

## **MCHB/EMSC September 28, 2005 Webcast**

### **MCHB/EMSC's National EMS Information System (NEMSIS)**

DAN KAVANAUGH: Good afternoon. My name is Dan Kavanaugh, director of the emergency medical services program here at HRSA. I would like to go over a few instructions as you watch the webcast this afternoon. Slides will appear in the central window and should advance automatically. Slide changes are synchronized with the presentation. You do not need to do anything to advance the slides. You may need to adjust the timing to match the audio by using the slide delay control at the top of the window. We encourage you to ask questions during any time during the presentation. Type the questions on the right side of the interface, select question for speaker and hit send. Please include the state or organization in the message so we know where you are participating from. The questions will be relayed on to the speakers periodically through the broadcast. If we don't have the opportunity to respond to your question during the broadcast, we will email afterwards. We encourage you to submit questions at any time during the broadcast and any questions we do not answer will be available on the archive. On the left of the interface is the video window. You can adjust the volume of the audio using the volume control slider which you can access by clicking on the loud speaker icon. Those of you who selected accessibility features when registered will see text captioning underneath the video window. At the end of the broadcast, the interface will close automatically. Please take a couple minutes to fill out the online evaluation. Your responses will help us to improve the technical support. I would like to introduce Susan McHenry from NEMSIS EMS division moderating the webcast.

SUSAN MCHENRY: Thank you, Dan. Welcome to all of you. We appreciate you joining us this afternoon. I would like to just give a couple sentences of background and then introduce the speakers for this afternoon. First I would like to say how please we are working with the federal partners to be able to give support to the whole NEMSIS project since the inception in 2001. We appreciate the leadership of the National Association of State EMS directors for moving this project forward. That was their idea in the first place and we are pleased with the support. Principal investigator was Greg Mears, he'll be joining us a bit later. I'm also very pleased to say that also in concert with us, we have made the decisions on where the national EMS database will be housed and contracted with a technical assistance center. National database housed at the National Highway Traffic Safety administration, and they'll be generating the national report. Also on the 16th of September we contracted with the University of Utah School Of Medicine to actually operate the NEMSIS technical assistance center.

Clay Mann, the principal investigator for the technical assistance center will also be joining us this afternoon. We are very excited about the implementation of NEMSIS because we know how valuable the data will be to all of us and we are very excited about moving on to that next phase. Today's program will give you a snapshot of what is to come, I think, and let you see some of the great services and resources that will be available to help you as you move towards participation in this national program. So Greg Mears will be joining us a bit later this afternoon. And as I said, he is the principal investigator on the project. He's the EMS medical director for the state of North Carolina. Following him, or we will also

have Clay Mann, as I mentioned, who is the principal investigator for the technical assistance center and also works with the National EMS for Children data resource center.

And finishing up with Dr. Rick Alcorta. Maryland Institute for EMS Systems. Rick is also representing on the executive committee of the state EMS directors. I would like to turn things over to Clay so he can talk with you some about the technical assistance center. Thank you.

CLAY MANN: Thank you, Susan. It's a pleasure to be here this afternoon and to talk to you a little bit about the national EMS database technical assistance center. I apologize in advance for the hoarseness of my voice. Probably a combination of a virus and being too focal at the University of Utah Air Force game. We did win the game. Hopefully it wasn't in vain.

The next slide we talk about beginning operations of the technical assistance center, it will begin in September of this month, on September 30th. As Susan mentioned the award went to the University of Utah School of Medicine with a substantial contract going to the EMS performance improvement center at the University of North Carolina Chapel Hill, Dr. Greg Mears shop. The reason why this collaboration is occurring, when we were submitting the proposal we thought we could best serve the needs of software vendors who were attempting to implement the data standards 2.2, and also for the statewide EMS data collection, and migrating it to a national database. It will be housed at the University

of Utah to increase the integrity of data collection. Dr. Mears, his shop, North Carolina, they have great expertise, of course, in a lot of institutional knowledge related to the data standards. Bringing those two will be very valuable.

