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To: HIT Policy Committee
Meaningful Use Workgroup

From: Marcus Cheatham
Ingham County Health Department

Re: Achieving Population Health Through Meaningful Use

Thank you very much for inviting me to testify here today. It's exciting to be speaking before people whose deliberations have had so much positive impact on public health informatics. I want to congratulate you for taking the role of public health in shaping population health as seriously as you have.

I also want to acknowledge the CDC whose cooperative agreements with local public health and our allies like the Public Health Informatics Institute have enabled us to participate in the HIT policy making process at a high level.

I apologize if I have tried to make points that have already been said better by others. As a full time employee of local public health I lack the time to keep fully abreast of all that is going on in HIE policy making. However, I don't apologize for my enthusiasm. I am strongly committed to the possibility that health information exchange can lead to significant improvements in population health.

I work in local public health. We are the people who actually give shots to babies, track down bad bugs, and counsel the contagious. We select and design our services in response to population level data and health assessments. In my remarks I am going to focus on the potential benefits to population health that improved informatics in local public health could bring. I am also going to talk about Lansing, Ingham County and Michigan which are the communities I know best, although I realize some others are more advanced.

Let me bring the bottom line up front:

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- 1) I believe we are on course to succeed in using EHRs to report the three initial types of data selected for exchange under meaningful use (immunizations, reportable disease and syndromic surveillance). This is a good starting place because these are core public health functions.
- 2) Preparation for meaningful use is uneven in local public health. Except for the largest health departments, local public health's preparation depends substantially on its relationship with state and federal partners.
- 3) The burden of chronic disease is concentrated in low income and vulnerable populations many of whom are served by public health. The most significant improvements in population health may well occur during the latter stages of meaningful use when tools are developed to address the challenges of serving this population. Effective tools could include: a) the exchange of clinical information between providers in public health (who may not be physicians), and physicians and other providers in clinical medicine with EHRs, and 2) aggressive use of population level data for community health assessments, community level quality improvement and research on the root causes of health disparities.

A Local Health Department Prepares for Meaningful Use

The Ingham County Health Department's options for engaging in meaningful use are shaped by its relationship with the Michigan Department of Community Health. In Michigan, the three types of data to be exchanged initially under meaningful use: immunizations, reportable disease and syndromic surveillance, are already being exchanged by the State, local public health and providers. Our immunization registry, the Michigan Care Improvement Registry (MCIR), and the Michigan Disease Surveillance System (MDSS) are both standards based interoperable systems. They were designed to support the business processes of immunization clinics and communicable disease divisions and do so very well, making the work of local public health more effective and efficient. MDSS is a NEDSS based system and reports to CDC. With these systems State and local public health can work together to manage clients and data. For example, during H1N1 we used H1N1 influenza vaccination data from MCIR to map immunization rates and discovered, not surprisingly, that low income areas in our county had much lower immunization rates than other areas. We contracted with grassroots organizations to run immunization clinics in those areas and did boost immunization rates. In another example, we were recently informed a person with contagious pertussis exposed several other people to the disease at an event in our community. We were able to look up all of those people up in MCIR and

determine that all of them had up to date immunizations and tell them they did not need prophylaxis.

These systems do not yet connect to EHRs although they have been designed since their inception with interoperability in mind. Michigan's State HIE plan calls for implementation of NHIN standards and functions in Michigan, called the shared services bus. Communities including local public health will be organized into regional HIEs which will access state services like the immunization registry and surveillance system through the shared services bus.

The Ingham County Health Department is a member of the Board of Directors of the Capital Area RHIO, one of the regional HIEs. The RHIO is up and running and collecting data from local hospitals and Michigan State University. These data are queryable by providers through a Virtual Health Record. We are about to partner with our state REC (M-CEITA) to roll out a very inexpensive web based EHR so we can begin to get community based physicians participating. The Capital Area RHIO's architecture supports interfaces to all the EHRs presently in our community and a number of providers are scheduled to be interfaced in the near future. The Capital Area RHIO's Beacon submission proposes a partnership with the Michigan Primary Care Association to extend quality improvement tools to regional physicians with a goal of reducing disparities in indices of chronic disease between our region's medically underserved area and the rest of the community. The RHIO's quality committee is already thinking about how to get ready for future stages of meaningful use.

Local Public Health Faces Barriers to Meaningful Use

This is not typical of local public health, however. Earlier this year the National Association of City and County Health Officials (NACCHO) conducted a public health informatics needs assessment. There are about 3,000 local health departments in the United States. Only half use electronic disease surveillance. And only half have access to an immunization registry and many existing registries are not standards based. The results of the needs assessment are available on line. Go to naccho.org and search for "informatics needs assessment".

The needs assessment suggests that major barriers to full participation in meaningful use by local public health include: 1) The need for more informatics training, 2) state

and local government finances, and 3) lack of coordination between the multiplicity of public health authorities.

According to NACCHO the local public health workforce has shrunk by 15 percent in the past couple of years. Even as the workforce is under increasing stress, health departments report an urgent need to train their staff in the fundamentals of using clinical data for quality improvement with few opportunities to do so at the present time.

