROI of QI activities undertaken? Well, one advantage is that the ROI tends to be more immediate, so that if you are undertaking a QI effort that has a three-year time frame you should begin to...to see some positive return maybe immediately, but certainly within a three-year time frame. That ROI can accrue more directly to the agency for internal processes that are being undertaken to streamline, make more efficient, et cetera, et cetera, that would come back to the agency budget directly. One of the disadvantages will be that automating of paperwork, sign-off process, will yield some return but it...it may be much more narrow in scope and not as grand as the clinical or population health outcomes. So with that in...that sort of as context, we went about developing an ROI QI tool. The funding was provided by NPHII, the Prevention Public Health Fund, ACA, which funds NPHII. We...our focus was to measure the ROI for QI projects such as those undertaken through NPHII. To undertake this work really before we had this focus of ROI for QI, we pulled together a very diverse work group that included a number of perspectives that would find this tool useful, we thought. And that included officials from CDC, it included state and local agencies participating in NPHII with an interest in ROI. We included a number of foundations that had done this work in the past, as well as some of the think tanks within academia that had played a leading role in thinking through ROI from a public health perspective. And very importantly, we secured the services of Glen Mays, who has worked extensively in this area, University of Kentucky, to sit in on the calls, provide his knowledge of ROI, sit in on the calls where we pulled the work group together, and then he led the effort to develop the tool that we have today in draft form.

So how does one realize ROI for QI efforts? There are certain pathways that the tool makes explicit and clear. Reductions in standard operating cost, that is, greater efficiencies realized. One example might be to automate forms. That would be a reduction in standard operating costs. That would allow auto updating a field, et cetera, across certain forms. Revenue enhancement. Better documentation for Medicaid reimbursement was one of the issues that came up through the beta test sites. Cross-checking billable client databases to find folks that could be...that would be an allowable Medicaid reimbursement field. Increased productivity of agency function is another pathway. Extending the reach of certain public health functions, such as better distribution of vaccines, for instance, is one of the products we thought about. Decreased time to produce outcome, reduce cycle time, separation. Virginia looked up the separation time from state service, all the multiple hoops that had to be jumped through in terms of forms for those who were leaving state service and trying to streamline that through form automation, decreasing the time to produce outcomes with an internal agency QI process. So again, what we’re looking at here are really outcomes. We’re looking at reducing standard operating costs, increasing revenue, increasing productivity, decreasing time to produce out...outputs. Those are all outcomes or pathways to realizing QI. And then what we do is we look at the cost data that sits behind those so that we can monetize those outcomes. So that’s really how the tool works in terms of making think...having the user think through those outcomes and the attendant data that can help monetize those outcomes. ROI is dependent on an impact. That’s kind of the lesson there.

So what does the tool look like? It is basically a series of spreadsheets. We do have some thoughts and will be getting your feedback at the NPHII grantee meeting about how we could make the tool more user friendly. I think by all who have used it, once they get into it, it’s okay. It is a little daunting, quite frankly. So I tried to kind of distill it into some frames here so that we can think through what it really asks the user to do. It asks one to think about their planning and development costs associated with the QI initiative. In terms of personnel, that’s usually the largest, quite frankly, cost category. Non-personnel services, contracted service, officer operations, facilities, maintenance, rent, et cetera, other direct costs and indirect costs. And to think about these at several discrete points in time. And it...it asks the user to really define those time frames up front. So when you’re thinking about your QI activity in planning and development, what are the initial costs with getting a work group together and thinking through the various activities that need to be undertaken to...to implement the QI initiative? And think about that in terms of personnel, non-personnel and other direct costs. And then there’ll be some guiding force throughout the QI process, so you also want to track those costs. Post-implementation year one, year two, year three, and you would expect basically these planning and development costs to decrease over time. So that’s one aspect of the tool, our spreadsheet, the link spreadsheet.

You’re going to do the same exercise, if you will, with routine operating costs. So we’re looking at those associated with QI targeted intervention, pre- and post-. So if we are talking about paperwork automation, or giving inspectors certain automation out in the field, what are the...what is the routine operating cost associated with that, pre-implementation of the QI effort, post-implementation. And again, we think about that in terms of personnel costs, non-personnel costs, other direct costs and indirect costs. It was very interesting, actually, to work through some hypothetical examples with the work group. We found that the cost categories remained fairly static, that we kind of wanted to capture the same thing in terms of investments, costs, outputs and benefits. But that those would change as the QI effort was being undertaken. Costs would be expected to decrease and benefits would be expected to increase.