On the next slide I list a number of the resources that will be available through the technical assistance center, and we will walk through those in some detail. Some are existing and enhanced, and others will come to fruition with the funding of the technical assistance. The second to the last bullet, the whole purpose behind everything mentioned today, and that is the development and deployment of a national EMS database. Many of you know that NEMSIS has had a website available for several years. It has provided a number of very good tools for software vendors attempting to migrate to 2.2. We will enhance it with a number of upgrades, provide the opportunity for states to actually go to the website and provide resources that will help them in their efforts to implement the NEMSIS system. That is, to develop a process whereby data could be collected across the state and migrated to a national database. A number of reference documents are currently available and will continue to be enhanced. The data set, and the schemas are available.

Dr. Greg Mears and his shop did a great job of putting that together. They presently exist on the NEMSIS website. They are working on a compliance policy whereby a software vendor could test their software to determine whether or not it's compliant with the 2.2 data standard. Test cases and a sample of files will be available to make that process work, and that will be housed in Dr. Mears' shop.

One of the primary purposes of technical assistance center, increase our communication as is mentioned on the next slide, with software vendors, local EMS agencies, and state EMS agencies. And also to increase public awareness of the need for a national EMS database Dr. Mears will be speaking to us about in a moment. There is currently a NEMSIS email list. We'll be enhancing the capability of that list. And we'll be developing some frequently asked question sheets that will aid software vendors and states that are attempting to migrate toward NEMSIS. I'll never attend a football game before a webcast again. We plan to put together a user group specifically for EMS agencies, software vendors and state agencies to allow them to speak with each other and communicate about some aspects that they have implemented or facilitated, a movement forwards NEMSIS. And then fact sheets as well. Some exist on the website now and there will be others developed.

Next slide basically details the resources that are currently available to software vendors and will be available in the future. Of course on the website now exist data dictionary, documents related to the data dictionary, XSD standard are all there and are currently scheduled to be locked down until 2007 when they are again reviewed. Test cases will be made available as I mentioned for testing compliance with the NITSA 2.2 data standard and tracking a version of a software and providing with a certification of compliance.

The next slide basically provides for you some indication of some tools that will quickly be made available, one of the most important ones that Dr. Mears is currently working on is

the available of a free data entry software package that will be made available to local EMS agencies. Dr. Mears is also working on a XML processor. And importantly, we are going to be working on some, a generic reporting systems that will indicate the value of a national collection of data. Really our purpose, of course, behind a national EMS data is to be able to characterize EMS care in this country, and it's important that we spend some time developing reporting mechanisms that are dynamic, that make good sense and answer important questions, and that will be part of the development package that the technical assistance center will come out with.

The next slide basically indicates the partners and the consumers, the people that we are attempting to contact and communicate with and offer assistance, and our proposal to NTSA, we have suggested that a Dr. Greg Mears and his shop in North Carolina will provide the first line technical assistance to software developers with the folks at the University of Utah providing primary technical assistance for state and local EMS agencies. Federal partners will be served by both the University of Utah and the University of North Carolina.

The next slide really points to the hard deliverables we hope to accomplish here at the technical assistance center. Dr. Greg Mears has made great strides in developing a pilot of the national EMS database with data from a number of states with the idea that that would be a live implementation of data from the states. We will migrate that to a national database and hope that by the end of 2006 that we would have implemented a live data from at least five states in the nation and that will be our primary goal. As mentioned we

will be working towards developing formal reports that will originate from that database and show their value to states as EMS agencies and of course once the database is clean and formalized, we'll publish that through NTSA. Again, I just in summary, I just want to express my appreciation to Dr. Greg Mears for NEMSIS and providing a pathway for state and local EMS agencies to actually populate the national database with important EMS information, and I think the purpose behind the technical assistance center is to forward that vision that was brought to bear by NEMSIS. Thank you.

DAN KAVANAUGH: Okay. I think we'll move now to Dr. Greg Mears. He's been able to join us.

GREG MEARS: Hello. One of the nice things about a webcast is that you don't have to take an hour-hour raising taxi cab ride like I did from downtown with a driver who was not sure where this location was located. But welcome and thanks for tuning in to this conference. My purpose in this presentation is to give you what really has become historic information now, and what I mean by that, this is information about what has been accomplished so far with NEMSIS and how far we have come, and to me that is a little like sending your kindergartener off to school for the first time, taking a piece using one set of skills and handing it off to an implementation plan which requires a different set of skills. And that's a bittersweet thing to have happen to a project and I think that we do need to spend a few minutes and just go over the things that have been accomplished here in the last three years. First of all, I would like to, you can go ahead and advance the slide. First of all, I would like to thank two entities, first the national National Association Of EMS

