

>> DR. EDGERTON: Good afternoon, everyone.

Welcome to the HRSA Maternal & Child Health webinar today entitled: Partnerships and Relationships: Keys to Facility Recognition Success.

My name is Dr. Beth Edgerton and I'm the Branch Chief for the Emergency Medical Services for Children and Injury & Violence Prevention.

We are very honored here today to have Evelyn Lyons, Kathy Janis, Daniel Leonard, and Jane Ball share their work and their different projects funded through HRSA to look at partnerships and relationships and facility recognition.

Today, just to give you a few logistics before we start, we will be taking questions at the end of the webinar, but you can submit your questions any time during the process.

Also, this webinar will be archived and posted for public access in approximately two weeks.

If you registered for the webinar, you will be sent an e-mail that you can share with your colleagues.

Just in a quick, brief overview so you will understand the context of the two presentations being met, EMS for Children's mission is to ensure that all children and adolescents, regardless of where they live, attend school or travel, receive appropriate emergency healthcare when it's needed.

And from pediatric services, that means not only in the prehospital system, but also in hospital emergency departments.

The EMS for Children's program has had funding in each of our states and territories throughout the United States.

We have a few focus areas again improving and refining and integrating pediatric care within state EMS systems, which is really led by our state EMSC partnership branch.

We focus on finding new approaches to providing the best practices for emergency care for children across the nation, and that these are these two grant opportunities.

We also support a multi-institutional network for research in pediatric emergency medicine, also known as the [indiscernible] network.

And again, we have some demonstration projects that are really starting to address the issues of pediatric medical treatment where care is limited to geographical distances or jurisdictional borders.

Again, our speakers today will be Evelyn Lyons.

She is a program manager and co-principal investigator for the Illinois EMSC program within the Division of EMS and Highway Safety in Illinois' Department of Health.

Her background includes over 30 years of experience in emergency medical services.

Ms. Lyons is also one of the co- principal investigators for this 2010 Targeted Issues Grant based at Loyola University titled: Pediatric Facility Recognition & Categorization: Models of Best Practice, Implementation and Evaluation.

Kathy Janis is the project coordinator for this Targeted Issues Grant based in Illinois.

She has the primary responsibility for the identification and collection of best practices, guidelines, and performance improvement monitoring tools specific to the development of the Pediatric Facility Categorization process.

Daniel Leonard is a data systems manager for the Illinois EMSC program.

In his role, he is responsible for the automation component of the Illinois EMSC program and other related data analyses.

And Jane Ball serves as a consultant to the American College of Surgeon's Committee on Trauma, promoting state trauma systems and participates as a member of the State Trauma System Consultation Team.

She is also the managing investigator of their 2010 Targeted Issues Grant based at Wake Forest University School of Medicine entitled: Evaluation of Pediatric Emergency Care Recognition Program on the Care of Injured Children.

Our Targeted Issue Grants, just again as background before these two presentations, are what I often call our innovation grants.

They are a funding opportunity to address specific needs or gaps in the field.

They are really targeted to be crosscutting, and applied or replicated in other venues.

And again, today's webinar highlights two of these grants that were funded with 2010 funding.

We have no conflicts of interest by our presenters today.

And again, for those that would like to receive continuing education, at the end of this webinar there will be a link that you will see on your webpage that can take you to fill out an evaluation and complete the form for continuing education.

You need to listen to the whole webinar to be able to get credit for that continuing education.

And again, that will be available at the end of the webinar today.

Again, if you can make sure your phones are on mute, please send your questions as they come up during the webinar and we will address them at the end.

And with that, I would like to introduce Ms. Evelyn Lyons and her program.

Thank you, Evelyn.

>> DR. LYONS: Thank you, Beth.

Good afternoon, everyone.

We are all familiar with various hospital designations such as trauma systems and others noted on this slide.

These can also be known as facility categorization and facility recognition.

Basically, they represent systems in which standards are defined that hospitals meet in order to improve care and outcomes for a specific patient population.

So this same concept applies to a Pediatric Facility Recognition system, which essentially aims to decrease childhood morbidity and mortality by assuring that certain specific elements are in place to manage the critically ill and injured child.

Most Pediatric Facility Recognition programs share some common elements and include, for example, having personnel who are appropriately trained in pediatric emergency care, as well as having pediatric specific policies and patient management guidelines in place.

Also required is a strong quality and oversight process to evaluate the care being provided, ensure ongoing compliance with pediatric standards and guidelines, and determine the need for any program modifications over time.

Pediatric patients requiring transfer are considered a high risk population since they typically are being transferred for a higher or more specialized level of care.

So having transfer agreements, guidelines and processes in place is paramount.

Pediatric equipment and supplies that can meet the needs of all sized children, ranging from the neonatal to an adolescent, as well as a system of care that addresses family needs are additional elements that are common to most Pediatric Facility Recognition programs.

The concept of recognition or categorization has been long advocated by the EMS for Children program.

The next couple of slides will provide a brief history on related efforts.

1984 was obviously a landmark year in which the federal EMS for Children program was initially established.

Their first grants were awarded in 1986.

And it's important to note that efforts were already beginning in California at that time to regionalize pediatric care and develop processes to recognize hospitals for their pediatric emergency preparedness.

By 1993, the Institute of Medicine had released their first report on EMS for Children in which they outlined specific recommendations regarding the need to integrate categorization and regionalization as EMSC is developed within state and regional systems.

Over the next decade, much progress had been made through EMS for Children efforts.

In 2005, federal performance measures were established to ensure that all state EMS for Children programs were working towards common goals and that there were processes in place to measure progress.

Since only a handful of states had implemented facility recognition at that point, one of the performance measures spoke to this by requiring a system that would address pediatric medical and trauma emergencies.

The following year, the Institute of Medicine released their Future of Emergency Care Series, which looked critically at issues within the prehospital and emergency department settings.

Part of the report looks specifically at pediatric emergency care and identified that although much had been accomplished, there was still much work remaining.

And woven throughout the report was the term "uneven," which was used to describe the disparity between adult and pediatric emergency care.

Most importantly, the report called out the need for the development of evidence-based emergency care categorization systems and specified the inclusion of pediatrics.

