

CDC *Vital Signs* Town Hall Teleconference

Preventable Deaths from Heart Disease & Stroke:
Improving Care Can Save More Lives

September 10, 2013
2:00–3:00 pm EDT

Coordinator: Welcome and thank you all for standing by. I'd like to remind the participants that their lines will be on a listen-only mode until today's question and answer session. At that time if you do have questions please press star 1 on your touch-tone phone.

Today's conference call is being recorded if anyone has objections to please disconnect. And I will be turning the conference call over now to your facilitator, Dr. Dan Baden. Sir you may begin.

Dr. Dan Baden: Thank you very much Kelly. Good afternoon everyone I'm Dr. Dan Baden. I'm the associate director for external partner outreach and connectivity in CDC's Office for State, Tribal, Local and Territorial Support. Welcome and I'm glad you could join us.

Today we'll be discussing the latest *Vital Signs* report on preventable deaths from heart disease and stroke.

But before we get going I want to go over some housekeeping details. You can go online and download today's PowerPoint presentation so you can follow along with the presenters. The web address is www.cdc.gov/stltpublichealth that's S-T-LT public health.

There's a link directly to the *Vital Signs* Town Hall website under the highlighted products and resources on the lower right side of the page.

On this Town Hall webpage you can also view biographies of each of the presenters. This is where we'll add the audio recording and transcript from today's call. They should be there next week.

But back to our topic, preventable deaths from heart disease and stroke is an important public health topic because nearly 1 in 3 deaths in the US each year is caused by heart disease and stroke.

Additionally more than half of these preventable heart disease and stroke deaths happen to people under age 65.

At least 200,000 of these deaths could have been prevented through either changes in health habits such as stopping smoking, more physical activity, and less salt in the diet or community changes to create healthier living spaces such as safe places to exercise, and smoke free areas, as well as managing high blood pressure, and high cholesterol, and diabetes.

Additionally health departments and community organizations can encourage health systems to use health IT to identify patients who have high blood pressure and establish follow up systems to monitor these patients among other best practices.

On today's call we're going to hear from three colleagues. First we'll hear opening comments from Dr. Barbara Bowman, the director of the Division of Heart Disease and Stroke Prevention in CDC's National Center for Chronic Disease Prevention and Health Promotion.

Dr. Bowman will hand the call over to Ms. Linda Schieb, an epidemiologist in the Division of Heart Disease and Stroke Prevention here at CDC. She will provide a summary of this month's *Vital Signs* report.

Ms. Schieb will handle the call over to Laura Nasuti, MPH who as the deputy director of the Office of Statistics and Evaluation in the Bureau of Community Health and Prevention at the Massachusetts Department of Public health.

Ms. Nasuti will share how Massachusetts has promoted community clinical linkages through the creation of a bidirectional electronic referral system.

Ms. Nasuti will then turn the call over to Mr. Brandon Skidmore, the deputy director of the Bureau of Health Promotion at the Kansas Department of Health and Environment.

Mr. Skidmore will discuss implementing quality improvement through the plan to do study act cycle.

There will be time for questions after our presentations today but you can get in queue at any time to ask a question during the teleconference just press star 1 and record your name when prompted. And now I'll turn the call over to Dr. Bowman.

Dr. Barbara Bowman: Thank you Dr. Baden. And on behalf of the Division for Heart Disease and Stroke Prevention and CDC, thank you for joining this call, thank you for your interest in the topic, and thank you particular for your commitment to work with us to prevent more deaths from heart disease and stroke the leading cause of death in the United States.

It's my honor to turn the call over to Ms. Linda Schieb, the lead author of this important report.

Linda Schieb: Thank you Barbara and thank you to everyone for joining us today. As we've mentioned our topic is preventable or avoidable deaths from heart disease and stroke.

So on slide 5 each year nearly 800,000 people in the US die from cardiovascular disease which includes heart disease and stroke. And that's one in every three deaths as Dr. Baden mentioned.

