

***Vital Signs* Town Hall Teleconference  
How Three States Tackled Sepsis  
Q & A  
August 30, 2016  
2:00 pm ET**

Matthew Penn: Yes, absolutely. Thank you so much and thank you all for these excellent presentations. So, folks on the call, this is the participatory stage so just remember that you can get in the queue to ask a question or make a comment by pressing Star 1 on your phone. Please say your name when prompted. The operator will announce when it's your turn and please address your question to a specific presenter or indicate that it's a question for all of the presenters to consider.

And I'll also encourage you all to share your own strategies, lessons learned, challenges and success stories about this topic. We have quite a few states and organizations on the call and many, many folks on the call today and this Town Hall is a forum for you to discuss and collaborate on different methods, practices and experiences with sepsis.

Operator, we are ready for questions and is there anyone in the queue?

Coordinator: We do not have anybody yet. But as you stated, if you would like to ask a question, please press Star 1 and record your name.

Matthew Penn: Great, thank you so much. So I have a question here in writing for Dr. Fiore. I think one of the things that comes across in these presentations is the difficulty in making a sepsis diagnosis, if we have as many as 80% of folks coming to our facilities that already have sepsis. Is sepsis in fact difficult to diagnose, and if so why is that, why is it hard to diagnose?

Anthony Fiore: I think sepsis is hard to diagnose because there's not a single diagnostic test one can obtain that determines if the patient has sepsis. It's putting together the clinical picture

and maybe even more importantly being aware of changes in the clinical picture that mean that infection has slid into a sepsis state and now needs immediate treatment.

There are some typical symptoms of people with sepsis that would indicate that they want you to be paying more attention and consider it possibly sepsis, the kinds of things one would expect with a severe infection include things like fever and clammy skin, disorientation, rapid heart rate, lowered blood pressure, rapid breathing, but none of those are specific to sepsis of course and can occur with lots of other conditions. So that's, I think, the main thing that makes it a challenge.

Matthew Penn: Great, thank you so much. And operator, do we have anyone in the queue for question and answer?

Coordinator: We do, our first question comes from Carol Moss, your line is open.

Carol Moss: Hi, yes, this is (Carol Moss) and I'm calling from Niles Project we're out here in California and this question goes out to everyone within the organizations and the different states. What kind of funding is available to support this kind of a program within the states and to get it really started quickly? In California I'm not aware of anything that's really happening to prevent sepsis on a state-wide basis so that would be super helpful if people could give us some ideas of where some resources are to start this program?

Jim O'Brien: Matt, this is Jim O'Brien from Ohio. So I think there are a couple of avenues. There is funding through agencies such as the HRQ. The Centers for Medicare and Medicaid have also have some innovation grants including some that have been done about sepsis. But, then there are other innovative ones too depending on what your local market might look like. So for example I know that Michigan has a state-wide safety collaborative that is largely funded by private insurers because they have large employers who want to help to drive down total cost of care. In California I know some of the larger health systems have been engaged in improvement around sepsis

and they've been doing it around the notion of “if we provide better care we're going to reduce overall total cost of care.”

Sometimes you can find that there can be leverage points simply by better analyzing the opportunity and speaking a language that's most convincing to the administrators you're working with. That at least gets you some local work but then you can sometimes build on that and look at who your community is, who the other players in the area are and see how they might want to collaborate as well.

You can do this without a great deal of resources and infrastructure, you just have to then make compromises about how much risk adjusting you're going to do or how detailed the data collection is going to be based on that.

Carol Moss: Okay great, thanks so much.

Matthew Penn: Great, thank you. Operator, do we have anyone else in the queue for question and answer?

Coordinator: Yes, we do have a few more. Our next question is from Marianne Kaner, your line is open.

Marianne Kaner: Thank you, this is Marianne Kaner from the Tennessee Department of Health. This is a question for New York. I was wondering the date of submission from the hospitals, is that manual data entry or is that electronic data submission and what kind of database? Was this a purposeful database for New York to capture the data on sepsis?

