Northwest Partnership for Public Health

Evaluation of Medical Coding Project
Final Report

June 2009

Executive Summary of Findings

A formative, qualitative evaluation of the medical coding specialist position in the Northwest Partnership for Public Health was conducted in April, 2009. The eight participants in this evaluation represented eight of the nine participating agencies in the project. Interviewees spanned a variety of positions within their agencies, and their tenure in their current position ranged from less than six months to 16 years.

Experiences filling out medical encounter forms
Overall, interviewees believed that the accuracy of medical coding had increased as a result of the work of the medical coding specialist. When errors occur, respondents most often attribute them to: a) time pressures and distractions for the attention of providers; b) a lack of familiarity with medical coding; c) human error; and d) occasional resistance on the part of providers. Prior to the work of the medical coding specialist, the mostly commonly mentioned facilitator for accurate medical coding was the use of "cheat sheets," usually single page references created and updated by individual providers, that listed the most commonly used codes.

Experiences with medical coding specialist
The medical coding specialist hired by the Northwest Partnership for Public Health provided trainings, chart audits, consultative services and recommendations on medical coding protocol, and advice for credentialing providers with Medicaid, Medicare or private insurance. The specialist also provided periodic bulletins with coding updates, as well as informal assistance as requested. The intensity of services varied based on the needs of the clinic.

Helpful aspects of services. Interviewees consistently reported that they had positive reactions to their interaction with the medical coding specialist and found her visit to be helpful. The specialist was perceived as displaying a high degree of professionalism and expertise. In particular, several components of the medical coding specialist's services were considered very helpful by interviewees: a) presentation of audit findings tailored to each clinic; b) interactive staff trainings; c) periodic bulletins on medical coding changes; and d) availability of the specialist for informal calls.

Perceived impact of medical coding specialist position
Interviewees described both procedural and short term impacts of the medical coding specialist position. The most commonly mentioned procedural changes were: a) revising patient encounter forms; b) changing clinic protocol regarding medical coding and oversight; and c) completing the medical credentialing process. Interviewees also described a number of short term impacts of the medical coding specialist position. These included: a) increasing awareness of the importance of medical coding among clinic staff; and b) increasing staff confidence to address medical coding issues.

Future improvements for medical coding
Interviewees were asked to describe the steps that they believed to be most important in order to continue to improve medical coding at their agencies in the future. The most common responses were: a) to maintain the medical coding specialist position; b) to continue to make staff more knowledgeable about medical coding; c) to carry on with credentialing efforts; and d) to develop systems and tools that will improve medical coding accuracy.

Overview

On behalf of the Northwest Partnership for Public Health, the North Carolina Institute for Public Health (NCIPH) conducted evaluation activities related to the Partnership's medical coding specialist position that was created in May 2008. The evaluation was conducted with funding and support from the NC Public Health Incubator Collaborative[1].

While some program-specific medical coding technical assistance is available from state Division of Public Health consultants, those consultants are responsible for a large number of counties and a variety of services. The health directors in the Partnership believed that with a full time medical coding supervisor position in their Partnership, more attention and direct technical assistance could be offered to their counties. The medical coding specialist position was designed to provide training and technical assistance to partnership agencies in order to improve the accuracy of their medical coding and thereby increase clinic revenue. Nine of the ten agencies in the Northwest Partnership for Public Health are clients for the services of the medical coding specialist[2].

There were two primary evaluation activities that occurred as part of this contract: a) to provide the Medical Coding Specialist with a logic model and evaluation plan to guide current and future evaluation of medical coding activities; and b) to conduct a formative evaluation of the Medical Coding Supervisor position in order to assess the extent of agency staff support for improving medical coding; and to identify perceived benefits and challenges of the program. The logic model and evaluation plan were shared with the Medical Coding Supervisor, the Incubator Coordinator, and Incubator health directors in February 2009 (Appendices A and B). This report will focus on the results of the formative evaluation. Findings from this study may help to shape the future of the NW Partnership for Public Health Medical Coding program and of similar efforts across the state.

Funding for incubator collaborative projects such as the Northwest Partnership for Public Health is projected to be cut in the 2009-2010 legislative budgetary cycle. These cuts will reduce the ability of collaborating agencies to carry out proposed programs such as the medical coding consultancy. At this juncture, the evaluation of incubator-planned and funded projects becomes important as a means of identifying successful past projects and understanding their value to participants. Careful reflection on the benefits and challenges of these programs may help guide future public health efforts as funding becomes available.

Primary stakeholders identified for this evaluation project included Partnership[3] health directors and staff involved in medical coding, as well as the Partnership Coordinator, Ms. Candice DuVernois and the Medical Coding Specialist, Ms. Debbie Widener.

Methods

The North Carolina Institute for Public Health (NCIPH) worked in collaboration with the Northwest Partnership for Public Health to create a plan for the formative evaluation of the medical coding supervisor position. Partnership members reviewed and provided feedback on evaluation questions and the proposed interview guide.