Then, in 2009, the American Academy of Pediatrics, in partnership with the American College of Emergency Physicians and the Emergency Nurses Association, released their joint guidelines for care of children in the emergency department, which were endorsed by a number of other key organizations.

That same year, the Federal EMS for Children Performance Measures were updated.

The update resulted in the original performance measure from 2005 that focused on facility recognition, that performance measure was now split into two performance measures as seen on this slide.

These two performance measures are in place today and are required for all states to work towards attaining.

They take into account the trauma designation programs that are in place in many states as well as the need to develop infrastructures that can better address children with medical emergencies.

So, when we look at how pediatric prepared we are today, the need for facility recognition is still evident in the literature.

The most recent Institute of Medicine report identified a number of gaps in pediatric clinical management as outlined on this slide that really supports the need to further develop pediatric infrastructures in every state.

This slide outlines the key areas that the guidelines for care of children in the emergency department address what was mentioned earlier.

These guidelines outlined minimal standards that emergency departments should have in place in order to optimally meet the needs of children, and can serve as a guide for states as they develop criteria for their facility recognition systems.

Taking these guidelines a step further, data was recently collected through the National Pediatric Readiness Assessment Project, which just concluded in August, to assess how consistent emergency departments are with these guidelines.

Valuable information was gathered from over 4000 hospitals across the country.

The average score was 69; however, it's important to note that for those hospitals that participate in some type of pediatrics facility recognition program, when teasing out their scores, they actually scored higher with an average score of 82.

This helps demonstrate the role of facility recognition in attaining and maintaining pediatric standards.

Our state has had a facility recognition program in place for a number of years.

This is a map of Illinois, divided into 11 EMS regions.

We utilized this already established infrastructure of EMS regions as we implemented facility recognition on a region-by-region basis.

To orient everyone, the regions located in the upper right sector of our state representative the city of Chicago and surrounding urban, suburban counties.

This is the most densely populated area of our state and is also where the majority of pediatric resources and pediatric specialty services are located.

The rest of the state has some urban centers, but is largely rural.

Based on the 2010 Census, Illinois is the fifth most populated state, with a population of 12.8 million.

We have a correspondingly large pediatric census of 2.7 million and a sizeable age 3 and younger population, which is the age group that many emergency care personnel are uncomfortable managing.

In looking at our healthcare resources, Illinois has over 200 hospitals.

Some of these are specialty hospitals such as psychiatric or long-term care facilities.

Those with emergency departments account for about 190 hospitals and 56% of hospitals with ED's in our state have taken the steps to be recognized at one of three levels in our Pediatric Facility Recognition program: Pediatric Critical Care Center, Emergency Departments Approved for Pediatrics or the Standby Emergency Department Approved for Pediatrics.

You can see that the majority of children are seen in the emergency departments or recognized hospitals, and are admitted to the inpatient units of recognized hospitals.

However, our goal is to strive to have every hospital in our state participate at some point.

A key component that has served our efforts related to facility recognition is our organizational structure and partnerships.

Our state health department is the agency that our EMS for Children program resides within.

It is the state agency that formally recognizes hospitals that meet the core requirements of facility recognition.

In addition, we have a partnership with Loyola University Medical Center, which provides a home base for our program as well as access to academic and clinical resources, which greatly lends to our efforts.

In addition, we have a state advisory board that oversees all program activities, including facility recognition.

When our board was first established, they created committees and charged them with specific areas of focus.

Having a dedicated facility recognition committee has been invaluable.

They are responsible for guiding and defining the process, and developing various documents and resources.

In addition, since quality improvement is a huge component of the requirements, a number of years ago we created a QI subcommittee dedicated to pediatric quality work.

We've defined facility recognition in our state as a process to identify the readiness and capability of a hospital and its staff to provide optimal pediatric emergency and critical care.

It essentially provides a mechanism for our state to formally recognize hospitals that are prepared to handle the needs of children.

To provide an overview of our experience in developing a facility recognition program, we began by forming a multidisciplinary task force that met in 1994, and which, as you saw on our organizational chart, continues to meet today to oversee and modify the program.

This task force gathered experiences and guidelines from other states that had worked on similar efforts and we use those as tools and templates.

For example, the California EDAP process was one model that we utilized.

We also looked at our own state trauma and perinatal programs.

We debated the benefits of a mandatory versus voluntary process, and ultimately decided upon voluntary implementation.

We structured the process as a three-tiered system so all hospitals could have the opportunity to participate.

Obviously, criteria that a large academic medical center could need would be difficult for a small community rural hospital, so criteria in each of the three tiers addressed these differences.

As mentioned earlier, our state is divided into 11 EMS regions.

In 1998, we piloted the requirements for the EDAP and SEDP levels in two regions to obtain a perspective from an urban and a rural region.

The pilot for the EDAP and SEDP levels proved successful, and the following year we began implementation throughout the rest of the state on a region-by-region basis.

We then began to work on the process for the top levels, Pediatric Critical Care Center, which goes beyond the doors of the emergency department and includes the pediatric inpatient area.

We rolled out this level in 2002.

Along the way, we also incorporated the program into the state EMS regulations.

Once all regions were completed, we then began to conduct a renewal process on the same region-by-region basis.

We conduct on-site visits that recognize hospitals every three to four years to ensure their continued compliance with emergency care and critical care requirements, which works out to about 30 site visits per year that we conduct.

It's really important to recognize and understand that facility recognition is ongoing.

It literally never ends.

There's always a need to update the requirements and the process, which is why our facility recognition committee remains dedicated and continues to meet every other month.

Some examples of our most recent updates to our requirements in 2011 include addressing fast-track physicians, educational requirements since we are seeing more and more ED's with integrated fast-track areas.

So we wanted to address their pediatric educational needs as well.

We also now require that all hospitals participate in facility recognition, address the needs of children in their disaster planning.

In addition, we added specific components from the 2009 joint policy guidelines that we didn't already have in place, such as Physician Champion requirements as well as some revisions to the equipment and supply sections.

So it is really an ongoing and evolving process.

Outlined on this slide are the core areas that our facility recognition requirements address.

I can't emphasize enough the need for partnerships and working with key organizations to ensure a successful program.

As mentioned earlier, our facility recognition committee is multidisciplinary and contains representation from the organizations listed here.

In addition, most of these representatives also work clinically as nurses, physicians, or mid-level practitioners.