About 1 in every 6 healthcare dollars is spent on cardiovascular disease for a total cost each year or around \$312 billion. So you can see how important it is for us to focus on prevention.

Slide 6 gives an overview of our *Vital Signs*. For the purposes of the report what we are calling preventable deaths, what factors affect one's risk, and what can be done.

Slide 7. Preventable heart disease and stroke deaths are those that could be attributed to lack of preventative healthcare or timely and effective medical care.

For our report we looked at vital statistics data from 2001 to 2010. And our definition of these preventable deaths included those deaths under 75 years of age with an underlying cause of either ischemic heart disease, cerebral vascular disease or stroke, hypertensive disease or chronic rheumatic heart disease.

Slide 8. What we found was that in 2010 there were around 200,000 preventable deaths from heart disease and stroke.

And the rates varied by some different factors. These include age, race ethnicity, gender, and where you live.

Slide 9. The preventable death rates were highest in those aged 65 to 74. And just a reminder we did look at only those death under age 75 so this was the oldest group that we looked at.

However it was interesting to note was that the rates and numbers both had declined less in those under age 65.

Slide 10. We also found differences by race ethnicity and gender. On this graph you see men on the left women on the right.

Men had higher rates of preventable deaths than women and blacks had twice the rate of whites. And here you say that black men had the highest rates of any of these groups.

Slide 11. What was also interesting is we found out that where you live matters. Rates—this is a county level map showing rates of preventable deaths and they were highest in the south.

But it's also important to note the differences within a lot of states you see pockets of high rates even in states that generally had lower rates. So it will be interesting to find out more about those places.

Slide 12. So what can be done about these preventable deaths? Here we're going to focus on what communities and health departments can do.

We also have on page 4 of our fact sheet we talked about what healthcare providers and really what everyone can do.

Communities and health departments can partner with healthcare systems on improving appearance to quality indicators, monitoring patients on the ABCs

of heart health, that's aspirin when appropriate, blood pressure control, cholesterol management and smoking cessation, increase awareness of community means, and also promote healthier living through creating tobacco free areas, safe walking areas, or access to healthy food additives including those with lower sodium.

So our two speakers today will address what their states are doing to address these preventable deaths especially focusing on how they are partnering with healthcare systems.

Slide 13. This slide just shows some of the communication activities that were associated with our report.

Of course we had the MMWR and the fact sheet. We also have a podcast. We have podcasts on both the MMWR Web site and on the *Vital Signs* website.

Dr. Frieden has created a video that focuses on some of the important messages. And we also have a lot of projects available for social media.

We have buttons, and badges, Instagrams, e-cards so a lot of different ways that we're hoping that you and everyone will help us to get these messages out.

Slide 14. This slide some of our resources our other resources that are available. For the *Vital Signs* in the *Vital Signs* digital press kit we have both English and Spanish language materials available.

I also have a link to our interactive atlas of heart disease and strokes where you can find the county level map that I just showed you in addition to maps based on race ethnicity, and gender, and a lot of other health topics.

I also have a link to our Million Hearts website. And then the heart disease and stroke web pages at CDC.

And that is all I have. So I will then turn it over to Laura Nasuti, who is the deputy director of the Statistics and Evaluation of the Bureau of Community Health and Prevention at the Massachusetts Department of Public health.

Laura Nasuti: Thank you Linda. This is Laura. Hello thank you for giving me the opportunity to speak with you today.

I'm excited to share some of our information some of the information about our project where we are currently and where we plan to go with our electronic referral project.

We are building an open source bidirectional electronic referral software to enable clinical providers to refer to community resources such as YMCAs and tobacco quit lines.

By linking clinical sites and community programs through electronic referrals we aim to enhance access to preventive services as well as enhance use of community services to promote healthy behavior such as services that would help prevent heart attacks and strokes.

And we feel that our CMS pilot is not only piloting this electronic referral software but it is also allowing us to formalize community clinical linkages within our states.