One other screen shot I want to show...or a simplified screen shot, I guess, is making explicit those pathways that we talked about earlier to realizing a positive return on investment. So thinking through the service units delivered, the required production time, the target population reach, or other output outcomes, currently or pre-implementation of the QI effort and post-implementation. And you would expect these to increase as well. I guess the service units would maybe increase, the required production time would decrease. But they would...they would change, as an outcome does, in the attendant way to show improvement through the QI effort.

The tool, if we could go to the next slide, is linked and the final view will show your return on investment given your various assumptions about the...the routine operating costs, the...the fields we just went through, your planning and development costs, your routine operating costs, your outcomes and outputs. It translates these over time in a way that amortizes the cost of an investment. So by that, we mean we want to...we want to hold costs and benefits, we want to standardize those or hold those constant, relatively constant, across the operating period. So if we invest, for instance, in a software package we want the cost of that investment to be amortized over the useful life of that project. It doesn’t all have to be absorbed within the first year of an investment. And this spreads the agency’s cost investment over the useful life of the product. And these are all standard accounting practices that your agency probably uses in other contexts I’m sure, used in the business world, but we want to make sure that we use those within an ROI calculation as well so we don’t have artificial costs to overcome within the first year, when we’re making a fairly sizable investment in order to realize a return. So we have the user think through their assumptions about amortization and present value. Present value applies to kind of costs and returns, and that is the relative worth of a single dollar changes over time. So if we’re looking at multiple years, we want to make sure we’re comparing adjusted dollars over time. And by that, we apply a discount rate. I think the default that’s plugged into the tool currently is 3%. But it basically accounts for inflation, or if there’s other factors that you know of that will impact the value of...of the key things you’re tracking then you’d want to change that present value. Those are built into the...to the tool as well.

So I’m getting close to the end here, but I want to close out with some important concepts that really came through...through this work group, who had varying degrees and expertise of working with ROI and...and they really emphasized that whenever we’re talking about ROI, we need to emphasize these as well. So let me just go through these quickly. It’s important, from my perspective I guess, this...this first one’s mine, to build in evaluation methods including ROI from the beginning. For practical consideration, it’s hard to retrospectively go back and think about what your baseline data was. So it...it’s best to really think about, if you’re undertaking a QI project, to build an evaluation. And I think the QI model, the training points model, really incorporates that. But you want to think about data collection throughout the process. Build evaluation methods, including ROI, into program inception and this will help inform management decisions as well as practically make sure that we can have access to timely data when we need it to show our impact. With ROI in particular, it is very important to clearly specify the intended purpose and use of ROI, especially when we are undertaking ROI of QI efforts.

The most powerful data in there will be the personnel costs invested in taking the time to sit down around the table and figure out what the QI effort is, where we’re going to go with it, what needs to be changed, mapping out the internal processes. Capturing all that time, those personnel costs, is sensitive data. And with ROI, there is a con...there is a conception out there that it goes hand-in-hand with certain budget-cutting exercises. If you can do something more efficiently, then you will cut the attendant budget. That certainly could be one use of ROI. I think we like to think of that continuous quality improvement that goes hand-in-hand with doing more with what we have and doing it better on an ongoing basis. So in any...in any sense it’s...it’s very important that we clearly specify the intended purpose and use of ROI and conduct ROI through transparent process so there...so that we can minimize the suspicion. Practically, this has important ramifications as well. If you...if one needs personnel data in order to conduct an accurate and thorough ROI, you don’t want people second guessing and cooking the books in terms of how much time or effort they’re investing in a certain activity or undercounting. You want an accurate representation of that. So just for access to personnel data in terms of how folks are using their time and how much they are being reimbursed for their time, it helps to have the intended purpose and use of ROI clearly articulated to communicate that through transparent process. And also conduct ROI through an inclusive process. I think through this tool, what we tried to do is include those with an interest in ROI from the funder perspective, from the program management perspective, from those directly in the field collecting and undertaking this sort of analysis. Included as many perspectives as possible so that we honed in on our tool, which was the most relevant and useful for all. I think the same would hold true at a micro level if one were undertaking ROI analysis.