And that's important, since they bring that real-time clinical perspective to the table and are able to balance whether certain changes are reasonable and feasible.

Our state EMS for Children Advisory Board includes additional organizations that fully support our efforts.

Having key players and organizations at the table is an important first step for states beginning this process.

It's especially important to have your state hospital association represented, since their support is critical in order to move forward.

Over the years we've received multiple requests from states for information on our program and we've been asked to travel to a number of states to review our process and provide technical support.

We emphasize that it takes time, so be patient.

Facility recognition has its share of challenges and requires considerable time and effort, but the rewards far outweigh the challenges.

As previously mentioned, having key partners and organizations at the table is critical.

We also encourage states to look at already existent designation programs within their state to use as a model, such as trauma and perinatal.

It's helpful to brainstorm with your state program partners, since they have already gone through a similar process and will have perspectives to share.

They can also identify unique issues that can help avoid missteps.

There are also a number of infrastructure needs and details to consider and develop.

For example, who will be responsible for coordinating the program and site visits?

The standards and requirements will need to be defined, which will require a committee process.

And you'll also need to outline your process for updating those requirements.

Prior to going out to visit hospitals, the survey process will need to be defined and individuals recruited for the survey teams.

Training needs to be conducted, and checklists and other forms and documents need to be in place for communicating with the hospitals, as well as the survey team members.

Or, a state may choose to outsource the recognition and survey process.

We also have a database that we maintain on all participating hospitals and keep it updated so we can track hospitals as they initially are recognized and then renew their status overtime.

Consider conducting a pilot, which can be a real nice way to evaluate the process before fully diving and implementing the process in your state.

Before you begin thinking that all of this is too overwhelming, it's important to know that there are multiple states that have already implemented a facility recognition process, so there are several unique models out there.

As we began receiving requests over the past few years, we realized that it would be helpful to put together a toolkit that could be assistive for states, so we applied for and received a Targeted Issues Grant in 2010 to lend some assistance to states that are working to meet the Pediatric Facility Recognition Performance Measures.

We are in the process of finalizing this grant, so this webinar will provide a sneak peek of what you can expect.

Our first objective was to collect information from several states that have a process in place and conduct a comparative analysis of their implementation models.

This includes not only their criteria and requirements, but also structures within their states that may have led to their efforts, and challenges that they needed to address.

We also gathered all sorts of resources and documents from each state, and compiled a toolkit that contains sample checklists, tools, letters, certificates and other resources.

Lastly, incorporating measures to determine the effectiveness of Pediatric Facility Recognition is important.

So a key component through this grant is the sharing of various tested outcome and process measures and data sources that can be assistive.

I'm now going to turn the presentation over to Kathy, who will talk more specifically about the toolkit.

>> MS. JANIS: Thank you very much.

So as Evelyn mentioned, we have developed a Pediatric Facility Categorization Implementation toolkit.

Due to its size, I'm only able to give you a preview of its content and features during this presentation.

The toolkit will soon be developed with help by the NRC staff into an interactive .pdf format similar to the style used for the Interfacility Transfer toolkit that was talked about in a webinar about a week or two ago.

So the intent of this toolkit is to assist state and territory EMS for Children programs in their own execution of their categorization program by compiling existing tools and developing new resources, using state or program-specific examples and the lessons learned.

While we hope the entire toolkit will be useful, it was designed to be modular, which allows each program manager to directly access whichever resources are most relevant to their program.

So no matter the design or the model that the state program ultimate adopts, it's important to use a logical, strategic planning approach for success.

So for our purposes, we borrowed from a strategic planning model developed by the National Association of County & City Health Officials, and this is called Mobilizing for Action through Planning & Partnerships.

We called it the MAPP Model.

So the MAPP Model's principles embrace the efforts to improve efficiency and performance through strong partnerships, advocacy, and the ability to anticipate and manage changes.

The toolkit will begin with an executive summary that highlights the key features and resources.

And for people who hopefully will take advantage and delve into the entire thing, I did want to go over a little bit a brief overview of the other chapters.

So chapters one and two will provide a very brief historical review of the national EMS for Children program, and efforts behind the development of pediatric categorization that Evelyn mentioned.

These sections will also review successful strategic planning concepts with state-specific examples, and discuss some big issues, such as cost implications and sustainability.

Throughout, we'll highlight other related products already developed by national pediatric organizations.

Or, more specifically, developed by the national EMS for Children programs.

This was really to promote awareness and use of those other resources that are available to people.

So in chapters three through eight, we wanted to review the MAPP Model concepts as they relate specifically to pediatric categorization.

Then chapters nine, ten, eleven will target topics specific to the survey process, to quality improvement and for measures of program effectiveness.

Later on, Dan Leonard is going to review the data chapter in more detail, so that I will not go over in this presentation.

So each chapter is populated with downloadable tools that have either been compiled from designation programs or were developed specifically for those toolkits.

So while we learn that participating state categorization programs do vary widely in design and execution, they share many common goals and objectives.

So these include: understanding their states' profile and patient care needs and gaps; establishing a network of pediatric stakeholders and partners; and working with those coalitions to build interest in the categorization program.

In addition, you need to come to consensus on criteria and standards, and define levels of categorization to allow for differences in pediatric services at hospitals.

Lastly, it's important to continually adapt and refine the process to remain relevant and sustainable.

Speaking of sustainability, we have collected a number of stories from the participating state EMS for Children programs that helped out in our grant, as well as from other trauma and perinatal systems experiences.

One example comes from Arizona in which their EMS for Children program partnered with the Arizona Chapter of the AAP to house and manage their new categorization program.

They developed a fee structure to bring money into the program to cover operational costs and outreach.

So no matter, again, the model or the design, common themes centered around hiring and maintaining competent staff, securing permanent funding for leadership in staff positions, working with legislators to build regulations into the law, finding ways to engage stakeholders and participating hospitals, incorporating QI and data initiatives into the core of the program in order to demonstrate value, and be willing to adapt.

And as Evelyn mentioned, all of these take a great amount of patience and perseverance.

So to get a sense of the current models that we examined, we evolved a profile that compares the five participating state programs based on some topline criteria.

For example, this slide outlines the number of levels and the current naming conventions used for each state.