Marcus Friedrich: Yes, thank you for the question, great question. It's manual data entry. So there are in the hospitals nurses who are abstracting the charts, septic, so via sepsis and septic shock charts and they are manually entering it into a database that is not housed by us but by our partnering organization, IPRO. I'm not sure if - you know, what the specifics are, is that the SQL database, I know this is like online that they have to put in the data online and that they can later on go back in and adjust the data if they've

found that they made any errors but I can find out more specifics so if you write me an email please feel free so when I find out more about that.

Matthew Penn: Thank you so much. Operator, we do have any other folks in the queue?

Coordinator: Yes, our next question comes from Jennifer Cabaug your line is open.

Jennifer Cabaug: Hi, I'm Jennifer from Stamford Hospital in Connecticut. My question goes for everyone, how does your hospital or your staff educate your MDs in understanding when time zero starts?

Jim O'Brien: This is Jim O'Brien from Ohio. So I think this is one of the - for me, this is one of the swirls you can get caught in; because people, physicians, and speaking as a physician, will argue about time zero until the cows come home and we won't get to the effort of actually improving. What I would suggest is asking the people who are actually doing the work, the physicians, the nurses, what do they think the best time zero is and you need that just from the standpoint of starting to improve.

It isn't anything that's written in stone but you need to come to some agreement about it because otherwise you can't measure in a standard way but I think that there's every opportunity to put it towards them about what data resonates with them the most, what do they care the most about so you can get past this issue of arguing about it.

Kelly Court: Yes, this is Kelly from Wisconsin, we would answer that exactly the same way. Sometimes trying to get all of these questions answered specifically becomes almost the stall tactic and so the clinicians have to get together and agree among themselves what it is and hopefully they can do that relatively quickly and their sharing of knowledge with each other will build a shared knowledge and then they've got something that they're committed to and hopefully can move forward.

Marcus Friedrich: We in New York, we went the way and let the hospitals in their protocols define the time zero on their own so we circumvented the discussions, one-on-one discussions

with them and this is good but also bad because it's not standardized over the hospitals but we can always tell them, you define time zero so, you know, when you start your protocol you can write it down in the chart and you make the decision of defining time zero as use you see it fit in your protocol and so that is one way but I agree with Jim again that this is an ongoing, even after two years, three years into the campaign an ongoing issue that is not resolved.

CMS also with the SEP-1 guidelines or the measures like everybody is struggling. We were recently on a call with CMS and it's, you know, like just ongoing and if anybody has any idea, please let us know but it's almost - you know, I want to avoid talking about it because it's so contentious.

Matthew Penn: This is Matthew from CDC and I know it sounds like a contentious issue but I think for folks on the call we have about - we've had about 440 people on the call so I'm wondering just for folks that might not know, just a brief explanation, Dr. Friedrich of what is time zero and why is it important?

Marcus Friedrich: Yes, time zero is the start of when you start the sepsis bundle, when you start counting, when the clock starts ticking in your hospital and you can define it in different ways. You know, if you pick a patient who comes through the ER, you know, when should the clock start ticking? So some physicians think that this clock should start ticking when they actually come in the, you know, through the doors of the ER. So there is a time zero that you can pretty much define in the ER pretty clearly but it gets more complicated when you go on the floors in the hospital because you don't have a defined time when the clock starts ticking and CMS went and defined time zero as when you recognize that their vital signs that are, you know, off the chart or different than the normal vital signs but this raises the question about how often do you check your vital signs and so, you know, when somebody recognized that there's something going on, we feel at least in New York and our sepsis advisory group felt that they should decide when they think the time should start for the clock to run down going to the three hour and then later into the six hour bundle.

So we have a time zero one and we have a time zero two and like we have specific guidelines and I would again encourage you to look into our sepsis data dictionary exactly how that is defined. We don't have enough time to go into that but this is how we go about it and now for the mortality for the risk and reduction mortality that we are planning here in New York, we actually define the time zero three that is we only look at ER cases because at least in the ER it's pretty much defined when the patient comes in through the door, the triage time as defined and that at least equalizes all of the hospitals who have ER's for the first pass-through of our risk adjusted (sets) of mortality. But to hear already there's like many, many definitions out there and I am not sure that we have found the right approach to that yet. If that helps?