Directors, I have been fortunate enough to be the principal investigator for the project. Certainly without the leadership of that organization and the involvement of the member we would have never made it through the process with the success that we have had. The secretary -- second entity I would like to thank is the University of North Carolina. Often times behind me and in front of me and people that didn't know it that were experts in the pieces of this that had to be laid into play for it to become a standard and progress into the implementation phase. So what I would like to do in a few slides go over the things NEMSIS has accomplished. First of all, I would like for you to always remember and never forgot that this project was really based on data use. Our goal was to establish a standard to get everyone to collecting data based on that standard, but ultimately the goal was to make sure that everyone used it. And we also did this from the perspective, the data was important not only from patient care and as a position certainly that was one of my priorities, but also for EMS structure and design and implementation, and finally for EMS personnel perspective, such as education and performance.

So we can go to the next slide. The project would never have made it through all of the different pieces and components and had the success without the involvement of all the EMS organizations and the federal partners, and these are listed on this slide for you. It looks like very much an alphabet soup, I won't go through all those in detail but we did involve every EMS organization that directly touched issues with data and brought them to a table and included them in this process, and they should be given significant credit by making sure the lines of communication with the membership were sustained and that this project moved forward on the timeline, which was fairly aggressive, through completion.

Go ahead, next slide, please. One of the things that I want to make sure that you understand is you can collect data and data can be very important for lots of different reasons. And we designed NEMSIS and the data set to be important to describe EMS but it could be important at the national level for different reasons than it could be at a state level or local level. But the reality is for any kind of data system to be functional, the understanding that EMS is a local entity and that applying that information locally to make sure the services and the patient care and the personnel perform to the standards that that system would like is what's really key, and so the data set and the structure was designed to help with those business plans and to help with the implementation of things at a local system level. The benefits were that it could also assist in helping at the state and the national level. Ultimately local is where the data resides and that's where it's used for many people.

Next slide. The pieces of the NEMSIS project that have been developed to this point really can be divided into these six items, and Clay mentioned these in some pieces to you in his presentation. The first thing I wanted to do is just discuss a little about the data set and then talk about how that translates into the XML. Some of the issues with the business model we have developed and put into play. And finally really the last three, including the pilot, the outreach and the software development, to some degree extend into an implementation phase.

Next slide. The data dictionary is very complex document. And if you have had the fortune to download it and print it, it's about 400 pages long and you just want to make sure you don't drop it on your toe like a door stop. Seriously, there is a lot of information about each of the data elements, the variables, and the definitions associated with that data element, how you would deploy that not only for a data collection perspective but also database. All those things may seem like overkill to many of you, but it's important to have that level of detail when you implement data systems. That piece of this project took about 18 months to complete. It was done through a consensus process with public comments, and has essentially been the foundation for what we have built everything else upon.

Next slide. Once the data dictionary was established, the next thing that had to occur for NEMESIS was what I call a vehicle or a way for the data to between, between a local and state level or state and national database level. The way we defined and did this was through a very geeky computer language called XML. And XML is a way for data to move. It provides a standard that everyone can understand and develop and know that if you follow that specification, regardless where your software was made and put into play, it will be able to communicate with other software in that format. So this documentation along with the data dictionary does include a significant amount of information about XML and how that is structured for that data to move.

Next slide, please. In 2004 we felt that it was important anticipating that once we had a standard and a way for this data to move and we had consensus, and even the MOU had been signed by that time by the overwhelming majority of the state, MOU is an agreement

to use as standard by each state, and currently 48 of the 50 states have signed that agreement. Part of that was also the need for funding. There was funding needed at a national level to establish a national database and to provide resources and technical assistance through, for instance, the resource center like we are speaking of today. There was also money that was needed to be applied at the state level, to assist states either if they had a data system to make sure it was upgraded to the new data set. If they did not have a data system, to establish one. And finally there was a need to help the local systems in some way because you can't have a state system without having local systems playing and having the capability of collecting the data using that standard. So out of this came a business model with proposal to establish a resource center, to work with each state to develop a state system and also develop software that could be used locally. The business model was asking for a three-year funding, excuse me, just over \$6 million a year. That has never been funded to that level. In fact, the funding this next year is only about 10% of that. So we have a lot to do from the standpoint of promote pg and pushing that business model and it's still very important and that was one of the highlights we got out in front of with the project early on.