So again, what I'm showing you are just small snippets of the toolkits just for presentation purposes, but you'll see quite a bit more in the toolkit.

For a more comprehensive look at all sorts of features, we evolved an online application and we call it the Categorization Feature Comparison tool.

This includes a comparative view of demographics, program infrastructure, categorization history, process and criteria.

It also includes information about the states trauma and perinatal systems.

This information can be compared on screen as well as downloaded as a Word document.

So the application is also, it was designed to allow for additional information and state programs to be included in the future.

So there are a number of tools available, such as this one.

We call this the Basic Assessment Tool.

This tool was created to help a program manager understand your state better.

It also promotes dialogue and coalition building among your key pediatric stakeholder groups, and can also create opportunities for new partnerships you may not have already considered.

Another resource in the toolkit helps to address existing standards and how to apply them best in practice.

This slide is from an expert panel meeting of national and state pediatric healthcare professionals, representatives from the participating state EMSC programs, and other clinical experts.

So this expert panel made recommendations to establish core standards for pediatric categorization.

So the topic areas married those that were outlined in the Joint Policy Statement, the guidelines for care of children in emergency departments.

We use that as our core document.

In this excerpt, the panel recommended that in practice national prehospital equipment guidelines be used as minimal standards for those rural or tribal facilities.

So the toolkit also provides resources related to the process of implementing a categorization program.

For example, each program needs to establish and maintain an EMS for Children Advisory board or council.

So the image on top is a snapshot of a compiled advisory board or council membership from the participating state program.

So as a companion piece, we also developed a template list of suggested organizations that could represent key pediatric and EMS stakeholders, family or other pediatric advocacy groups.

So everything we've developed, you can download as a Word document or PDF, and the Word documents can be adapted for anyone's program.

So another challenge related to implementation is the survey process itself.

We have included a number of resources and examples, such as equipment checklists, certification approval letter.

So here on the screen, you'll see, we have an example from Arizona, an example of what a certification letter looks like, as well as what the letter and the certificate that a hospital gets when they are approved.

We also include a surveyor packet that reviews the roles and responsibilities.

For example, this one is from Illinois as well as a number of checklists that have been developed through different state programs that we've been able to adapt for the toolkits.

So the concept of quality improvement is also core to the success of a categorization program.

So listed on the slide are commonly identified pediatric-specific quality indicators.

This chapter also emphasizes the importance of having buy-in and participation from both the physician and nursing professions in order to enact meaningful clinical improvement.

So now, Dan Leonard will review the data resources found in the toolkit.

>> MR. LEONARD: In this section of the talk we're going to discuss [indiscernible] facility recognition with data.

Many types of data measurement are useful to categorization programs.

For example, it's important to track program activities, such as the number and percentage of participating hospitals and the number and percentage of patients treated at these hospitals.

There are also outreach efforts.

For example, the Tennessee EMSC program tracks website traffic, participation in conferences, and educational outreach.

This program will focus on secondary data.

Secondary data consists of existing data sets or data systems that are available publicly or used for research.

Examples include vital records, state registries and data sets, such as a trauma registry or EMS database, medical care billing records such as hospital inpatient and outpatient records, and national health surveys.

In the toolkit, we describe a number of these sources and for convenience include a summary table.

Here, the full table is displayed for a quick overall view.

I'll step through the rules one at a time in the following slides so they will appear larger.

However, regarding the overall view, we go from basic to complex.

This follows the model of a toolkit based on the understanding that different state programs will have different resources available.

This is the first row of the table.

Here we are showing publicly available data sources with online query systems and built in reports.

The third column shows links to tip sheets.

These are brief documents developed as part of our grant to amend the materials from the sites.

The third column also includes links to a number of online tutorials.

The sources can be useful for any program to provide baseline data as well as to provide reports for meetings and stakeholders.

The list of data sources is not exhaustive, but includes several useful examples.

These are inpatient and emergency department visit data by state, and for the U.S. overall from AHRQ; mortality data by cause of death by state and the U.S. overall from CDC.

Also from CDC, morbidity and mortality data for the U.S. overall.

This Iowa state level Child Health data provides pediatric health indicators derived from national surveys.

The Kaiser Family Foundation maintains a site with data about health systems by state, such as insurance coverage.

U.S. Health & Human Services maintains an interesting site with county and community level health indicators, including comparisons.

And finally, U.S.

Census data can be accessed through a user-friendly interface as well as in a more technical fashion, which we try to describe in the related tip sheet.

This is an example tip sheet to show the overall appearance.

The tip sheets step through use of the websites with screen images.

They also include specific notes that can be helpful.

This example works with CDC Wonder mortality data.

I'd like highlight the second note.

In the CDC data, the coding system used for cause of death changed from ICD-9 in 1998 to ICD-10 beginning in 1999.

Some uses of data may date back to the earlier time period, so this change is important.

Within the CDC site there is an extended discussion on the subject.

The discussion includes a link to a study in which researchers took a single set of records and coded them both as ICD-9 and ICD-10.

They then compared rates between the two coding systems by cause of death.

For example, for injury and mortality, ICD-10 coding inflated the rate slight, around 3% relative to ICD-9.

Because the CDC paper is particularly helpful, we make a clear link to it as part of a tip sheet, so it's readily available.

This is the second row of the table.

We are still working with free, publicly available data but the examples supply additional tools.

Using these tools assumes that some staffing is available for further data work beyond website queries and downloading existing reports.

Examples in the second column consist of spreadsheets using downloaded CDC mortality data for injury.

The spreadsheets compared time periods before and after categorization in Illinois, Oklahoma and Tennessee.

Because the spreadsheets take many steps to construct, we included links to brief, animated demos to show their construction as well as the tip sheet.

Mapping of data is also useful.

In the third column, we linked to a free mapping tool that was developed as part of the United Nations Educational Project, and there are many such mapping tools available.

One of the example spreadsheets from the previous slide is shown here.

It uses data taken directly from queries run on the CDC Wonder website.

I will describe components of the spreadsheet starting from the top.

We are examining the Injury Mortality Rate for 0-14 year olds.

Two time periods are compared: 1994-1998 and 2001-2005, before and after categorization was implemented in Illinois.

As a note, in Illinois, our Center for Health Statistics has recommended that we use five-year periods when comparing mortality rates.