Matthew Penn: No, that's great. Thank you so much. Operator, we do have anyone else in the queue?

Coordinator: Yes, our next question comes from Patricia Humiston, your line is open.

Patricia Humiston: Hi, this is Pat Humiston from Baystate Medical Center in Springfield, Mass. Just two quick comments, one, I don't know if everybody saw the CMS response that came out to this new sepsis definition that they're announcing that they're not going to physically make any changes which is unfortunate to the sepsis definition. And secondly, following up on your time zero and actually physician and physician feedback, I do feedback letters to all of the care providers that took care of that patient and it's - the time zero and patient has been obviously a huge topic but physicians have been very responsive to these feedback letters because what we do is we take them case by case in our sepsis meeting and do - present a case and discuss it and I found it to be really helpful.

At first the feedback letters I think they were kind of like what is this? But once they got a real full explanation and really started getting them on a regular basis, drilling down, it actually helped them get it as well as I made an (IA) sepsis pocket card for them, that kind of gives the really good explanation and, you know, those are some avenues that we have taken at our teaching hospital here to help with that time zero is some really good feedback letters.

Matthew Penn: Great, do we have more folks in the queue?

Coordinator: Yes, our next question comes from Dan Seltzer your line is open.

Dan Seltzer: Hi good afternoon. Thanks I'm Dan Seltzer from MEDITECH - EHR vendor. I had a question for Kelly Court. Your presentation said one of your objectives was a state-wide 20% reduction in readmissions. However, I didn't see what your data was on the readmission production. I was wondering, A, if you know what progress has been made on readmissions and also, B, what your methodology was in defining a readmission specifically if it was patients treated for sepsis that return to the hospital or patients who perhaps were not initially septic but developed sepsis as a result of a procedure and then were readmitted for sepsis?

Kelly Court: Yes, thanks for the question. The 20% reduction in readmissions is all cause readmission for all patients and that was just part - that's part of the CMS Partnership for Patients Project and then the 40% reduction in harm is across 12 different areas of harm including sepsis. So the goal has not been - we have not actually studied readmissions just for sepsis. Our readmission work is a separate project and includes all patients.

Jim O'Brien: I think you can look at some of the work by Hallie Prescott out of the University of Michigan looking specifically at readmissions in this population and as opposed to a lot of other index diagnoses, readmissions associated with sepsis seem to be more likely to be associated with infection and there's this increasing thought about what's called dysbiosis which is the notion that that initial infection may then cause changes in the persons underlying microbiome, so the microorganisms that grow on you that make you more predisposed to a subsequent infection. So there's emerging information about that that's really painting the picture that sepsis may not actually be the acute diagnosis we thought it was for so long.

Matthew Penn: Great, thank you and operator do we have anyone else in the queue?

Coordinator: Yes, our next question is from Orlaith Staunton, your line is open.

Orlaith Staunton: Hi, good afternoon. I just wanted to - my name is Orlaith Staunton and I'm Rory Staunton's mom and I just wanted to applaud the efforts by Ohio, Wisconsin, New York and other states that are putting sepsis protocols in place. The question I had relates to me as a parent, if I have a sick child in Ohio and I understand the work that's being done by the (health) associations there, the hospitals that are not actually part of the work that you're doing, is it - do you find that mandatory protocols would work better in the state in that as a parent no matter what hospital I would go to, I know that my child was - the hospital would be thinking sepsis?

Jim O'Brien: So speaking for Ohio, Orlaith, you know, I think the short answer is we just don't know. I think the evidence that we have to look towards with some of the other required reporting and if we look at required reporting for things like CMS measures, core measures, that hospitals including children's hospitals may have to report, there is data that suggests that the process measures get better but maybe not that overall improvement in outcomes is accompanied with it. And so I think that's very challenging to answer your question directly.

I think that my personal bias is I would much rather see healthcare come forward and take ownership of improving this problem because I feel like they are in a better position to do so than being mandated to do so. That said, if healthcare is not doing that, this is something - healthcare is something that consumes \$3 trillion a year and it's probably the third leading cause of death. We should be held accountable to the care that we are providing and if we are unwilling to step into the vacuum of leadership that's existed, we should be held accountable by other means.