One...one or two final points before I close this out and we open it up. The tool is really designed, we realized once we started beta testing it, to be used throughout the project. It upholds one of our primary tenets that we should really be conducting evaluation from the onset. And the tool can be used prospectively, that is, during the planning phase to realize how investments can be maximized. One can conduct sensitivity analysis around certain outcomes or outputs. So one can think about what...what sort of change do I have to effect in order to justify various levels of investments? And this really comes at the core of ROI, this sort of sensitivity analysis to figure out how should we be investing, how much, and how much return will we have to realize in terms of moving our...our outcomes to justify different levels of investment. So it can actually inform the QI process from the beginning, if you will. And again, we can maximize that return on investment, one of the key concepts that I would say differentiates ROI analysis from simple cost-benefit analysis. So it can be used prospectively during the planning phase. It could and should be used during the implementation phase to track ongoing costs, outcomes and return in real time as they accrue. And so we can show folks that are involved with the process how they’re doing. And of course, retrospectively post-implementation, one can use the tool. That means going back retrospectively and looking at pre-implementation data and getting folks to kind of estimate what they were doing at a certain point in time after the fact, when...when we were not collecting information during that time. But it could be used retrospectively as well.

So, why ROI? I think ROI is one way of measuring and communicating public health effectiveness in a manner that is particularly salient for policy makers, funders, administrators and the general public. We’ve been encouraged to think through what types of questions ROI can answer and what it cannot. So I’m starting to kind of create a list and I’d be happy for input on that. Some of the things that have come up in my onsite visits are, are we making the right investment? So we could compare different investments we are currently undertaking and looking at the return on those investments and seeing where we are getting relatively more benefit, where we need to concentrate. Are we becoming more efficient at what we are doing? So I’m not looking across, because looking at a given function over time and seeing if we are continuing to improve our efficiency if that can translate into monetary terms. Just real simply, policy makers, funders want to know, what bang are we getting for our buck? So that means defining what we’re doing and calculating our return on investment for that. What is our budget accomplishing, maybe from a budgetary standpoint building it in? So coming...going backwards, working backwards from our budget, and saying from a budgetary standpoint what are some of the big ticket items we’re funding for each line item, calculating return on investment for those. Are we being good stewards?

Again, I just want to close out and say ROI is...is really hot right now. It is not always the be-all and end-all. I want to emphasize that. It’s just one evaluation tool of many. It should be used thoughtfully and carefully. And we encourage folks to really think through what their evaluation needs are, starting from that, and thinking through the outcomes, the data collection strategies and plans that are most important to them and then focusing on those that could and should be monetized. So I think that’s it, Melody. I’d be happy to open it up and I...I welcome input, questions.

**Teresa Daub:** Perfect. Thank you, Karl, for your presentation and for your leadership on this hot topic, as...as you called it. It is definitely that. Want to remind everyone on the line that we’re taking questions in two ways. We’ll open the lines in just a moment. If you actually aren’t asking a question, please use the mute feature on your phone or star-six to make sure we don’t hear any background noise. And you can continue to use the Q&A feature on LiveMeeting if you prefer. But we do have a few questions queued up via LiveMeeting, so we’ll start with a couple there and then move to the open line. So again, Karl, thank you for the presentation. If you don’t mind, we’ll hop right into the questions.

**Karl Ensign:** Perfect.

**Teresa Daub:** So the first question is to ask you to speak a little more about how outcomes and outputs will be monetized, and there’s an example to help us think through this. If clinic wait times are reduced from ten minutes to five minutes on average, how do you determine the monetary value for the agency?

**Karl Ensign:** Um-hum, um-hum. So we would want to think through on several fronts what the cost and return are associated with that. So first of all, from a micro perspective, those who were invested in reducing clinical wait times, we’d want to capture it...the time they spent undertaking that QI effort. And then we’d want to think through the outcomes and outputs, the benefit of doing that. Now, of course, the question is, and it’s a very good question, if we reduce the wait time for those waiting in the...the wait room, their time may be of value. That’s something that accrues external to the agency budget. So we get back to that issue of we could, you know, estimate something like that but it wouldn’t be something maybe that directly impacts the agency budget. But we could also think through those pathways to realizing a positive return on investment and, you know, it would be interesting to have an interactive discussion where we said with that reduced wait time, are we able to, for instance, accommodate more clients? I mean, if we have a full waiting room and we have time-certain scheduling or something like that, can we move folks more efficiently through our process? Can we accommodate them more efficiently? So there...there might be some other things we’d want to think through. What are we really about with undertaking that reduced wait time? Is it just that we think folks are coming into our clinic and wasting their time there and...and...and we feel badly about that? Or does it translate into the fact that maybe they don’t come back as frequently or they only come back when things reach a boiling point. Maybe they would access the clinic more frequently and it would extend our reach if...if the...if those wait times were reduced. So it would really be an interactive discussion where we’d think through what the outcomes and outputs of interest are in this particular situation and then how we would come about...go about gathering data on the planning and development costs and the routine operating costs associated with that. And routine operating costs, I think, could accommodate the wait time of clients if we wanted...if we wanted to go down that road, the wait time that they spent in our clinic.