Rates are in deaths for 100,000 population.

Above each chart we note the overall decline between the two time periods: 28% for Illinois and 17% for the U.S.

Within each chart, bars represent the rates.

For example, the blue bar in the Illinois chart shows an injury and mortality rate of 13.7 per 100,000 population for 1994 to 1998.

At the top of each bar are brackets that represent 95% confidence intervals.

These help in having meaning of the bar chart and the confidence interval values are available from the CDC query.

Also, within the spreadsheet beneath the charts we placed a set of scrollbars created using Excel's Developer tools.

This is only a screen image, but in the actual Excel file, the user can click on these tools to scroll through each individual state on the right while keeping Illinois on the left.

For example, the first click would bring up Alabama data for the bar chart on the right, the second click, Alaska and so on.

This makes it convenient to compare Illinois to other states, particularly those that are similar regionally and demographically.

These comparison reports need to be interpreted cautiously since there are many factors associated with injury mortality, including motor vehicle safety and injury prevention programs, and the use of the reports should include this caution.

Sorry, I stepped on my controller.

This is the third row of the table.

It presents more sophisticated examples and assumes greater support in working with data.

As an example of such support, the Illinois EMSC program is based at Loyola University Medical Center and we have both a research associate professor within our program and access to a biostatistician for selected projects.

As shown in the first column, obtaining data for these examples required data agreements.

Data agreements are legal documents the researchers signed as required by the data owners.

In addition to the data agreement, typically data owners want an accompanying description of research activities.

So one tool we like to in the second column is an example that can be used as a template.

The example describes the purposes of the research, how the data will be handled and the anticipated deliverables.

One national data source that requires a data request is the American College of Surgeons National Trauma Databank.

In the third column of the table there are three example reports.

These are more advanced and I would like to describe in detail the third example, which will focus specifically on emergency department pediatric care.

It consists of a study done in Illinois regarding its EMSC Categorization program and the use of head CT scanning in the ED for minor pediatric head trauma.

To describe the study, during 2008-2009, there were 190 hospitals with EDs in Illinois.

Of these, 107 participated in the EMSC facility recognition.

Facility recognition in Illinois requires ED quality improvement or QI activities.

For example, each hospital designates a pediatric quality coordinator; the coordinator serves as a liaison between the individual hospital, the region and the state program; participates in the regional QI committee meetings to discuss findings, sentinel events and educational opportunities; and integrates EMSC related QI activities within the multidisciplinary program at their own facility.

In 2008-2009, Illinois EMSC used this existing QI structure to conduct a statewide monitor regarding the ED management of pediatric patients presenting with mild head trauma.

The project required QI coordinators at each participating hospital to complete a survey and conduct medical record reviews.

Peer comparison reports were provided back to the coordinators with these data.

The appropriate use of head CT scans was emphasized to protect pediatric patients from unnecessary radiation.

In a follow-up to the QI monitor, Illinois EMSC developed an online educational module for providers.

We also took an algorithm regarding CT usage for minor pediatric head trauma from a national study published in 2009 and formatted it as a user-friendly handout for distribution throughout the program.

At around the same time, beginning with 2009 ED visits, statewide ED data became available in Illinois.

This did not allow for a before and after analysis relative to the QI project, but it did allow us to compare participating facilities to those who did not participate.

Using these statewide data, statistical analyses regarding head CT scan usage were conducted with assistance from our program research associate and biostatistician.

After adjusting for injury severity and other patient, clinician and facility characteristics, the following were found using the statewide ED data.

Hospital participation and facility recognition was associated with lower head CT usage in the ED.

Hospitals with pediatric intensive care unit capability were also associated with lower usage.

Clinicians treating fewer pediatric patients in the ED, either as a total number or as a percentage of their ED patients, were associated with higher usage.

The conclusion of the study was that a statewide program of facility recognition may have a positive influence on patient care through the dissemination of evidence-based materials to participating hospitals, and the study is currently being developed as a paper.

This concludes a look at example uses of secondary data as presented in the toolkit.

The uses range from basic to complex.

The examples and tools may suggest further opportunities to work with such data for measures of categorization.

Finally, although helpful, secondary data are not as rigorous as primary or perspective data collection conducted to address specific program needs.

With that, I would like to turn the presentation over to Jane.

>> DR. BALL: Hi.

I'm very happy to be available today to provide some overview of the Targeted Issues Grant that I've been involved in, which is the evaluation of a pediatric emergency care recognition program on the care of injured children.

This Targeted Issues project is based at Wake Forest University School of Medicine in Winston-Salem, North Carolina, and it is being conducted in partnership with the American College of Surgeons, Committee on Trauma, and it could not have happened without the support of the state of Delaware and North Carolina EMSC programs.

This is a brief glimpse of the project team.

As you can see, we have got Dr. Wayne Meredith, who is our principal investigator, as well as other folks at Wake Forest University who have been essential to the project, and then a team through the American College of Surgeons.

This project focused on Performance Measure #75, in which 50% of hospitals are recognized as part of a statewide, territorial or regional standardized system that are able to stabilize and/or manage pediatric traumatic emergencies.

Just to give you a little background, when we were thinking about trying to develop a Targeted Issues Grant, we learned the Delaware plan to implement a Pediatric Emergency Care Facility Recognition Program statewide.

This created an opportunity to evaluate the implementation of such a project, and such an evaluation had not yet been conducted.

Our project goal was to analyze and report on the recognition and care of injured children in states with and without a Pediatric Emergency Care Facility Recognition Program.

It is helpful to review a little bit about the process that Delaware put in place and the criteria for their system.

It really follows all of the guidelines in the Joint Policy Statement, and this includes having adequately trained staff in the emergency departments for emergency care and resuscitation, central equipment and supplies, having pediatric coordinators who are both physicians and nurses, having the hospital participate in a statewide quality improvement process, linkage with prehospital care, the existence of interfacility transfer agreements, and public education and injury prevention outreach.

Just to give you a picture of where the Delaware hospitals are, there are eight hospitals in the state with emergency departments, and as you can see, four of them are in the northern part of the state.

This is the urban/suburban area of the state.

And four hospitals are located in the two lower counties, which are the more rural parts of the state.

Delaware's program actually created four levels of Pediatric Emergency Care Facility Recognition.