Next slide. One of the things that we have been doing very much of, and that's part of any project that requires consensus is working with all the different EMS agencies, all of the national organizations, each of the stadium S offices, as well as many of the EMS systems and the software developers working with software and working in the technology side of things to make sure that the standard is promoted and becomes the standard for EMS data collection. The limitations prior to this time have been based on funding and based

on those resources, and that, again, is one of the goals, and reasons why technical assistance center is so important in the implementation of this plan.

Next slide. Currently there are many products that we have developed this past three years with NEMESIS, starting with the XML, which is a standard that software developers can use to write to and move data around. We also have developed actually physical database schemas or models and these are scripts that you can run within, whichever database platform you have chosen, whether that be in a sequel server or Oracle or Microsoft Access and it will build the database for you. And also you can test the XML files where they come in, wherever they come in, whether that be local systems putting data together from different systems, or the state, or the national level conducting data from multiple states. We have built software applications to test that and move it into the database models. Most of this information and most of these software pieces are on the NEMESIS website at this time at [WWW.NEMESIS.ORG](http://WWW.NEMESIS.ORG).

There is also another application that we are currently testing that should be available any time, which actually will allow you to test your own file and get a printout of the issues with respect to how well you're compliant with the data set and with that file structure. It's also important to note and give credit to the American Heart Association a few years ago they began assisting with this project and applying funds. We are currently finishing up what will be a current data entry software completed at the he said of this calendar year, and we will also make that available to anyone at no cost. What that will do is allow anyone with a Windows environment computer, run software, collect data based on the NEMESIS

standard and create an XML file on the back end that they can send to either their local data system or to the state or whichever data location they need to have that data reside in. So when you piece all this together, what we have created is the data set, created a way for the data to move around, collected in a standard way and moved between systems and then we have created some tools that would allow anyone to start storing the data if they didn't have an application to do that already. And finally working on limited reporting capabilities available at the end of the year as well that will help them start applying that data.

Next slide. I mentioned earlier that the memorandum of understanding was a document that was created. That document was to help get states to adopt the NTSA 2 version standard implementing standards and the data structure. It also was put into play to help get the software industry to understand we were migrating to the standard and there were current products that needed to be revised or updated to include that standard. And 48 of 50 states have agreed to this and are moving forward with the standard at this point in time.

Next slide. This is just some progress that's updating you on how states have been moving with this. This slide depicts that there are 38 states currently that have data systems in place of some type in collecting some amount of information. There are only two states which do not have a data system in place, and that's not necessarily the two states that haven't signed the memorandum. Actually two separate states. So there is movement among all the states and the overwhelming majority, over 75% of the states

have some type of data system in place right now and they are either working to increase to get all the data capture in their state and also to make sure the data elements that are captured are compliant with the data set. Next slide. So I will hand things over at this point and we take questions at the end?

DAN KAVANAUGH: Rick Alcorta.

RICK ALCORTA: It's a pleasure to be here representing the National Association of EMS State Directors. Next slide if you would, please. The key from our perspective is the proof of concept, actually goes back to about 1973 or even a little earlier when the state directors realized they couldn't compare data from one state to another in any way, in any standard format or process. And so they looked at and tried to bring people to the table to say how do we make this happen? From an overview perspective, I plan to touch on apples and oranges, I want to talk about how we can collect at different levels and how to incorporate those differences from data levels. Next, please. Then I want to clearly emphasize the medical direction issues, and that you as directors or I am me -- I implementers of the database, and how we should strive for the database. When I talk about 1993, that's when I as an EMS executive, state executive director, later became the medical director, got involved with the national association and realized that we really had a challenge. Each of us had in some way different data fields, data points trying to address the same issues. Through the association we were able to generate appropriate support, state to state, and then with our federal partners to the point now as Greg had

pointed out we have 48 memorandums of understanding that we are as states moving towards a national database.

On to the next slide, please. So the challenge then becomes as we are no longer going to be comparing apples and oranges. Which is a very classic scenario problem from a medical perspective. When we are talking about cardiac arrests, which criteria are we using? Or our own local criteria to establish standards for comparison? It's often a challenge in any study model that you want to have a standard definition or database. So that you can compare one study of a topic with another study of a topic. This gives us that opportunity. This is the tool, the key, the cornerstone that we should be applying ourselves to assure that we are collecting data in a standardized format and then sharing that data, so we have improved powers of observation. Instead of having a cohort of maybe one county or one city, we'll have potentially a cohort of an entire state and/or nation, which is truly a critical piece in the advancement of EMS research.