Matthew Penn: Thank you so much. And operator, do we have anyone else in the queue?

Coordinator: We do have another question and as a reminder, if you would like to ask a question, please press Star 1 and record your name. This question comes from Deborah Varillo, your line is open.

Deborah Varillo) Hello, my name is Deborah Varillo and I'm from Rockledge Wuesthoff Hospital in Rockledge, Florida and regarding the accountability, I think the CMS rules that are nationwide will help in not only providing accountability but providing benchmarks that we can benchmark each other against to document improvement. What we've done here that we've found extremely helpful is we've initiated a sepsis alert and empowered the nurses and the physicians in the emergency room to call a sepsis alert overhead when a patient meets criteria of suspected infection, two vital signs out of range.

And that doesn't diagnose sepsis, it just gets the resources to the patient so that a specific set of orders are carried out diagnostic wise. They get like a rainbow of labs that include a blood culture and lactate and they get an EKG and they get a chest x-ray. And the EKG is just to rule out a STEMI because that's not something you want to miss. But we try and pattern this alert after the STEMI alert and the stroke alerts just to increase the importance and get the resources to the patient when it's needed and we also present a case a day at the executive meeting every morning just to increase awareness.

And I also give feedback whether it's to the emergency room, physician and nurses and we don't concentrate on what time zero is, we're looking at the golden hour to try and get everything done and get definitive treatment to that patient within an hour and they know that their time limit is three hours but we're aiming for that golden hour; faster is better and that's what we're trying to accomplish and it has worked well.

Thank you.

Matthew Penn: Great, thank you. And we are upon the hour, I think we have time for one more question if we have any in the queue?

Coordinator: We do have another question. This question comes from Susie Moroski, your line is open.

Susie Moroski: Hi, thank you. I am the employee health nurse over to JFK North Campus in West Palm Beach Florida and after - it was a wonderful presentation by the way and we have a huge following here at JFK of the CDC - and after looking at the Face of Katie I got so nervous that I have to ask this question because recently, well I'll tell you, I wanted to know first of all what is the, statistically, frequency of people that have maybe a minor dog, not even a bite, like a tooth that gets caught on your skin and makes a bite mark, by accident while playing, that becomes possibly a cellulitis that goes sort of undetected and then turns into a sepsis, what is the real frequency of something like that happening?

Anthony Fiore: Hi, this is Tony Fiore at the CDC. You know, I'm sure it's quite low that that kind of thing happens every day and in every playground around the country probably but I think the important point is that parents and clinicians need to know when what is a minor localized infection needs more attention and to not be concerned about being too pushy with talking to their - talking to a physician and asking is this more than a regular infection, could this be sepsis?

And so I guess the good news is most of the time the very large portion of the time it's not an issue but in some cases it is and it's - it requires not just assuming that this is just another minor infection if things are looking worse and looking for the sort of danger signs that we mentioned earlier, things like higher fever and rapid pulse and rapid breathing and disorientation and things like that. So, I think that's the best I can come up with. It is definitely a gray area and we want to balance the education with not causing undo concern with minor everyday types of things that happen to kids all of the time.

Susie Moroski: Okay, thank you.

Matthew Penn: Great, thank you so much and thanks everyone for great presentations and a great series of questions. Before we close here at the top of the hour, please let us know how we can improve these teleconferences. Email your suggestions to [ostltsfeedback@CDC.gov](mailto:ostltsfeedback@CDC.gov), that's O-S-T-L-T-SFeedback, all one word, at CDC.gov. We hope you'll be able to join us for next month's Town Hall on Tuesday September 20 when we will learn more about what is being done to assist those with hypertension to adhere to their medicine regimen. Thank you to our presenters and everyone who attended the call. I'd like to ask our presenters to stay on the line for just a moment and at this time I will turn it back over to the operator.

Coordinator: Thank you. That concludes today's conference. Thank you for participating, you may now disconnect.

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