Stressed health departments may not be fully capable of participating in meaningful use. The informatics needs assessment revealed that only 25 percent report participating in the state's HIE process. Less than one in five expect to be able to benefit directly from funds for HIE made available under HITECH or other ARRA like programs.

An additional barrier faced by local health departments is that they are sometimes required by other authorities or funders to use systems that are not interoperable. Funders may require that a system be used that is not interoperable, or they may grant funds with the stipulation that they may not be used for systems development. While there may be good reasons for such restrictions, the result is that local public health has few good options for bootstrapping its own health IT systems.

Thoughts on the Future of Meaningful Use

We should consider meaningful use in light of the leading causes of morbidity and mortality on the one hand, and health disparities on the other. As is well known, public health's traditional foes, communicable and vaccine preventable diseases, are no longer major killers, having been supplanted by chronic diseases like heart disease, cancer and diabetes. And as is equally well known, the burden of chronic disease is concentrated in low income, vulnerable populations. In Ingham County, we have identified neighborhoods in our medically underserved area with rates of years of potential life lost four times higher than in nearby more affluent areas. We determined that if our county is stratified by income, and the bottom quartile is removed from the calculations, our county would appear to have achieved Healthy People 2010 goals for many of the most important measures. Excess mortality and morbidity beyond Healthy People goals is almost entirely due to illness and death in low income and marginalized groups. To improve indices of population health we must improve the health of low income people.

These people are clients of public health. They come to us to participate in WIC, for breast and cervical cancer screening, for treatment of contagious diseases, for diabetes counseling and smoking cessation services, for nutrition counseling and help with childbirth and parenting. Even as health reform rolls out public health will continue to serve the Medicaid population.

And public health leads community based interventions aimed at improving population health. We create walkable neighborhoods and fight food deserts; we counter tobacco advertising and provide substance abuse services. These strategies are designed using population level data from a variety of sources: surveys, vital records and hospital data when we can get it (not often).

In my opinion, the true promise of meaningful use will be realized when it is turned to the problem of chronic disease in public health settings, especially as it is concentrated in the high risk populations we serve. What I consider to be most urgent is to ensure that meaningful use results in the full participation of public health and the people we serve in the latter stages meaningful use, where the focus is on true two way exchange, quality improvement and the use of population datasets for health assessment and research.

I recognize that meaningful use refers narrowly to the exchange EHR data by providers and not all the other things public health could do in the realm of informatics. I realize the committee does not have the authority to order public health to do the right thing; it does not have buckets of money to throw at state and local government to help public health. But this does not mean that meaningful use cannot have a profound and positive effect on public health. The genius of meaningful use to date has been to recognize the enormous public good that would result if most physicians adopt EHRs and exchange data with each other; and to realize that the barrier to achieving this is that the typical physician acting alone cannot bear the risk of adopting a complicated, expensive EHR. Meaningful use and related activities (state HIE grants, RECS, etc.) reduce the risks, and increase the rewards of adoption. As a result it is likely a large proportion of physicians will be using EHRs to exchange data in the near future.

Similar strategic thinking is needed in regard to the public health system. We must start by acknowledging the enormous public good that will result if prevention succeeds and communities are healthy in the first place and simply require less health care. We must acknowledge that local health departments are vulnerable and face

daunting risks that preclude them from developing integrated systems on their own. States can be highly conflicted and sometimes cannot engage in visionary leadership in HIE no matter how much the state health officer understands or what she wants them to do.

Are there ways in which future meaningful use criteria can strategically support the role of public health? I offer three meager suggestions and will continue to look for better ones:

- 1) Consider the case of a Medicaid provider who makes a referral to public health for home visits from a public health nurse. In many cases the provider and the nurse will never discuss the case together and the provider will not know what transpired between the patient and the nurse. Would it be beneficial to require some level of interoperability between a physician's EHR and a public health (case manager) EHR? The Public Health Data Standards Consortium and others are working toward such a goal.
- 2) Could future rounds of meaningful use incentives be extended to public health settings where nurses use a public health EHR for case management? For a public health EHR to be used meaningfully, it would need to do more than send data on clients to their physicians, it would also need to pull data from public health sources like, perhaps, WIC, immunizations, communicable disease, STI and other data sources. This could incentivize the integration of public health data systems.
- 3) In the final stages of meaningful use it is envisioned that EHRs will send data to data bases and registries for use in population level assessment, fighting health disparities, quality improvement and research. The way data are captured, stored and accessed at this stage will depend mostly on state HIE plans. Is there any way meaningful use criteria can help ensure that these plans provide access to this data for public health including local public health? This is not clear to me, but I urge you to continue to think about this important issue. As state plans take shape it will become clearer what is working and what is not and opportunities to exert influence may appear.

The next time you hear someone say, regarding HIE, "Public health just needs to step up; public health just needs to get its act together." I hope you'll think of the Michigan experience and think, "They've done a lot to get ready." HITECH took the real problems faced by physicians into account when it laid out a carefully crafted plan to move them forward. In the same way we must take the real problems faced by states

and local government into account as we try to move forward toward a healthier nation.

Thank-you very much for your kind attention.