

“Tips for using Your Health IT System for Population Health Management”

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Panelists:

- **Richard Elmore-Office of the National Coordinator for Health Information Technology Kirby Craft- Magee General Hospital**
- **Robert Kohl-Maine Primary Care Association**
- **Rosy Chang Weir- Association of Asian Pacific Community Health Organizations**
- **Heather Law-Association of Asian Pacific Community Health Organizations**
- **John Williams-Association of Asian Pacific Community Health Organizations**
- **Lawreen Duel-Finger Lakes Community Health**

Anthony Oliver: Thank you very much, operator. I'd like to welcome everyone to today's presentation entitled: *Tips for Using Your Health IT System for Population Health*. Before we start today's presentation, I'd like to take a minute to make you aware of the HRSA Health IT and Quality websites. These sites contain toolboxes, additional resources, and archived copies of previous webinars. An archived copy of today's presentation should be available for viewing within two to three weeks. Viewers can submit any questions for assistance to healthit@hrsa.gov. Requests to receive electronic copies of today's slide presentations can also be obtained by sending a message to this email address.

Today's participants should be aware of recently - - the recently released Health Information and Management Assistance Society Job Mind for Safety Net Providers. This allows members of the Safety Net community to post resumes and search for positions free of charge. Please mark your calendars for the next HRSA Health IT and Quality webinar titled: *Tips for Overcoming the Gray Areas of Meaningful Use Stage 1 for Safety Net Providers*, which will be presented on December 13th at 2:00 p.m. Eastern Time. There are also new ICD-10 resources available on the HRSA ICD-10 webpage.

I will now turn the webinar over to Dr. Yael Harris, the Director of HRSA's Office for Health - - Office Health Information Technology and Quality, who will introduce today's presenters. Dr. Harris.

Dr. Yael Harris: Thanks so much, Anthony, and I want to thank and welcome all of the HRSA grantees and members of the Safety Net community to today's Health Resources and Services Administration, Health Information Technology and Quality monthly webinar.

This month's webinar is entitled: *Tips for Using Your Health IT System for Population Health Management*. Today's technical assistance webinar will provide tips and examples from experts on how to use your health IT system to management population and community health. Health IT systems can turn patient data into valuable information, thus allowing providers to view health information across their entire patient population. By focusing on the entire community or population, providers can gain insight into the factors which affect the communities health. Today's speakers represent a variety of safety net provider environments, and we'll focus on how they view health IT systems to manage population health within their communities to improve health outcomes.

Before I introduce this afternoon's presenters, I'd like to read a disclaimer. HRSA wants to add that this webinar is tended to serve as a technical assistance resource based on the experience and expertise of independent consultants and HRSA grantees. Its contents are solely the responsibility of the authors and

do not necessarily reflect the official views of HRSA. In addition, HRSA and HHS in general does not endorse any health IT vendor or software system, including those featured in this webinar.

Now let me just take a moment to introduce this afternoon's presenters. First, we have Richard Elmore from ONC, the Office of National Coordinator, and he is the leader for Query Health, which is an ONC sponsored initiative to establish standards and services for distributed population queries of electronic health records. He is also the Communications Workgroup lead for the ONC's Direct Project. He's currently on a leave of absence from Allscripts where there he serves as vice president of Strategic Initiatives. At that... At Allscripts, he manages exploration and execution of acquisitions and strategic partnerships, and part of this he ran the Allscripts Provider Analytics business. Mr. Elmore is a business - is a member of the board of directors for Patient Engagement Systems, a chronic disease technology company, and also serves as the vice chair on the board of directors for the King Street Center, which serves kids in need and their families in Burlington, Vermont.

Following Mr. Elmore, we'll have Bob Kohl, who is a health information technology projects director for the Maine Primary Care Association. Maine Primary Care Association supports 20 organizations with 120 sites serving over 20,000 residents across Maine. In this position, he manages multiple grants and reports to the board of a health center-controlled network. Mr. Kohl has over 30 years of experience with Safety Net healthcare systems, including 11 years as the executive director of Near North Health Service Corporation, which is a federally qualified health center in Chicago, and 17 years in leadership positions within the Ambulatory & Community Health Network of Cook County, which is part of the Cook County Bureau of Health Services.

Next, we have Rosie Chang-Weir, who is the director of research at the Association of Asian Pacific Community Health Organizations. Ms. Weir oversees research to improve the health of medically underserved Asian Americans, Native Hawaiian, and Other Pacific Islanders at community health centers. Ms. Chang-Weir is also joined by John Williams and Heather Law. John Williams is a CIO for both the Waianae Coast Comprehensive Health Center and for the Pacific Innovation Collaborative Project. He has extensive experience in designing and managing health information technology projects, such as network infrastructures, electronic health records, and software development. Heather Law is a research associate at the Association of Asian-Pacific Community Health Organizations in Oakland, California, where she coordinates numerous health IT projects.