So on slide 17 I have a brief overview of the presentation. So I'm going to talk specifically about the award that is allowing us to develop this software, the history of the project, where we are currently, and how we are linking our work on e-Referral to other activities within our department of public health.

So this is just a quick slide to show you how we are situated. We are just one project within the Massachusetts State Innovation Model Testing Award.

On slide 19 I want to talk about before getting into our project I wanted to give you a little bit of background.

First the idea for an electronic referral to a community resource is not new. Dr. Frieden and Dr. Mostashari published a paper in 2008 listing 12 key features that should be implemented in electronic health records so that they can function as effectively as possible.

As part of the innovations grant we wanted to support the development of one of those features that have been neglected, linking electronic medical records to community resources.

The DT specifically the track or control program here has had a bit of history with electronic referrals.

In 2010 both the Massachusetts Department of Public Health and New Hampshire Department of Health sponsored a project to electronically refer patients interested in smoking cessation to the tobacco quit line using a proprietary software called Healthy Link.

We learned from that experiment that more referrals are made when the referral process is part of the medical record. So we are taking that model and improving it.

Specifically we are building a tool that will allow providers to refer to a wider array of community resources and will work with multiple EMR's.

On slide 20 we envision e-Referral as a tool for creating community clinical linkages for meaningfully evaluating community based programs and sustaining community clinical linkages.

What do I mean by this? Well first create. In addition to providing an electronic referral tool in order to use e-Referral system it will require both clinical and community organizations to come together and talk to each other.

For evaluation this system will aid in evaluation of how community resources are being used if they are being used after referrals are being made. And it will allow programs to track positive clinical outcomes that arise after using the system.

And sustainability once the software is installed the e-Referral system can be easily modified to add additional referral types.

Using this system for that evaluation I just mentioned this program can be used to help justify the continuation or potentially help build an evidence base for reimbursement of certain programs.

On to slide 21 this slide has some specifics of our project plan. In the first days of this project we have developed the technical specifications of the software and are starting to build the open source referral program.

This program is to be vendor neutral allowing it to function with an EMR. And will be bidirectional which would allow data to leave the EMR to make the referral and information about the referral can be sent back into the EMR.

Our primary clinical partners for this initiative are the Massachusetts League of Community Health Centers and several affiliated health centers.

The Mass League has invested in a data repository and visualization system called CHIA DRVS (Community Health Information Association Data Reporting and Visualization System) which we will use to conduct an evaluation of this software.

Working with DRVS we will be able to examine the number of referrals made, number of referrals completed, as well as linking referrals directly to short term health measures such as weight loss, blood pressure, and hypertension control as well as A1C levels.

Our initial pilot phase will be community health centers who are on CHIA DRVS and up to four community resources such as the tobacco quit line, YMCAs, Council's on Aging for Chronic Disease Self-management Programs, as well as Visiting Nursing Associations.

The funding for this grant provides IT support staff support including clinical workflow analysis and any additional technical assistance needed to implement these new electronic referrals as well as manage the data.

I mentioned earlier that this is an open source software. As part of our grant we are already assembling a toolkit so that the software can be universally available to anyone who wants to adopt it.

Ideally we will have more providers from a variety of healthcare settings making referrals to a wide array of community resources.

On slide 22 this is one example of a bidirectional referral but for time reasons I'm going to move on to slide 23.

So this slide is one of our more technical slides but it details how the system works. The system can receive information from any electronic medical

record and then translate that information to the right community resource in a secure manner.

Most of these community resources will not have their own EMRs. So they may opt to use a web portal or a gateway that we are creating to manage their referrals and ultimately send feedback to the healthcare provider organization.

On slide 24 I've listed some e-Referral pilot referral types. Before a pilot we will be specifically piloting referrals to these four community resources and for these specific referral types.

These referral types were developed after working closely with clinical providers and several community based organizations.