And I think it's also helpful for you to know that all the hospitals participate in the state trauma system, either as actually verified trauma centers or as a participating hospital.

To participate in the Pediatric Emergency Care Facility Recognition Program, each of the hospitals had to submit an application and they were then site visited to verify the information in the application.

Program recognition was awarded to all eight hospitals in December of 2011.

For this project to be effective, we felt there needed to be a comparison group to the Delaware hospitals.

We hoped to identify changes in the process of pediatric emergency care with the implementation of this recognition program.

However, I think a lot of folks recognize that care practices can change over time for many reasons, such as the dissemination of new practice guidelines, new research that gets published, information that is shared at meetings.

So there is a lot of things that can happen to lead to change and care over time and we felt that a comparison group would help determine if changes could actually be related to the implementation of the facility recognition program.

That is assuming that knowledge and transmission of information is kind of consistent between both the site being evaluated and the comparison group.

For the purpose of this project, our comparison group was North Carolina hospitals in the region around Wake Forest University.

It was important for us to know, at the time we selected this comparison group that North Carolina did not plan to implement a Pediatric Emergency Department Recognition Program, and it was important to note that the state had an established trauma system so there was some comparability between the two groups of hospitals.

To give you an idea of where our groups of hospitals were located in North Carolina, if you look at the section of the state that is purple, that is the area we've focused on, and the two dots in the center, one is actually Wake Forest University Baptist Hospital, and then there is another trauma center in that region.

So we're actually looking at hospital cohorts.

Within our grant application, we identified that we would recruit six of the eight hospitals in Delaware to participate in the project.

In actuality, all eight hospitals wanted to participate in the project, so all eight were allowed to participate.

In North Carolina, we identified that we would identify 12 hospitals for the project and we recruited 13.

We felt it was important to have a spare hospital in case, for some reason, one of the hospitals dropped out of the project.

Within each state cohort, we did have a Children's Hospital and either a level one or two adult trauma center that participated in the project.

The process of recruiting hospitals was lengthy, challenging, and ultimately successful.

I was introduced to key emergency department leaders in each state.

In one state, it was through a meeting of the EMSC Advisory Committee in which every hospital pretty much had a representative.

In another state, I was invited to do a presentation about the project at a meeting of emergency department nurse leaders who were attending the State Trauma Regional Advisory Committee.

I then collected contact information from those individuals and worked with the key liaison I had in each state to collect other contact information, and began the process of following up with each of these emergency department leaders to try to gain agreement to participate in the process.

This was a relationship that occurred by phone and e-mail predominately, as I was not in either state locally.

I think one of the things that helped tip the scale in many regards with regard to agreement to participate in the project is that we offered to pay for the data abstraction.

I think without that carrot, we probably would not have been successful in recruiting the hospitals.

We had several challenges.

In the first year, we devoted a lot of time to hospital recruitment.

As I said, ultimately we did get 21 hospitals that agreed to participate.

We had to work on the development and refinement of a data collection system that could be used in all 21 hospitals.

And, we also worked to obtain the initial Institutional Review Board approval for the project.

Once we had the initial IRB approval, we then had to work to obtain the IRB approval for each of the hospitals participating.

We had previously obtained a Letter of Agreement for each hospital to participate in the project that had been signed by the hospital administrator.

That was something that we had to provide as evidence to grants management that we actually would be able to successfully proceed with the project.

The IRB approval was a totally different challenge in that not every hospital had an IRB committee.

We had to actually come up with a process that would work.

We did work very hard with the hospitals that did have an IRB committee, and provide them with information that they needed to actually submit the application to have it reviewed.

We had about 13 hospitals without an IRB committee and we were very fortunate that Wake Forest University worked to develop a community IRB process, providing an infrastructure and toolkit, basically, for each of the hospitals to complete so that they could identify who was going to be their project team leader, who was going to be their data collection person, insuring that all of them had met all of the educational requirements for patient confidentiality and research confidentiality.

And linkage to the IRB committee at Wake Forest University was somewhat challenging, but we were fortunate to have a lot of support to make that happen.

One of the other challenges was a delay in the implementation of Delaware's Pediatric Emergency Care Facility Recognition Program.

We had actually hoped that it was going to be implemented about a year before it actually happened, but with collaboration of key people in Delaware we were actually able to get the program implemented in December of 2011, which did allow us to have an opportunity for evaluation and data collection a year after the program implementation.

The data collection system was also an interesting process.

Because we were collecting data from 21 hospitals, we felt that we had to have a web-based data collection system.

We chose the Red Cap System, which is a web-based tool that was developed at Vanderbilt University, and it has worked very effectively for us.

This database was built at the American College of Surgeons, and it was maintained their with all of the required security measures.

Each of our abstractors were able to login.

They had their particular login process but they were able to then enter the specific data that we requested.

We built a data dictionary to guide the abstractors on the correct coding for the required data elements, and then we conducted abstractor training in each state.

This actually was done, we had a hospital who offered to sponsor the training, and we actually did this in a computer lab so that abstractors could have practice in abstracting some records that had been cleaned, and it gave them a chance to learn to evaluate the data dictionary, to look for data and figure out how to code it correctly.

I'm having trouble advancing the slides here.

Just a second.

There we go.

Okay, here is a sample of one of the screens from the web-based database.

This is the Pain Management page.

As you can see, there was an opportunity to identify the time that a pain assessment was performed, the scale used, and an opportunity to insert the name of the scale, if the one that they used was not listed.

We were able to get the pain score, whether or not there were subsequent pain scores obtained, if pain medication was prescribed, what was administered, the dose and that type of thing.

So we were able to collect a lot of very discreet information.

I'm still having trouble advancing the slides.

I'm sorry.

Is someone available to help advance the slides?

>> DR. EDGERTON: Jane, this is Beth.

If you could just say "next slide," then Scott can move it for you.

>> DR. BALL: Okay, well I need the next slide.

Okay.

>> DR. EDGERTON: Right now it is showing Study Population Eligibility.

>> DR. BALL: Okay, it's just not showing up on my screen.

That's okay.

I will just keep talking.

The study population eligibility, we had children who were 14 years of age and younger who were eligible.

Each of the children needed to have an injury and we used ICD-9 codes 800 to 959.9.