---

[1] In 2007, the six NC Public Health Incubators contracted with Evaluation Services at the North Carolina Institute for Public Health for the conduct of one evaluation per fiscal year per Incubator.
[2] Forsyth County does not receive services as they do not have clinic activities.
[3] The words Partnership and Incubator are used interchangeably throughout this report.

The interview guide (Appendix C) asked participants to describe the process of medical coding at their clinic and to identify barriers and facilitators to accurate medical coding. In addition, interviewees were asked to describe their experiences with the medical coding specialist, including those aspects of the interaction that they found to be most and least helpful. Some descriptive information was gathered about the interviewee, including type of position held at the agency, tenure at the agency and in their current position, and degree of interaction with the medical coding specialist.

Each agency identified one individual to be interviewed by an NCIPH Evaluation Services staff member. Telephone interviews lasting approximately 45 minutes were conducted in April 2009 with a representative at eight of the nine participating agencies, for a total of eight interviews[4]. Interviews were tape recorded, and selected quotations were transcribed verbatim from the recordings. For each idea, common themes and trends were identified across respondents. Sample quotations are provided to illustrate various themes.

Results

Description of respondents

Participants in this evaluation spanned a variety of positions within their agencies, such as nursing or clinic supervisor, administrative officer, management support supervisors, and processing assistants. All interviewees had interacted with the medical coding specialist through trainings, audits, or consultations.

Respondents had been in their current position for an average of 6.1 years (±5.7), and their tenure in their current position ranged from less than six months to 16 years. The mean number of years of employment with their current health department was 10.8 (±5.7) years, and the range was from 2.5 to 17 years.

Clinics represented in this evaluation employed between two and eight providers, with a mean number of providers of 3.9 (±2.4).

[Note: For the purposes of this report, the terms encounter, encounter form and super bill are used interchangeably to denote the sheet on which Procedure Codes CPTs) and Diagnosis Codes are recorded in order to charge for the patient's visit.]

Experiences filling out medical encounter forms

Overview of medical encounter form experiences. Protocol for filling out the medical codes on encounter forms was consistent across sites and reinforced by guidance from state consultants. Providers (i.e., medical doctors, physician assistants, or nurse practitioners) are responsible for filling out diagnosis and treatment codes at the time they attend the patient, while nursing staff enter codes for laboratory tests or handling fees. In the event of a medical coding error on the part of a provider, clerical staff are required to return the encounter form to the provider for correction prior to processing the fee and billing information for the patient.

Respondents reported that the medical codes are filled out correctly most of the time, and they believed that the accuracy of coding had increased since the employment of the medical coding specialist. For example, one respondent reported that

[4] A representative from one county declined to respond.

> *Our encounter forms are filled out correctly now a lot more than they were prior to Debbie came. Before, I'd say 50-60% were filled out correctly; now it's more like 90-95%. We've improved drastically.*

Barriers to accurate medical coding. When errors occur, respondents most often attribute them to: a) time pressures and distractions for the attention of providers; b) a lack of familiarity with medical coding; c) human error; and d) occasional resistance on the part of providers.

Time pressures and distractions for the attention of providers was the most often cited reason for medical coding errors. Respondents pointed out that providers had multiple forms to fill out in the course of a medical encounter, time during the encounter was limited, and patients and auxiliary staff were competing for the provider's attention.

> *Sometimes the patients are talking at them. They need to fill out the superbill. They need to fill out the prescription. It's a lot for them to do and that does leave a lot of room for error. They may be interrupted and forget to include that last digit. . . . You've still got that next patient waiting for you, a nurse waiting for you, or whatever. Overall, they do a really good job based on what they have to do.*

Another factor commonly mentioned as contributing to medical coding errors was a **lack of familiarity with medical coding**, compounded by changing codes and regulations. While a few providers and administrative staff had training specific to medical coding as part of their professional education, many did not. For example, one person stated of their health department, "No one's really been trained on coding per se, so I think it's a learning process for all of us."

Moreover, prior to the employment of the medical coding specialist by the Northwest Partnership for Public Health, respondents reported that little training was available to increase staff skills at medical coding. As a result, many had to learn medical coding procedures on the job, through "trial and error."

> *I think one [of the reasons for failing to fill out encounter forms correctly] would be lack of knowledge, because there's never been a formal training of coding at the health department. And when everything was unbundled and it had to be coded separately, it was kind of trial and error, to see what was denied and try again.*

The complexity of medical coding and a lack of availability of a medical coding expert to consult (prior to the medical coding position) was seen to pose an additional challenge to providers as they attempted to familiarize themselves with medical coding. Interviewees reported not being able to find codes for specific services, such as nutritional counseling, or diagnoses. They also expressed confusion over how to code for multiple diagnoses or whether to charge for products provided by other people.