This leads us into slide 25 where we have listed all the types of information a referral will incorporate. Since we received the grant funding in last April we have been working on developing use cases and technical documentation for the software.

Understanding and choosing the structured data elements for each referral type has been an important exercise for us as well as for the end users of our system.

Making sure that that data is coming back to us in a structured data form is essential in order to be able to evaluate how people are using the system.

On slide 26 we have a picture of our timeline for implementation period and first year. We anticipate launching the system in June 2014. Currently we are a little ahead of schedule and we hope it stays that way.

On slide 27 I wanted to talk a little bit about how we are - who even though we are building and testing the e-Referral system as part of our CMS innovations award we are not limiting the use of the system to only the CMS pilot.

As I mentioned part of our plan is to make the software publicly available to anyone who wants to use it along with the necessary user guides and operations manuals.

As an example of how our current work on e-Referral may align with other state initiatives I wanted to mention the Prevention and Wellness Trust Fund a unique opportunity in Massachusetts.

Currently we are soliciting applications for this fund from agencies located in Massachusetts. This fund is of about \$57 million over the course of three years with the aim of improving health outcomes in the state of demonstrating a decrease in health care costs.

As part of this process we expect applicants to electronically formalize at least one community clinical linkage in their proposal. We are making the e-Referral system available to any grantees who wish to use it.

Thank you for giving me the opportunity to share our progress on the e-Referral system. And I hope by this time next year we have some very exciting results to share.

I am now going to pass the presentation on to Brandon Skidmore, slide 29, who is the deputy director of the Bureau of Health Promotion at Kansas Department of Health and Environment.

Brandon Skidmore: Well good afternoon. Again we're starting from slide 29. But first let me take a minute to thank CDC for the opportunity showcase work underway in Kansas with providers in implementing quality improvement practices to improve the quality of care for people with diabetes and hypertension.

Also thanks to colleagues in Massachusetts for a great presentation and to Dr. Ryan Loo our contractor on this project who joins me today and will be available for questions later.

And thanks to those that are listening. I know that each of you are involved in great projects in your own states related to quality of care. And I hope the information we touch on today is useful in your current effort.

For the next few minutes I'll describe the work of the Kansas Quality of Care Project and how this project is adapting to advancements in technology specifically around the collection and use of health information to improve the quality of care for people with diabetes and hypertension.

Transitioning to slide 30, the Kansas Quality of Care Project pilot was launched in 2004 by the Kansas Department of Health and Environment's Chronic Disease Program which eventually grew to include 95 health care clinic sites across the state.

The Quality of Care Project provided a natural platform for public health and primary care to partner in Kansas.

These initiatives rely on expertise and action planning and systems thinking hallmarks of public health work. And the knowledge and know how about clinicians possess to effectively treat disease.

Initially data for this Quality Improvement Project was captured through the Chronic Disease Electronic Management System or CDEMS I know many of you are familiar with CDEMS.

For those who are not CDEMS is a Microsoft access database application designed to assist medical providers and management and tracking the care and outcomes of patients with chronic health conditions.

The initial data collection process in Kansas highlighted on slide 30 require providers input information into CDEMS.

The identified data was then exported to an Excel spreadsheet and pushed to the State Health Department. Staff at the state health department then input the data into a master spreadsheet for analysis.

With early success in the areas of diabetes a hypertension demonstration project was added to the project here in Kansas in 2007.

This enhancement relied on the established infrastructure developed to track key indicators in diabetes to guide providers in the plan do study act process with regard to hypertension.

Slide 31. While collecting and routinely reviewing the data in CDEMS was a key element to the Quality of Care Project to realize the full benefits of participation clinics had to act on the data and initiate changes to existing protocols and procedures within their environment.

With technical assistance from state staff clinics developed teams to use the plan care model frameworks and the plan do steady act cycle to more actively use data from CDEMS to drive improvement.

Through these targeted plans and routine review of data at the patient and clinic level providers were able to make adjustments in their practice procedures to improve the quality of care leading to better patient outcomes.