What we did was give the abstractors a date and specific time upon which they were to begin identifying cases treated in the emergency department with an injury, and then they took -- they took cases who met the criteria until they reached the number they were assigned to get.

And we were concerned that we might have children with severe injuries that were transferred.

We did not want the same child counted twice in the study, so children were only counted in the referring facility, not in the ultimate facility where they arrived.

In terms of the study population, we did work to prorate the number of cases that each hospital contributed because we had some very small hospitals as well as some very large hospitals with regard to emergency department patient volume.

We asked each of the hospitals at the beginning to tell us what their 2010 annual pediatric volume was for children that were 14 years of age and younger.

And we had hospitals with less than 1,000 children and we had hospitals with greater than 39,000.

We then did the proration.

We probably overestimated a little bit with the smallest hospital, but we felt that every hospital should contribute at least ten cases.

One hospital contributed as many as 189 cases, and this was each of the three data collection periods.

The total number of cases was 2186.

And as you can see, Delaware contributed about 1072 cases and North Carolina about 1028.

I'm trying to move forward to the data collection phases.

>> DR. EDGERTON: You are on that page right now.

>> DR. BALL: Okay, great.

Thank you.

As you can see, we collected data three separate times.

We wanted to get some baseline data so that we would know a point at which to measure change in the process of care, so we had data collected from emergency department cases in 2009.

This was collected from the hospitals in both states.

In January of 2012, we collected data from Delaware at the time of their facility recognition implementation, and this is because we just wanted to know for sure that there wasn't a big change between the baseline data and the time of implementation.

And then in January of 2013, which was one year after the implementation of the facility recognition program, we collected data from both states again.

Just to give you a little bit of information about the demographic characteristics of the study population, as you can see, our mean age is 6.8 years.

And, as you would expect, the number of boys was greater than girls.

We had an injury severity score of predominantly less than nine, which meant that a huge portion of kids had mild injuries, but this actually mirrors what you see in emergency departments across the country.

And the majority of the kids were transferred home as well.

In terms of some of the data analysis issues that we were dealing with, after the first data collection phase, when we discovered that our cases were going to be predominately mild injuries, it created some challenges for us because we had certainly hoped that we would have some children with moderate and severe injuries.

We had prepared for that in some of the data elements that we were collecting; however, we then started turning our thoughts to what could we actually evaluate with regard to children with mild injuries, thinking this is the most common group that we see in emergency departments, and surely there are some valuable pieces of information that we could learn from the care provided to children with mild injuries.

So in many regards, this actually turned towards a performance improvement process evaluation.

And to give you an example, we really started thinking about some of the measures that we would be able to look at in our project with regards to performance improvement, such as whether or not wait was documented; were vital signs documented?

Was pain assessed in children?

Was pain managed when it was present?

Were medication dosages actually correct for the child's weight?

Did children get sedation?

And, what was the use of radiation on kids?

Okay, moving on to the next slide that looks at current status, I just want to let you know that we have collected all data.

All 21 hospitals contributed all of the requested cases.

We are in the process of data analysis at this point in time, and publications are being developed.

And, as I'm sure you can guess, we aren't able to really share results with you at this particular point in time.

We, as I said, we're finalizing the data analysis, and we want to make sure that we really do a great job of carefully looking at all of the options with regard to the data analysis.

However, I do think there is some very important information that is important to reflect over the nature of this project, such as the fact that relationships were so essential for the success of this project, and they were essential for every aspect of this process.

It reflects back on one of the reasons that we elected to title this webcast what we did.

First, that we had to have a strong partnership between Wake Forest University and the American College of Surgeons' team.

We would have really had a difficult time if Wake Forest had not developed a relationship with the individual hospitals with regard to the IRB approval process.

The project team had to have a really effective working relationship with the Delaware State trauma program manager, who worked hard to make sure that the facility recognition program actually got implemented on time for us to be able to do the study.

It was really important to have a strong working relationship with each of the emergency department nurses who were our key advocates for this particular project.

And I also, as the managing investigator, had to have a strong working relationship with each of the abstractors, because they needed to have someone that they could speak with to ask their questions and make sure that they were appropriately coding information.

I learned a lot through the relationship building process, and some of the things I think that are important to share with you are that each of these key people are very busy professionals, so they were in essence volunteering their time to participate in this project.

All of the relationships were built electronically, so you had to kind of create strategies for how you were going to interact with them, and make them know that they were valuable to you and felt appreciated.

It took a lot of phone and e-mail messages to get the permission to participate, to get the IRB approval, to get the abstractors in position, to get their training and that type of thing.

One of the things I learned very early is that group e-mail messages were not effective.

They were either bounced out by the screening process that went into the hospitals, or they just were not viewed as important by the individuals who received them.

So I would send 21 individual messages to the emergency department nurses that I needed to reach, especially when I needed a response from them, such as tell me an update on where you are with regard to getting the IRB documentation together.

So that was something that was very important.

The other thing that I tried to do was to go through any messages I got back from each individual and identify a piece of information about the individual or the person, and keep track of it.

Use that piece of information in the next message that I sent.

That turned out to be one of the most effective ways to develop a relationship, because I could communicate.

I also learned that you have to show appreciation with every single message that you sent.

They needed to know that someone was interested in them and appreciated their efforts.

One of the things that was also important is you have to start early.

When you are trying to get feedback from this many people, it sometimes takes weeks and weeks.

You need to stay in contact with the individuals.

I tended to send a message at least every two months, because I never knew when an emergency nurse or an abstractor might decide, I'm going to change jobs.

It was one way to at least have a contact person between the hospitals that I could get to another person if I needed to.

We did provide feedback to the nurses and the abstractors when we could about the data that had been collected, just so that they knew there was something being done with the data.

At the end of each data collection period, I would send back a note and say here's a summary of all of the aggregate data that we have done, just so you have a picture of what it looks like.

The last thing I want to do is say that you need to remember that relationships are a two-way street and you have to demonstrate that you really value the person that you are having the relationship with, so you need to follow through on the promises that you made.

If that means that you send back data when you can, you do that.

I think it's also important to let them know that they are partners in the entire process and that you really can't be successful without them.

And I think that's one of the biggest messages that I have.

You need to expect to give back if you want someone to share something with you.