Next, please. The data collection process crosses multiple boundaries. It crosses jurisdictional and state boundaries. And realizing that it then allows us to compare vertically, not just laterally or across county lines. It gives us an opportunity to look at much larger cohorts, the stuff we have been collecting years is not necessarily useful, we are collecting time intervals or scene times. Those used to be viewed as a quality of care. They are an integer. We can now evaluate patients throughout the spectrum prehospital care and into hospital care and research, and successful evaluation of an EMS system. When we talk about levels of complexity and the difference of data needs, it's clear each

level of EMS service, individual providers, individual companies, moving to jurisdictions or city-based entities, and up to a state and national models, they each have different needs for data. For example, providers clearly need to have an understanding what their compliance right is, success rates are. Jurisdictional level, what the appropriate configuration of response should be, so they can use the resources more effectively, especially looking at the challenge where we are running out of ALS providers and yet we are moving to ALS engine models. We need to have data that says which is the way to go based on the current environment or resources. And then clearly trends state to state and protocol affirmation.

Many of us have state-wide protocol that have been historical models and not necessarily proved based on standard data. When we moved to the national, we need descriptive models for concepts. Are the models and implementation processes appropriate? And overall, there's no question that budget plays an important role and if we have the appropriate data sets, we can defend our budgets with this information. It becomes incredibly crucial. As medical directors, many of us look at the issues of prevention, the providers. Do they do a good job, they are operating under my license. Am I confident the level my providers are getting is adequate? No longer just providing we had 55 arrests in our area or 5 intubations. Does EMS make a difference? We can start looking not only at our own systems, but compare ourself to the next county over, or compare ourself to the state model. So that we then can set quality improvement indicators or benchmarks for standards of care. This gives us that opportunity.

Next, please. Electronic data collection. I have to tell you, many of my EMS field providers use a computer for one thing, and that's either to look at the Internet or look at some kind of DVD movie. Many of them don't have a clue how to use a word program or an Excel spreadsheet, for example. We have challenges with our EMS providers, let alone managers and people to query the databases. We need to make this electronic collection process user friendly. Software, computer services, and the ISP and the wireless modalities coming, we have to put into the equation when we move and update our systems. Data updates become a real challenge when you hear about the database itself and you start making changes. If you have it on 300 platforms in your jurisdiction, that means you have to have 300 updates. Many states are looking at centralized processes and interstate-based tools so you have a central repository. You also need to establish good edit and query tools to seek information they need effectively.

Particularly I focus on medical directors but looking at quality assurance officers in the jurisdictions who have challenges from their administration and the political administrators that say why do I need to invest in your EMS or fire system. The technical resource, or technical assistance center will be a critical tool that you have heard about from Clay already. An integral point for fielding questions, as well as looking for funding. Federal and grant processes are moving in the direction of funding this type of technology. We need to keep our ears open, the resources are available. Be ingenious, talk to your peers, look for means by which you can purchase hardware and implement software changes.

Next, please. So in summary, I think one, the NEMESIS process is a critical-based tool. It's essential for both state, national, compliance, but also at the jurisdictional level. The future is clearly electronic database submission process and it needs to be made as simple and convenient as possible. And as you have heard, there are some new technologies making a huge difference. Last but not least we need to strive to be as compliant with the definitions and the data sets as possible. Thank you very much.

DAN KAVANAUGH: At this point we have had a lot of questions come through for our presenters and for Susan McHenry at NTSA. See how many questions we can get through verbally in ten minutes, and those questions we can't answer, answers will be crafted to them and they will be provided on the archive of this webcast. Let me go with the first question we have, I'll throw it out to the folks here, decide who wants to answer it. This is from Dawn from Rockville asking what method of data collection will be using, electronic media, etcetera?

GREG MEARS: Well, I think the standard is that XML is the way that the data gets moved. The way the data can be collected can really be anything that the technology would support. So I know of systems out there collecting data using Palm, PDA devices. I know systems that use notebooks or Tablet devices, desktop computers, and even scanable forms, certainly the least user friendly of the bunch. Once you have the data collected, all the forms can use the XML and programming so it can go to a database. So this structure allows for any technology to be used for data collection.