As a result individual clinics reported improvements in quality of care majors such as the ability to systematically assess hypertension, hyperlipidemia, and A1C levels.

Protocols to ensure patients have self-management goals were established. And they had the ability to use EHR and patient registry to monitor quality improvement.

Slide 32. Fast forward now to 2013 as we all recognize the world of health information is changing and changing fast.

New technologies are required to meet the growing demands placed on the health care system as the use of Electronic Health Records or EHRs explodes new sophisticated approaches to collecting and sharing vital quality improvement data are needed.

The diagram I described in the first slide depicting how the Kansas project used the CDEMS system to collect quality improvement indicators must now adapt.

As such our current work is focused translating the support we've been able to provide through CDEMS to an EHR interface.

EHRs provide a unique opportunity to continue what started with the implementation of CDEMS in Kansas.

Slide 33. For the past year and a half KHE has been working with partners to migrate from the CDEMS system to a new system called Catalyst.

While this migration was required it was critical to provide the same quality information and reporting that had been available through the standalone CDEMS system.

Working with our contractor Spectrum Health Policy Research Dr. Ryan Loo and his team worked to meet the needs of the state health department and the states providers to maintain a central registry of patient and clinic level data on diabetes, hypertension, hyperlipidemia, and other chronic disease indicators.

Catalyst will link EHR systems from all clinics who participate in the Quality of Care Project providing for a more streamlined approach to data entry and an enhanced reporting interface.

The systems level data and enhanced reporting features generated from Catalyst will continue to assist our providers in their work to address quality improvement.

Slide 34. This slide is an example of a specific report that a provider could generate from this new system.

At the top of the report is the selected indicator. And then the sliding timeline which the provider will use to specify the period he or she wishes to review.

The middle section illustrates the data indicator for the provider site compared to the provider's geographic region.

The idea is to reach a positive benchmark where the benchmark can be adjusted by the provider. For example the provider might set a goal of 25% prevalence of a specific condition thus 25% are below is positive or in the green.

The bottom section provides a set of cross comparisons allowing the provider to look at data by gender, BMI, diabetes diagnosis, tobacco use, et cetera.

In this example on the slide which we're now looking at we're looking at data for hypertension and a provider set benchmark of 25%.

It's important to note that only the provider can view data related to his or her patients. And data related to a specific providers practice is not assessable to other providers.

Slide 35 shows the summary report as I mentioned earlier KHE wanted quality of care summary that provides critical quality information without the cumbersome data entry that developed when using CDEMS in conjunction with an EHR.

The new system allows the provider to generate a report based on for example the ABCs of heart disease by applying filters for individuals fitting specific criteria.

The report itself has many more variables than what's displayed here. The image shown has been simplified to show just the variables pertaining to reporting on the ABCs of heart disease.

This report allows the provider to create a filter for reporting on appropriate criteria for instance in reporting the ABCs of heart disease you would identify those who are on ASA or aspirin in the first box, high blood pressure in the

second box, high cholesterol the third box and those who are currently tobacco users in the third.

Using these filters will provide the user with the percent of individuals within their database who fit the criteria selected.

Slide 36. We can certainly speak in length about the changes to the quality of care project but this presentation provides a snapshot of where things currently stand in Kansas as we work with providers to establish linkages to their EHRs and create meaningful use.

We along with Dr. Loo and his team are working hard to roll out this new improved resource for providers.

And we're excited about the opportunity and look forward to strengthening the partnership between public health and primary care to improve the quality of care delivered to those with chronic disease in Kansas.

Our contact information for those who have additional questions later on and related to this project is on slide 36.

We certainly appreciate your time and the opportunity to talk about the work here in Kansas. I'll now turn it back over to Dr. Baden.

Dr. Dan Baden: Thank you very much. And thank you to all of you for the excellent presentations. I'd like to remind everyone that you can in queue to ask a question by pressing star 1.