> *I think the nurses have had a lot of questions about that because [prior to this position] we didn't really have a person dedicated to medical coding. For example, in our immunization clinics, if the state is providing the vaccine, are we supposed to charge for the immunization?*

In addition, medical codes are updated on a yearly basis, and interviewees reported that it is difficult to keep providers and other clinic staff up to date on new codes and rules without external assistance. In many cases, interviewees described the use of "cheat sheets" or "Rapid Coder books" as tools to aid providers in medical coding, but most felt that these tools were quickly outdated and sometimes hard to use.

> *When the codes change at the end of the year and they update for the coming year, the doctors have to renew the little cheat sheet they have and sometimes they don't have time to stay up to date on codes and stuff like that.*

Respondents also described natural **human error** as a contributor to medical coding errors. They pointed out that the systems in place did not have mechanisms to catch errors at an early stage.

> *Lots of times the doctor will put too many digits or not enough digits, and the system will deny those. And a lot of times when the [staff member] punches stuff out front, the system will take it, and then it [is denied when it is processed]. . . . Just because the system accepts it doesn't mean it will be accepted by [Medicaid] or Medicare.*

Finally, a few interviewees described **resistance on the part of providers** to taking responsibility for medical coding. For example, providers coming from the private sector had previously not been responsible for assigning codes to diagnoses.

> *Here they have to write the diagnosis code, they can't just write the diagnosis. I think that if they're coming from another practice or the ER, maybe they're not used to that. They're used to writing a [diagnosis] and having someone actually code it for them.*

Similarly, several health departments reported having to instruct their nursing staff to code for medical procedures that they performed. Both resistance and lack of communication were cited as contributors to a failure to code for procedures.

> *Some people just don't like to do it. If the service is provided by a nurse, they are expected to fill out that part of the encounter form, but many of them felt it was clerical work and not their responsibility.*

> *Once in a while you will find, like in child health, maybe they did a hearing and vision [screening] and it was just left off by the person who did it because they thought maybe the practitioner would circle it. A little bit of lack of communication on who was coding, but we've tried to train them that if you do the procedure, you circle on the encounter.*

One interviewee observed that there were historical reasons that contributed to initial resistance among providers to medical coding.

> *They changed things back. . . in 2000 or 2001. . . [Prior to that time,] we didn't have to actually code like you do in a medical setting. So that was a big change for all of our staff, and there was a lot of resistance to the coding piece and who should code. And we had practitioners who had worked in a medical setting, they were a little bit resistant because they would say, "Someone did this for me in the doctor's office. I never coded." And I would say, "It was preached to the clerical staff by our state consultants that you are never to code. You are <u>never</u> to code."*

Concern about how rising prices would affect patients was not seen as a barrier to accurate medical coding. Interviewees frequently cited sliding scale systems and payment plans as ways to ensure that clinical services remained financially accessible to low income patients. One respondent pointed out that most of the fee increases in her clinic affected primarily moderate to high income patients.

> *In the travel clinic, we've started charging an injection fee. Patients did complain, but these are not indigent patients – they have the money to travel internationally. The*

> *changes affected them more than the indigent patients – we didn't make a lot of changes with the indigent patients.*

When asked if there were ways in which providers might help patients avoid a medical expense, respondents reported that providers might refer patients to other low cost services or provide medication samples.

Facilitators to accurate medical coding. Interviewees also described factors that facilitated the accurate completion of medical codes on encounter forms. Many of the facilitators that they described were results of the medical coding specialist assistance, and these will be described later in the report. The one item that was often used prior to the medical coding specialist's work was the use of cheat sheets for the most often used codes. Interviewees described single page sheets of medical codes that many providers carried with them. Some also carried small medical coding reference books, although these were less popular because they contained more superfluous information and were quickly outdated as medical codes changed.

> *I know that a lot of them use the little cheat sheets that they have with the actual diagnosis codes on them, because I know for a lot of the sick kids and sick adults they use the same kinds of codes, like your typical sinus infections, things like that.*

Experiences with medical coding specialist

After describing their experiences with the medical coding process and the barriers and facilitators to accurate medical coding, interviewees were asked a series of questions about their experiences with the medical coding specialist.

Overview of services provided. The medical coding specialist hired by the Northwest Partnership for Public Health provided a variety of services to clinics in the partnership. She conducted trainings, audits of charts and encounter forms, and presentations. Additionally, she provided consultative services to medical coding staff that included the revision of patient encounter forms, recommendations on coding protocol or how to process denials, and advice for credentialing providers with Medicaid, Medicare or private insurance. Finally, she provided periodic bulletins to clinics that advised them of changes to medical codes.

The mean number of visits that the medical coding specialist made to each clinic was 6.3 (±3.3), with a range of 2 to 11 visits. Not only the number of visits but also the type of activities conducted varied significantly based on the needs of the particular clinic. For example, one individual who was new to her position described more intensive assistance provided by the medical coding specialist.