DAN KAVANAUGH: The next question is from Dan from Iowa. And I believe this is in reference to Dr. Mann's presentation. You mentioned a lockdown of the standards. Does this mean there will be no changes to the data set until 2007?

CLAY MANN: That's exactly what it means. Actually the purpose of the lockdown is to allow software vendors to feel confident that in developing their systems, that data standard will not be changing. The idea is if we will keep it locked down until 2007, but the technical assistance center will keep track of any comments that are associated with, in particular variables, so they can be reviewed at that time.

DAN KAVANAUGH: The next question is from Bruce from Florida who is asking, in your discussions with software vendors, have you an idea on when EMS providers may begin to see NEMESIS compliant software enter the marketplace?

GREG MEARS: That's a great question. Software developers are currently developing on this standard, and I know of many of them who have a product that is using the data set. Where this question gets tricky is the idea of compliance. And if you look on the website and again [WWW.NEMESIS.ORG](http://WWW.NEMESIS.ORG), there is a draft compliance policy on the website. What that policy describes is a way for software companies to obtain a seal or stamp of approval if they are compliant with the data set. Because we are just now implementing the technical assistance center, that compliance piece has not been activated. And so no software that is in existence today can truly say they are compliant with the standard because they have not been tested. But over the next three months there will be a

process put into place that will allow software companies to commit their software based on that compliance policy and test it to be compliant and at that point in time, they will be able to say they are compliant with the software. With that said, there are a lot of packages out there currently that use the NTSA version 2 data set in their data collection. It's already in many places out in the field.

DAN KAVANAUGH: Dr. Mears, I think your answer leads right into the next question from Thomas who is asking how will a software vendor receive a certificate of compliance? Contacted by someone or will someone contact them?

GREG MEARS: I mean that is an operational piece the technical assistance center and Dr. Mann will have to put details down as to exactly how you got to that process. The concept of obtaining compliance, you run test cases through your software, from your software you would then generate XML. That would be submitted to the resource center, technical assistance center, and then based on testing of that XML, you would be monitored as to whether you were compliant based on the test cases that you use. So it's a process that would be an interaction between the technical assistance center and the software developer in order for that to occur. And Clay, I don't know if you want to add on any details id -- as to when we will do that.

CLAY MANN: Certainly in the next three months is the goal to have that in place. And Dr. Mears has done a fair amount of work on this for about the past six months. Literally a matter of us formalizing a process whereby we can receive the software packages.

DAN KAVANAUGH: And the next question is from Tim who is asking as we have had an opportunity to work with state systems regarding a NEMESIS 2.2, we found states are editing the data set and/or values to meet their needs. Should we anticipate this being the norm as we move across all states? He also mentions it's similar to how state Medicaid programs were deployed and found it difficult to comply as a vendor.

GREG MEARS: There is a process as you implement the data set as to how you can extend the data set to incorporate variables within a data element that are not defined and that certainly part of the technical assistance we have been provided all along, if you have the questions you can contact us and we will help work through that piece. I really, I take it that this question was one from a software developer perspective, and responding in that sense from a software developer's perspective is that the goal of NEMESIS and of the version 2 data set was to allow you to write a piece of software that by including all the elements in a fashion that they could be active or inactive to anyone using your software or your system, that you could market this to any state and meet the specifications of the state. We have been working very hard with the states to help them to, or to encourage them to choose data elements based on the version 2 data sets. That doesn't mean the software will be the same in every state but it does mean that if your software has all the elements of version 2 and they can be turned on or off based on what a state desires to collect out of that dictionary, then you do have a product that can be sold potentially in any state.

DAN KAVANAUGH: The next question is from Pamela, who states how do we find out contact for NEMSIS for our own states? I think what she's asking here is if I'm in a particular state and want more information or who is my point person for NEMSIS within my, within the state?

GREG MEARS: The first place to start is with your state EMS office. Over half the states currently have state data managers which are individuals that have been assigned a duty for that state to help to oversee and keep up with their data projects. If your state is one of those that has one of those, that is ideally the person you contact and speak with. If you are a state without a data manager, someone in the EMS office should be able to provide you information on the data structure of your state and how that is currently deployed.

CLAY MANN: Particularly regarding NEMSIS-related questions or questions related to the NTSA standard, both Dr. Mears and my phone numbers are available on the current website. So you could contact us either by mail or email or phone.