**Teresa Daub:** Oh, thank you for that great suggestion, and...and maybe there will be an additional question or thought on that as we open up the lines. But for now I’ll move to a question from Magaly in Rhode Island which is referring to a slide in...earlier on in your presentation in which you noted that clinical population outcomes yield the largest benefit in terms of return on investment. So the question is, is it true that getting these large benefits would also involve the most effort and expertise?

**Karl Ensign:** Oh, boy. He’d probably be a better judge of that than me, quite frankly. I’m the evaluator, here. That’s a very good question. I mean, I...you know, I’m not sure I’m equipped to answer that. If you think of the...where ROI’s been conducted, it’s been conducted primarily in injury prevention. Issues around tobacco control and prevention have yielded very big impacts because, you know, smoking is very detrimental. So I guess the question is, is undertaking a smoking initiative something that requires a big investment? I mean, I...I don’t know. I mean, really, if you’re...if you’re talking about your return on investment, the larger the return in relation to your investment will yield a larger return on investment. So I think how I’m going to answer that is that ROI done correctly will take into account return on investment regardless of the size. And the primary distinction I wanted to make is that you aren’t probably going to get your large returns on investment for the QI efforts that we’re focusing on simply because they don’t focus most immediately on the sort of clinical or general population outcomes. I hope that’s helpful.

**Teresa Daub:** Yeah, Karl. Thank you for taking a stab at that. And I...I think, you know, given that there is not a lot that you can say with certainty, it’s a great question to open the lines on and see if there are other thoughts or opinions on the phone with us. So Sherry, our operator, if you’ll open the lines now we’ll take any comments or questions from the group.

**Sherry:** And all lines are open.

**Teresa Daub:** Thank you, Sherry. What questions or comments are out there today? Any additional thoughts on Magaly’s question, which again is, if it’s true that the largest benefits are from the clinical population outcomes, would that also involve the most expertise? I’m not hearing any questions on the line, and again, you can pop in at any time. Let us know if you have any questions or comments. We do have a couple of questions in the room, so we’ll give those a round now. I’ll start with one question that came up in the room here is the question, Karl, may be another tough one about cost avoidance. So how does the model...or how can the model factor that in? Does engaging in improvement activity help in different ways and as far as expenses, is that something that can be factored in?

**Karl Ensign:** Right. So two thoughts come to mind. One is that I guess the devil’s in the details about how you define cost avoidance. So if you have a routine operating...the cost of routine operations, if you will. If that factors in certain inefficiencies that are related to cost, for instance paying a contractor to clean up data so that it gets embedded in a usable format to someone down the line, the avoidance of that cost can be minimized by undertaking a QI effort to have translatable data across databases, if you will. So that’s one way of looking at it. This...interestingly, this did come up in one of our beta test sites. We were having a hard time finding a positive return on investment for better reporting ethnicity data. And we grappled with that issue. One thought was that there might be kind of more...first of all, it’s the right thing to do. So the ROI tool could be used quite...at a very elemental level to just document what the cost of cleaning up the various ways that ethnicity data was reported and analyzed and making that standardized across program silos, if you will. There was a broad agreement that needed to happen there so that certain inertia. So the...what was unknown is the cost of doing that and the ROI tool could very...by walking people through the steps could make that cost known, which...which actually is estimated to be fairly minimal. So cost avoidance in that...in that particular perspective, I don’t know if this is what we’re after, to be that down the road, you know, we needed to make these databases compliant. Now...

(Interruption, sounds like a television or radio commercial.)

**Karl Ensign:** I’m sorry, I’m hearing something else on the line here.

**Teresa Daub:** Yeah. That happens when participants put us on hold. But Sherry will be able to help us take care of that. And she already has. Thank you, Sherry.

**Karl Ensign:** Okay. Long story short. The...there were sanctions that were not being realized at that point in time. They weren’t being enforced is what I’m trying to say, with having inconsistent ethnicity data. There was some thought about those kind of happening within the future, so incorporating those as an other indirect cost, if you will, or other. So, I mean, I think that the tool has some flexibility. It’s how you talk about cost avoidance, how you define that. But I’d need to know more about it.