At this point in time, I would like to turn the webcast back over to Beth.

>> DR. EDGERTON: I'm sorry, I was on mute.

I apologize.

Thank you to Jane, Kathy, Daniel and Evelyn for your great presentations.

We had a few questions from the audience.

One of those being, Jane, if you could respond to the arrangements you have had with the data abstractors and whether they were paid by the hour or the case?

And how many ultimately participated in the abstraction process.

>> DR. BALL: Okay.

I had abstractors at each of the 21 hospitals that participated and in some cases, I had two abstractors when we had a very large number of cases that were abstracted.

We paid the abstractors per case so that they got feed, you know, it was prorated.

Since the number of cases was prorated at the hospitals, the hospitals with fewer cases actually got less income, but they each got an amount.

I think I had 22 abstractors total for this particular project.

>> DR. EDGERTON: And how did you maintain training with that many people in so many different locations?

>> DR. BALL: We actually conducted training at two locations, one in Delaware and one in North Carolina, where the majority of the abstractors came and got the ability to practice data abstraction.

We had a few abstractors who were unable to participate in the on-site training and we did telephone training.

We actually followed the exact same process that we used with the on-site training, giving the background information, the overview of the data collection system, how to get access to it, and then we actually provided them with the cases to practice the data abstraction.

So each of the abstractors had three cases that they practiced abstracting on, and at the end of one case, we asked them to let us know when they were done.

We had a discussion with any of the challenges with regard to the data abstraction.

We had a few particular data elements that we wanted to find out if they were consistently interpreting the data dictionary about how to code a particular variable and that seemed to work pretty well for us.

I had only one abstractor that we needed to replace in the third data collection phase and we did the telephone training with that individual.

We did do data validation.

At the end of the first data collection period, we actually went on-site at each hospital and re-abstracted a sample of records just to ensure ourselves that there was accurate data abstraction occurring.

>> DR. EDGERTON: Great.

Thank you.

I'm going to share this question with Daniel since you're the main data individual.

It is a question about why different age brackets were used, specifically why in Illinois you alluded the age range to 14 rather than to 19 on your spreadsheet tool example.

>> MR. LEONARD: Sure.

For our program and the state trauma program as well, we define pediatric as 0 to 15 years of age.

The choices by default in the CDC website are 0, 1-4, 5-9, 10-14, and 15-19 years.

So obviously I would break it off at 14 rather than include the extra years that are not part of our program.

>> DR. EDGERTON: Okay, great.

Again, to Evelyn and Jane, what additional partners would you like to recruit in Illinois or do you consider the program fully successful?

And to what extent are you partnering with burn prevention treatment professionals and the poison control staff?

>> MS. LYONS: In Illinois, we have a number of critical access hospitals that are participating in the process, but those southern and central areas of our state actually have quite a number of critical access hospitals.

So I think partnering to a greater degree with the Illinois Critical Access Hospital Network within our state, that organization has a really good handle on critical access hospital needs.

We have begun establishing a relationship with them regarding disaster preparedness.

And I think as we build that relationship a little bit better, they will be able to assist us in identifying more specific needs of the critical access hospital population, and how we can try to address the facility recognition program and identify resources that might be helpful to them to begin participating.

In terms of poison center, we do have a poison center representative on our EMS for Children Advisory Board.

When we go out on our site visits, we do look to ensure that there is poison center access information that is readily available in the emergency department and the hospital.

Burn resources, hospitals are aware of the burn centers.

We have two burn centers that are recognized through the American Burn Association in our state, and then we have two hospitals that have burn units.

Those resources are made available, and there is awareness by the other hospitals in our state as to those resources.

And we're currently working on a burn surge plan in the event of a disaster, if there was a large scale event that resulted in a large number of burn patients.

This plan will outline the state response to that event.

So those are the activities that we have been working on so far related to those areas.

>> DR. EDGERTON: Great.

And a question both to you, Evelyn and Jane, is how do you all plan on maintaining that engagement with hospitals?

Evelyn, you mentioned a little bit about your continual site visits.

I didn't know if you have other activities; and Jane, with all your relationship building strategies that you plan on taking.

>> MS. BALL: Well, I'll go first.

I wish I had a way to maintain the relationships with the emergency department nurses.

What I have done over the couple weeks ago was go and visit each of the hospitals in North Carolina, and follow-up on the promise that we made to share their hospital data with them, and some comparison data for similar sized hospitals in aggregate.

Also, to do a little mini-ED assessment and provide them with some resources for improving pediatric emergency care, so that was one of the things that we've done to actually share stuff and show that we valued the volunteer efforts that they have provided.

I will be sharing some aggregate information at EMSC meetings in Delaware and also at the Regional Trauma Advisory Committee in North Carolina, so that they hear more than just their hospital, but they will get some overall aggregate information from the project, and appreciation for their participation.

>> MS. LYONS: In Illinois, we have contact information for all of the hospital pediatric quality coordinators, and so, on a regular basis, we share updates with them and keep them in the loop on anything new that is going on, or any information that we are aware of that would be important for them to have an understanding of from the national level or other organizations that's related to pediatric emergency care.

In addition, we have a quality improvement subcommittee that reports up to the facility recognition committee.

Each of the chairs, each region, each EMS region within our state, the hospitals within that region come together on a quarterly basis and meet together to share information and work on regional activities.

The chair of each of those 11 committees, each of those 11 chairs sits on the quality improvement subcommittee.

And so that's another opportunity to share information with them, and that they can share amongst themselves the various projects and activities they are working on, and then they can bring that information back to each of their regional committees.

>> DR. EDGERTON: Great.

Thank you.

While I was on mute earlier, I just wanted to thank all of our speakers for providing such a comprehensive view and different strategies to showing the effectiveness of pediatric categorization and also just the time and effort you have all put in to developing those relationships and the thoughtfulness of who you've engaged to be part of that process.

We really appreciate it and we look forward to Illinois' tool that will be available through our National Resource Center.

Again, thank you to everyone in attendance.

Hopefully on the slide you should be seeing the connection that you need to make if you would like to get continuing education credit for this.

And again, I would like to thank our speakers- Evelyn Lyons, Kathy Janis, Daniel Leonard and Jane Ball- for all of their time and effort.

01:22:28:22 Thank you again.