> *We've had probably 10 visits, and that was since December [2008]. I was fairly new and she was a tremendous help to me in getting us credentialed, getting us credentialed with Medicare and showing me that we could get credentialed with Blue Cross Blue Shield and Medcost and getting our dentists credentialed with people like that. She came in and did an audit and looked at our encounter [form], and I think there were eleven things wrong with our encounter form. Correcting codes. Surgical codes on our encounter that didn't need to be there. [Also] if there was something incorrect on the form.*

In addition to on-site assistance, interviewees stated that the medical coding specialist was accessible for technical assistance via phone, and they reported having used this service with frequency.

Helpful aspects of services. Interviewees consistently reported that they had positive reactions to their interaction with the medical coding specialist and found her visit to be helpful. The specialist was perceived as displaying a high degree of professionalism and expertise. In particular, several components of the medical coding specialist's services were considered very helpful by interviewees: a) presentation of audit findings tailored to each clinic; b) interactive staff trainings; c) periodic bulletins on medical coding changes; and d) availability of the specialist for informal calls.

Respondents frequently cited a **presentation of the audit findings** that was delivered by the specialist and customized to each clinic as evidence that the specialist was well prepared and informative.

> *When she came back to do the training, we had clinic staff and management support staff in there and they were all very impressed and pleased. She was very informative. She does a great job. She had a Power Point presentation set up and had our audit, specific to us, and went through each thing, step by step…. [She gave] nurses a chance to ask questions. [It was helpful] for us to see on paper, our audit, specific to us, and to have her tell us where we could make some adjustments.*

Interviewees also frequently cited the question and answer session as an activity that was helpful for their staff and demonstrated the extensive knowledge of the specialist.

> *She did a question and answer session. She is very confident. When she talks, you know she's done it.*

Interviewees expressed a high level of satisfaction with **interactive training activities**. A specific element of the training that the interviewees liked was the use of interactive exercises based on real life examples. Additionally, they reacted positively to the specialist's method of using forms from a clinic in that clinic's training activities. Both of these practical elements added to the relevancy of the training for participants.

> *[The specialist] came and did a presentation for the nurses. She used a Power Point. She gave them an encounter form and had them fill it out based on what they would do, and then they went over it together. It helped that she would bring real life examples to the workshop and use our encounter sheets. She had examples that we see on a daily basis.*

For some clinics, previous training efforts had been limited. One stated that the in-service that the specialist provided was "the first that some of [the staff] had had."

The medical coding specialist also provided periodic updates on changes in medical coding in a **periodic bulletin** to all clinics. Interviewees felt that this was a valuable services because it alleviated some of the challenges of keeping their codes up to date.

> *The main thing is staying on top of those new codes and keeping them changed on our encounter form. And she's been really good about sending those emails when those changes have occurred.*

In addition to formal types of assistance, all interviewees reported having **informal calls** with the medical coding specialist as specific questions arose in their clinics. When providing telephone assistance, the medical coding specialist was perceived by interviewees as being highly responsive to their requests and quick to return their calls. Interviewees repeatedly voiced the

opinion that it was helpful to have someone knowledgeable who was available to answer questions and share resources.

> *Knowing that you have that support. That's very helpful. Especially when you come into a position like I did, and you actually need someone to contact with questions and concerns, and they're just willing to drop everything and come down, you know, to your actual site, and you sit down face to face and one on one and talk through it with them. I think that's really helpful.*

Suggestions for improvement. Interviewees offered few suggestions on how the medical coding specialist's visit could have been more helpful. One interviewee requested that auditing appointments be confirmed a few days before the visit and information sent regarding the types of information that should be available upon her arrival, observing that as a result of communication failures, the visit was less effective that it could have been.

> *We still got some good information, but not as good as it could have been. It would be great if she could follow up with email so we could make better use of her time and provide what she needs.*

A few interviewees noted that there was a reciprocal learning process between the specialist and the health departments, observing that "we're teaching her as much as she's teaching us." They pointed out that while the specialist provided expertise on billing and coding grounded in her experiences working in the private sector, she also relied on health department staff to explain the nature of clinic flow in a health department setting or specifically what was helpful to health department staff.

Perceived impact of medical coding specialist position

Interviewees reflected on the short term impact of the medical coding specialist position on their organizations. They described a number of procedural changes they had made or short term impacts they observed as a result of their interactions with the specialist.

Procedural changes. The most commonly mentioned procedural changes were: a) revising patient encounter forms; b) changing clinic protocol regarding medical coding and oversight; and c) completing the medical credentialing process.

Most interviewees described **revising patient encounter forms** as a result of work with the medical coding specialist. The medical coding specialist assisted clinics in removing codes that were not actively being used so as to streamline and reorganize forms so that codes were found in logical groupings and orders. In addition, the specialist updated and corrected codes that were in error.

> *We've changed the medical encounter form – we've taken her suggestions and added things that we could code and took away things that were no longer valid. We've taken three pieces of paper and combined it into one piece of paper on the coding.*
>
> *One of the things that we have done in our agency is we consolidated all of our information into one encounter form. We put our diagnoses in alphabetical order and grouped our labs. [The medical coding specialist] helped us do that.*

In addition, interviewees stated that the medical coding specialist had been instrumental in helping to **change clinic protocol** regarding medical coding and oversight. Some of these protocol changes helped contribute to increased revenue while others reduced medical error. One common recommendation was to charge laboratory or handling fees.