GREG MEARS: Next question from Thomas is does the state have to use all data elements to be considered NEMSIS-like -- compliant?

>> NEMSIS-like -- NEMSIS-compliant is not really a term that fits in that. To choose the ones that they feel are important, both for a local EMS system to use, and ultimately for the state to use. We do not get into recommendations of what that should be and the number of elements that should be with one exception, and that's that we ask that the states at a minimum collect the data elements that are noted in the dictionary to be

national data elements or data elements that should be transmitted to a national database. So most states are starting with that, and there's about 70 of those elements, and then they are expanding using a task force or using a group of experts within their state to try to identify what's important and what should be collected for that state.

DAN KAVANAUGH: Next question from Douglas who is asking how will NEMESIS data be available for researchers and what is the time frame for making this data available?

CLAY MANN: That's a good question and that's part of the process of the technical assistance center, to specify the process. Currently what we know is that Dr. Mears is making great strides in development of a pilot database that's included. Sample data from several dates. Our goal over this next year is to migrate that to a national database that will include the variables that are specified to be on a national level, to expand those sample data to include collect data, submission from at least five states. And then our charge is to process that data, clean that data and make it available to the national center of statistics, is that correct?

SUSAN MCHENRY: Statistics and analysis.

CLAY MANN: Statistics and analysis within NTSA, and I assume from there the process you associate with any access of the data would be specified by that group.

GREG MEARS: Our goal in the data set, first of all, when it comes in at the national level, the data elements are identified from the standpoint there's nothing to prevent the general public or anyone from accessing and using those data elements and establishing and creating reports. And our goal is to work with the NTSA so that they can configure and build reports based on questions they would like to have answered and supplement that with things we feel are important for everyone to understand so there is a way to get data that you want in a specific format, plus to see reports that are descriptive of EMS nationally that have been preconfigured and run and ran, for instance, quarterly or over some period of time.

DAN KAVANAUGH: And a question from Tim asking how do you envision, or do you envision the states forcing the local providers to adopt this standard?

GREG MEARS: I think that is an issue that every state has potential way that they operate. For instance, some states have laws and regulations that require an EMS system to provide data to the state. Other states have data systems which aren't necessarily required in law, but they are required if you receive grant funding or have other duties within the state that you perform as an EMS system. Other states have voluntary systems. It depends on each state as to whether or not, or excuse me, as to how they work with local systems to provide data. I think one thing that each state understands is that there are some systems that have the resources to do that, and there are others that need help to collect that data. And so any plan that a state implements would have to address each of those. One is how to get data from systems that have the existing data systems in

place, or how to get data from local systems that have the data systems in place, and two, how to help those that don't obtain assistance so they can collect and use it at a local level.

DAN KAVANAUGH: Time for one more question from David. You talked about the lockdown of a database and certainly understandable why this is important from a software developers. However an absolute lockdown may make data entry difficult for EMS providers as things change. Does that apply to the tables or just the data elements.

GREG MEARS: The lockdown is there based on the data dictionary. So again, the data dictionary is separate from the technology on how you collect the data and even the data structure that the data is stored in. What the data dictionary is, it means if you are going to record a specific thing like, for instance, age, it should be recorded in a certain way and then that data should be moved through the XML in a certain format. That's the part that's being locked down and if we don't lock that down, the software developers and the people implementing systems have a moving target and it's very difficult to develop based on a moving target. The issues of how you collect data from a technology perspective, all those things are changed or altered using this data set, those are things outside the data and the XML. Certainly technology can still adapt and push things forward with this structure being locked down. What we mean by locked down is that starting in 2007, that is when comments and suggestions and review of the data elements should take place and one of the key things that needs to be included in that review, it needs to be reviewed based on individuals collecting and using those data. And they should be able to provide information

through the reports and through the use of that data as to how to make the data set more useful to others and how to expand or contract it based on what they found using the data over a period of time.

DAN KAVANAUGH: Thank you very much. I would like to thank Susan McHenry and our three presenters for putting this together for us today. A couple housekeeping notes to close out that an archive of the webcast will be available in a few days and answers will be crafted to those questions we weren't able to get to and a text of the answers you heard verbally will also be available. At the conclusion, the interface will close automatically and you will have the opportunity to fill out an evaluation form. Take a couple minutes to do so. Again, thank you very much.

GREG MEARS: Thank you.

SUSAN MCHENRY: Thank you.