**Teresa Daub:** Thank you, Karl. We have another question via LiveMeeting right now, so we’ll go to that. It’s from Deborah Tews and the...and that’s in Michigan. The question is, will actual program or quality improvement examples of the application of ROI method or tool be available in the future? And how about case studies?

**Karl Ensign:** Right. So that’s exactly where we’re going at the NPHII grantee meeting. I’ll be presenting, but we have a 90-minute session. We have two 90-minute sessions. I’ll be presenting that in a very short format. We’re going to turn it over to Brynn Riley, who’s going to be putting up some actual data that she used to test the tool for...from her program perspective. And then we’re going to open it up to grantees. We’re going to...we’re...we’re encouraging them to come with either ROI issues they would like to think through about how they can access data, for instance, or actual data that we could use to plug into the tool to see the return on investment. So we...we will be making the tool available interactive and showing real data examples, if you will. The case study component, I... think that’s an excellent idea where we need to capture more stories about how it’s used. Once it’s available out in the field that is a focus of us here as ASTHO, is to try to capture stories that are compelling. And I think ROI is a field that would be right for that sort of communication, and sort of a truncated case study, if you will. And how the tool is used I think would be a great example. So we’d look for partnership with you all to develop those case studies, but that would be a very big interest of ours.

**Teresa Daub:** Thanks, Karl. It sounds like you’re going to be excited to hear from some peers at the grantee meeting perhaps. Let’s give a pause now and give a chance for anyone on the line to break in with additional question or comments.

**Dave:** Karl, this is Dave calling from Nebraska.

**Karl Ensign:** How’re you doing, Dave?

**Dave:** Very good. And thanks for the presentation. I was wondering if you’d just comment a little bit on...oftentimes it’s...it’s easier to collect data and costs, and more difficult to identify efficiencies or outcomes or benefits, although not impossible to do. But you really have to kind of think through the...the lighter portion there to make sure you’ve got really good information.

**Karl Ensign:** Right, right. I think, you know, this has become...David is one of our members of the work group, so appreciate his expertise and help along the way. I think as we were wrapping this up, what came through at the beta test sites is how, again, this tool can be used retrospectively, which quite frankly that’s how we were using it as we were beta testing it. We had a tool and so we were trying to think of examples that we could plug into it versus prospectively or real time. So I think the answer lies in using the this tool from the beginning in concert with a QI activity and taking your best shot at outcomes, thinking through what those would be. You very well may have to undertake primary data collection. I think that’s one part of your question.

**Dave:** Um-hum.

**Karl Ensign:** And then adjusting those outcomes over time as more and better data comes in. If you do it through...if you conduct this ROI through a transparent and inclusive process, I think you have a better chance of getting outcome data in a timely manner that’s accurate. But you’re right, evaluation requires some investment of time and effort, and one of those...it’s one thing to kind of have folks estimate how much time they spend with the QI activity and then calculate that as a percentage of their annual income and you have that data already. So it’s just a matter of...primary data collection is just simply the...how much time they spend on an effort. The outcome or output effort is more difficult. Under NPHII of course we provide technical assistance on evaluation, so we’d be happy to come out and help folks think through that. But yes, ROI, as with any evaluation activity, does take some attention to thinking up front your intended outcomes or outputs and putting in place the necessary data collection procedures, seeing where there is available data and where there is not, undertaking primary data collection, trying to make that as least...as less burdensome as possible. And through an inclusive process, hopefully folks will realize the importance of supplying that information.

**Dave:** Thank you.

**Teresa Daub:** Thanks, Dave, for your question. Are there any other questions? Okay, I’m going to hand it back to Melody now. Karl, thank you again for your presentation and your leadership on ROI, and thank you all for participating in the call today and for your questions.

**Melody Parker:** I want to thank everybody for your participation on today’s call. Before we leave we have this final poll. How would you rate this webinar overall? Give us an excellent, good or fair or poor. We hope for excellent. If you’d like to give us any feedback...any other feedback on the call or, of course, suggest topics for future calls, please e‑mail us at PIMNetwork@CDC.gov. And, of course, please remember that next month there won’t be a webinar, because we’ll actually all be seeing you, hopefully, at the NPHII grantee meeting here in Atlanta. But we’ll share some information about the May 23rd call on down the line. Also recall that you can view and download these calls and materials from the PIM Network webinar series on the OSTLTS PIM Network web site. So thank you so much for your...again for your participation today. Everybody be careful out there. We will see you online in May and we’ll see you in person next month. Thanks so much.

**Shelly:** And thank you for participating in the conference today. You may now disconnect.