> *There are things that we are not charging for now that we could be. She just went over that with us and went over our fee schedule, how that compared to the Medicare rates. . . Handling fees for our lab stuff. Another one was administration fees. It was going to mean about $20,000 dollars a year difference. And that was just in our flu billing.*

Other recommendations for clinic protocol were designed to help clinics identify and address errors at an early stage so as to avoid repeated errors. For example, at one clinic, the medical coding specialist helped clinic staff to proactively address insurance denials and identify patterns within those.

> *Some of the changes that we've made have been, as our Medicaid denials come in, now that we have all been trained on that by [the medical coding specialist], we work on those as they come in. Because those had kind of piled up.*

Similarly, the medical coding specialist helped other clinics to establish their own internal audit procedures to identify and address medical coding errors.

> *The biggest change [we have made] is adding the encounter form and billing piece to our internal audit. We peer audit each other. Because of the training, they are confident in discussing the forms. They'll say, "I don't think I would have coded this or done this."*

Interviewees also frequently mentioned that the medical coding specialist assisted them to **complete the medical credentialing process** with their providers so as to be able to bill Medicare, Medicaid, and private insurance companies. The credentialing process was frequently described as labor-intensive and intimidating, and interviewees were appreciative of the availability of the medical coding specialist to answer questions and guide them through the process.

> *We're right now trying to get set up as a participating provider with Blue Cross Blue Shield. That's a big packet of papers and it's a lot of jumping through the hoops to cross those t's and dot those i's to get them everything they need. And she has just, by working in the private sector and knowing more about that process. . . she was just a wonderful resource and she did the bulk of that work for me. Our next step is to become a provider with Medicare, which is a very extensive application process, and I feel like I've got just a wonderful resource that will make it that much easier for me.*

Short term impacts. In addition to describing procedural changes that the medical coding specialist helped to bring about, interviewees described a number of short term impacts of the medical coding specialist position. These included: a) increasing awareness of the importance of medical coding among clinic staff; and b) increasing staff confidence to address medical coding issues.

Several interviewees expressed the belief that interaction with the medical coding specialist's work had **increased staff awareness** about the importance of accurate medical coding. Staff trainings and in-services, as well as presentation of the results of audits, were considered helpful in emphasizing the importance of coding and helping staff understand how coding errors affected

the organization. One interviewee stated that, "I think we're more aware. I know for myself that I've been better about making sure those codes are circled."

In addition, interviewees described ways in which working with the specialist helped to **increase their confidence** to address medical coding issues. For example, one interviewee pointed out that in the course of providing tailored answers, the medical coding specialist was diligent to provide sources for the information. As a result, the interviewee was confident that she would have needed information available in the event of an audit.

> *Any time she sends information she always sends documentation with the answer so I have something to back that up. She's done a lot with Medicaid denials, helping me with those.*

One interviewee described how she felt that her own skills and capabilities for tasks such as credentialing had increased through interaction with the medical coding specialist.

> *Now that she's helped me with the credentialing, if we have a new provider, I feel like I can do that now, on my own maybe.*

In addition, the coding updates provided through the medical coding specialist's regular bulletins contributed to a feeling among interviewees that they had the resources to provide up-to-date information.

> *The main thing is staying on top of those new codes and keeping them changed on our encounter form. And she's been really good about sending those emails when those changes have occurred.*

Future improvements for medical coding

Interviewees were asked to describe the steps that they believed to be most important in order to continue to improve medical coding at their agencies in the future. The most common responses were: a) to maintain the medical coding specialist position; b) to continue to make staff more knowledgeable about medical coding; c) to carry on with credentialing efforts; and d) to develop systems and tools that will improve medical coding accuracy.

Many interviewees felt that one of the most important steps that could be taken to advance the cause of accurate medical coding was to **maintain the medical coding specialist position**.

> *It's important to keep [the medical coding specialist] on staff. It has really, really helped to have her, especially with new providers on board. I feel like I've got a wonderful resource that will make it much easier to take care of credentialing and address other issues.*

One interviewee pointed out that in the absence of a medical coding specialist position, clinics would be left to "fend for themselves," while another observed that "having a resource like [the medical coding specialist] makes it easier to do things right the first time."

One respondent suggested that the medical coding specialist position had the potential to raise money and become at least partially self-supporting.

> *I think [the medical coding specialist position] could generate money. . . . there are other counties that are interested in paying for her services.*

In addition, interviewees felt that it was important to continue to **make staff more knowledgeable about medical coding**. Some interviewees felt that medical coding should be integrated into the orientation of new providers. Others imagined standardized trainings to address needs across a variety of health departments.

> *I think [it would help] to have some standardized in-service so each health department is hearing the same message. . . . I think to have a PowerPoint -- that wouldn't be time consuming, but that would pack a lot of information.*

Multiple interviewees saw **credentialing** their providers with Medicaid, Medicare, and private insurance as one of their important next priorities. Credentialing providers will allow these clinics to increase revenue as they are able to bill these sources.

> *Our next step is to become a provider with Medicare, which is a very extensive application process, and I feel like I've got just a wonderful resource that will make it that much easier for me.*

Finally, interviewees believed that it was important to **develop systems and tools that will improve medical coding accuracy**. They mentioned a number of ideas to create reminders for providers or systemic checks that would catch medical errors during the coding process. For example, one interviewee felt that the medical coding specialist could help local health departments by providing a template "cheat sheet" with up-to-date medical codes for the most common ailments and treatments. Each clinic or could then modify this template to suit their particular needs.

> *I think it would be helpful to have cheat sheets with most of the commonly used diagnoses. . . . that would be something that would be helpful, if she could meet with our providers and they could give her a list of the most common diagnoses and the labs that need to be done all the time. Put together in one page, that would be easy to use, easy to update.*

Another interviewee envisioned that their new software for medical records and billing could alert staff to errors in the medical coding before the medical visit was complete.

> *As we get a new electronic system, it would be great if the system would recognize that a diagnosis code is wrong instead of accepting it and then having it denied.*

Discussion

Evaluation participants expressed the importance of having a Medical Coding Specialist and indicated their interest in maintaining the position. The training, technical assistance and consultation that Ms. Widener has been providing since May 2008 has helped address medical coding problems that have existed due to unfamiliarity with medical coding, the complexity of medical coding (e.g., annual updates to codes, variations across agencies), human error, and time pressures. Some of the changes that have already been made include revising patient encounter forms, changing clinic protocol, completing medical credentialing, and increasing staff's awareness and confidence in medical coding.

Interview respondents indicated satisfaction with their involvement with Ms. Widener. Interviewees described Ms. Widener as helpful and professional and particularly noted the usefulness of her tailored audit findings, interactive training, and periodic bulletins with medical

coding changes. The range of visits to each of the agencies varied from 2 to 11. The approach that the Medical Coding Specialist uses to engage staff from Partnership agencies is to email or call to set up an appointment. Often, Ms. Widener leaves staff messages to return her calls. While this approach works for many of the staff interviewed, some staff do not return calls or emails resulting in Ms. Widener's following up with additional calls and emails. In some cases, it can take months to schedule an appointment. While not specifically investigated in this evaluation, it appears that staff who respond and engage with Ms. Widener find her services the most useful.

Engaging with the Medical Coding Specialist involves taking additional staff time, which may present a barrier for those who have multiple responsibilities. For example, agencies going through accreditation or serving as a pilot for statewide initiatives (e.g., HIS system) may feel maxed out and not have additional time to work with the Medical Coding Specialist.

Limitations

Several limitations existed for this evaluation. There was no participation from one agency, so evaluation results are limited to the agencies that participated in the evaluation. Only one individual from each agency was interviewed and her responses may not have been representative of other agency staff who interact with the Medical Coding Specialist. Finally, while confidentiality was ensured, interviewees may have been concerned about being identified in the report and may not have been fully forthcoming with their responses.

Recommendations

Recommendations are divided into two sections, items to address for the current Clinic Efficiencies in Family Planning project and items to address for future projects. Recommendations are provided for the Partnership Coordinator and health directors' consideration.

Recommendations for Ms. Widener

- The following are recommendations provided by the evaluator:
  - Consider meeting with agency health directors where interaction with the Medical Coding Specialist has been limited. The purpose of the meeting would be to determine a plan for future interaction.
  - Review and follow the logic model (Appendix B) to guide evaluation of the Medical Coding Specialist position.
  - When conducting audits, consider revising methods and collect charts for a specific timeframe and randomly select charts to be audited. In particular, use the same protocol for chart selection at all agencies.
  - Consider learning Epi Info and tracking indicator data (as described in the logic model) in this or another type of database.
  - Develop categories or themes for types of coding errors so there is a way to summarize and compare changes in coding errors over years.

- The following were suggestions provided by evaluation participants:
  - Confirm appointments in advance.
  - Inform staff ahead of time of information and materials they should have prepared on day of her visit.
  - Work with health directors and human resources departments on integrating medical coding into new provider orientation.
  - Continue to work on assisting agencies in credentialing providers.

- Develop systems and tools to help ensure medical coding accuracy (e.g., cheat sheet templates, software alerts, and checklists).

Recommendations for Partnership

- Disseminate findings of report to evaluation participants for full transparency (Ms. DuVernois).
- Incorporate evaluation findings into NCPHA presentation on the Medical Coding Specialist position (Ms. DuVernois).
- Consider sharing evaluation findings with the Division of Public Health and state agencies using or considering using a Medical Coding Specialist.
- Ensure Ms. Widener has training and support needed to follow-through on capturing data outlined in logic model.
- Consider requesting semi-annual or annual reports summarizing chart audit, training, and other information provided by the Medical Coding Specialist.
- For agencies where there has been limited interaction with the Medical Coding Specialist, re-assess agency interest in obtaining the Specialist's assistance. If interest remains, health directors may want to indicate this interest to staff and request their participation in trainings and other coding activities.

Primary Stakeholders
Health directors, incubator coordinator, medical coder, and agency clinic staff involved in medical coding

Evaluation Purposes – 1) To conduct a formative evaluation to determine the extent of support agency staff have for improving medical coding; and 2) To develop an evaluation plan and instruments for the Medical Coding position to ensure evaluation data are collected over time.

Evaluation Questions

Type of Evaluation	Question
Formative	1a. To what extent is their agency level support for improvements in medical coding?
Process	2a. Is the Medical Coding Supervisor position achieving what it intended?
Outcome	3a. Is the Medical Coding Supervisor position leading to compliance in medical coding? 3b. Is the Medical Coding Supervisor position resulting in maximized reimbursement?

Process
- The draft plan was shared with Ms. Debbie Widener, NW Partnership Medical Coding Supervisor, and Ms. Candice DuVernois, NW Partnership Coordinator for their review and approval. Following that, Ms. DuVernois presented the plan to the Partnership Board for approval. It was approved in Winter 2008.
- NCIPH evaluator, Molly Cannon, will conduct formative evaluation and provide findings to Ms. Widener and Ms. DuVernois.
- Ms. Cannon will assist Ms. Widener in setting up process and outcome evaluation indicators and some instruments (see Logic Model).
- Ms. Widener will be responsible for implementing and summarizing process and outcome evaluation indicators and reporting to the Partnership.

Scope
- Evaluation will involve 9 out of 10 agencies in the NW Partnership (Forsyth does not offer clinical services)

Assumptions
- Key contact for this project will be Ms. Widener and Ms. DuVernois
- Cooperation and participation from project staff on providing necessary data

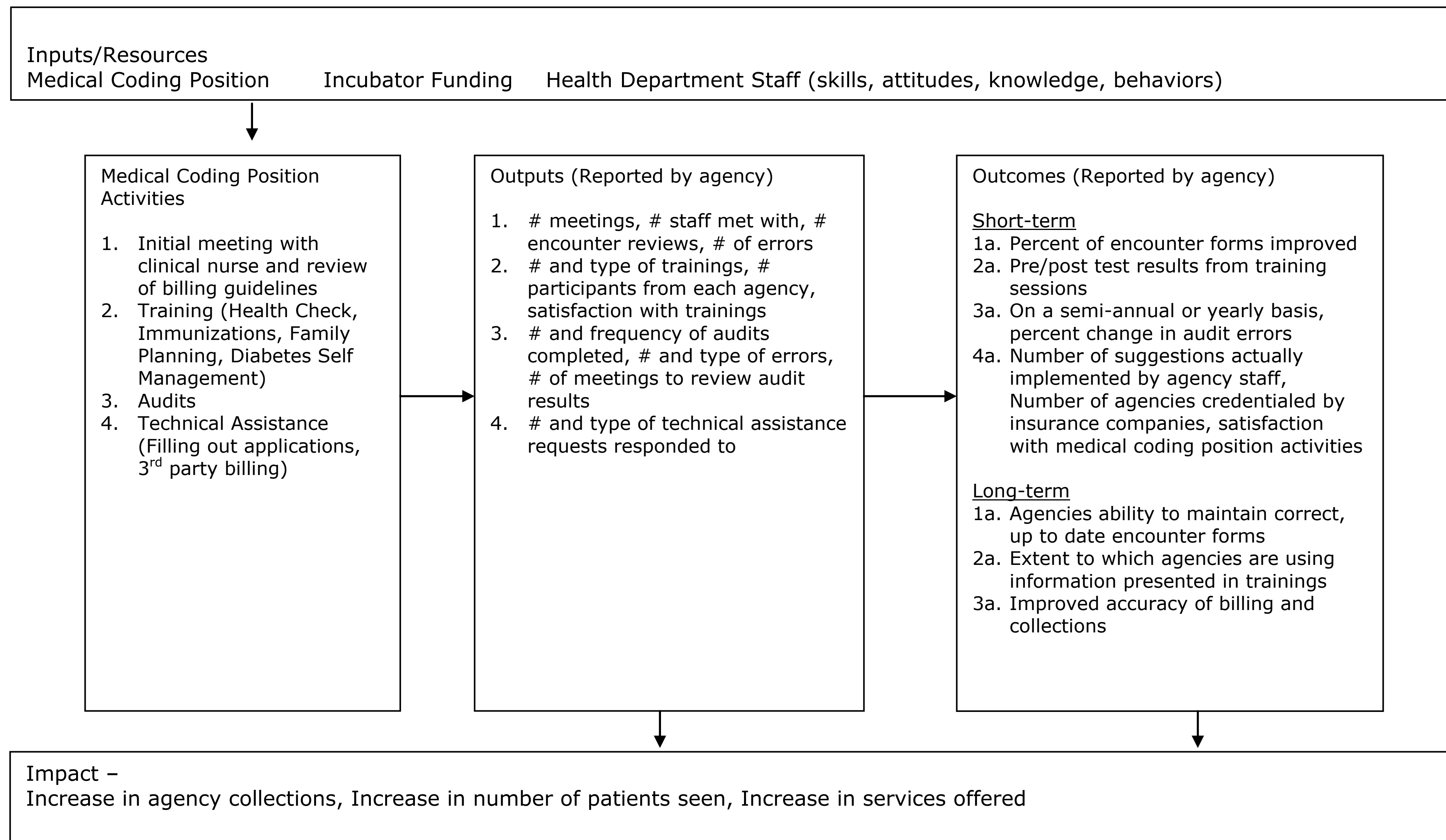
Evaluation Methods
- Formative Evaluation – Interviews with Directors of Nursing/Nursing Supervisors from each of the nine agencies. Interviews can begin as soon as interviewees are identified and protocols reviewed and approved.
- Process/Outcome Evaluation – See attached logic model. Data to be collected could include:
    - Encounter form errors – track number of errors and resolved errors in database (e.g., Epi Info)
    - Satisfaction surveys for trainings – track responses in database for summarizing
    - Pre/post tests for trainings – at least for trainings in first year to assess effectiveness of trainings

- Audit errors – track number of errors and resolved errors in database
- Technical assistance requests – track number and type of requests, response, and follow-up on recommendations made.
- Annual satisfaction survey for technical assistance provided – enter responses in database for summarizing. Document improvements made based on survey results.

Preliminary Suggestions

1. Conduct audits within a specific timeframe
2. Randomly select records to be audited – use same protocol for selection for all agencies each time
3. Consider learning Epi Info and tracking indicator data in this or another type of database
4. Develop categories or themes for types of errors so there is a way to summarize and compare over years.
5. Summarize all indicators at given time periods.

Appendix B: Logic Model



Formative study of health department medical coding practices (Northwest Incubator Project)
Interview guide

Last updated: 3.30.2009

Hello, my name is _________ and I'm calling from the North Carolina Institute for Public Health. We have been asked by the Northwest Partnership for Public Health to help set up an evaluation plan for the Partnership's Medical Coding Project which aims to improve medical coding at nine of the ten Partnership counties. In order to create such a plan, we would like to understand more about the medical coding experiences of providers at each of the agencies.

I think that our conversation will take approximately 30 minutes. Is this a good time for us to talk? [If not, set up time].

Before we talk, there are a few things that I want to let you know. Our conversation is confidential. When we report our findings, we will discuss overall trends. If we provide quotations from our interviews as examples, we will make sure that all identifying information is removed. Your participation is completely voluntary, and you may stop at any time. However, your participation can help decision makers understand the perspective of providers on medical coding.

Do you have any questions about this interview? Are you willing to participate?

I would like to tape record this conversation so that I can be sure to accurately record your answers. I will not share this recording with anyone, and I will destroy it after the project is complete. You have the right to ask me to stop the recorder at any time. Do I have your permission to record our conversation?

1. Please describe your role at the health department. What is your role with regard to patients?

2. Tell me about the process of using encounter forms when patients are seen at the health department.
   a. Who fills out the form?
   b. At what point do they fill them out?

3. What are some of the factors that make it easier to fill out the encounter forms?

4. What are some of the factors that make it more difficult to fill out the encounter forms?

5. Based on your experiences and the experiences of your staff, how often do you think that encounter forms are filled out correctly?
   If answers not always:
   a. What are some of the reasons that providers might not correctly fill out the medical codes on encounter forms?
   b. Which of these reasons do you think are most important?
   c. If patients have to pay more money for the services they receive, are you concerned that this will discourage them from seeking medical care?

d. Thinking again about patients who visit your clinic, if a provider seeing those patients were concerned about their financial situation, are there things they might say to them or ways in which they might try to help them avoid a medical expense?

There are several initiatives underway to help health departments collect more money from patients in order to cover the costs of providing care. I'd like to get your perspective about some of those efforts.

6. Have you been visited by a medical billing specialist, Debbie Widener?
   a. *Probe:* When Debbie visited you, what services was she providing: 1) Visit?, 2) Audit?, 3) Training?, or 4) Assistance?
   b. *Probe:* What reactions did you and your colleagues have to the visit?
   c. *Probe:* In what ways was the visit helpful?
   d. *Probe:* Do you have any suggestions of how her visit could have been more helpful?
   e. *Probe:* What, if any, changes have you made as a result of that visit?
   f. *Probe:* What do you think are the most important things that your health department could do to improve medical coding?

7. Do you have any other comments about the things that we have talked about today?

I would like to ask a few more short questions.

8. How many years have you worked as a nurse/provider/**management support staff?**
9. How long have you worked at your current health department?
10. How many providers work in your clinic?
11. How many times has a medical coding specialist visited your health department?

Those are all of the questions that I have. Before we finish today, do you have any questions for me?

Thank you for your time!