Finally, we're fortunate to have Ms. Duel, who is the chief information officer of Finger Lakes Community. Prior to this, she has held positions as the operations manager and dental program coordinator and as the data manager at Finger Lakes. Ms. Duel has extensive training knowledge and experience in many key areas of the organization, including reimbursement systems for (inaudible) health centers, financial data systems, PELA health, and electronic health records management. During her career with Finger Lakes Community, she has lead the implementation of two practice management systems and has also served as the project manager for the EHR implementation throughout Finger Lakes' five clinical sites, mobile medical and mobile dental programs.

I want to thank the HRSA community and grantees and Safety Net community at large for participating in this event and thank the presenters for taking the time to share their insights with us.

Now I'd like to turn this event over to Mr. Elmore.

Richard Elmore: Thanks, Yael; and welcome, everybody. I was asked to provide some level set understanding of population health, what it is, and to provide some introduction and context for the presenters who actually brought in the tips, and there's some terrific presenters coming up.

So with no further ado, population health focuses on health outcomes as a group, and the idea here is really to be able to improve the overall health of the population and it's also to improve individual health by having a better understanding of patient population and there... As you know - - all well know, there are all kinds of contributing factors to population health - social, environmental - many than most actually that occur outside of the healthcare system, and I think that a lot of the challenges that we face as a country is: How do we get at influencing the behavior and helping with health of populations when you're not in the health system? And there's lots of work that's going on out there in terms of entertainment education. Population Media Center is a great example of someone who's using long running soap opera formats and methodologies to be able to influence population behaviors. There's Health 2.0, gaming, and new media all designed to reach the general population who may not be in the health system. Within the health system, and that's going to be the majority of our focus here today, providers, payers, and employers are all trying to manage the health of their respective patient populations and using a variety of tools. They're using portals, different kinds of risk investment, education programs, plans for consumer. And really if you think about it, a lot of it translates into focus on the high cost, high risk population, (and payment reform aspects as we make a move in this country from volume payment to value and do population measure or center-based payment.

So that's just a general context in which we find ourselves. Of course, a lot of our focus today will be on those that are in the health system as the particular populations that we'll be looking at. There are a number of different applications in health IT that really relate to population health management. Cohort identification is a very significant one. It's just identifying the population that you're trying to get at - Who are the type 2 diabetics? Who are the patients with (inaudible), et cetera. Preservation activity, understanding of quality. There's certainly been a big focus on quality measurement, performance measurement and so on that meaningful use regulations that (inaudible) and an increasing need for better understandings of the evidence around treatment and results and comparative effectiveness. So for patients that are flu, abdominal flu, did they have a flu vaccine or not, and so on, just being able to understand the comparative effectiveness and various alternatives. Disparities and being able to deal those that may be disadvantaged in terms of access to the health system, utilization critical from the point of view of payers, and critical to every patient who's ever encountered a life-threatening illness is: What is happening to patients like me? And really understanding population health in a sense that's immediate, personal, and critical to your own care. I think that population health management really comes alive when you think about it in those terms. It's important to individual patients who want to understand, tell me about the effectiveness of drugs and how they've done in treatment of other patients or tell me about the comparative effectiveness of treatments or tell me about how other patients like me have fared in various settings.

So this is important stuff. It's great that you're all on the line to talk about it and a lot of this is kind of - - the backbone of this is really the foundation for learning health system and the context of the meaningful use program that DLNC has laid out. There's progression from 2011 to 2015 from just starting with electronic health records to small to 15 where we're trying to move towards real transformation of the healthcare system. Much of that is through alerting health systems. And earlier this year, the Institute of Medicine published a paper on the digital infrastructure for the learning healthcare system and a number of the infrastructure items that they identify for learning health system have direct relevance to population health.

Another important kind of guide post in establishing focus and kind of the importance of this to the nation and communities was the Presidential Commission of Scientific Advisors and their Health IT Report which identified deficits relative to be identified and aggregated near-time access to health data and exchange based on minimal standards for that data. And what they were really saying was that there's a potential here now, particularly with more prevalence with electronic health records for real-time, real world, and comprehensive data to be made available to answer questions related to Syndromic surveillance and public health monitoring, safety and (inaudible) monitoring population, assessing quality and use of evidence-based approaches all based on an understanding of population better effectiveness research.

So that's a bit of background. I wanted to quickly just let you know a little bit about a project at ONC that has started, which is looking at distributed population queries, which is an element of population health and the better understandings of population health, and the name of that project is Query Health and it's seeking to improve community understanding of patient population health through the ability to have distributed population queries which asks questions of the data motors, whether that's a small clinic or whether that's a large health system, and to be able to get back population results or aggregated results back or questions about disease outbreak, prevention activity, health research, quality measures and so on, all of which can be done in the aggregate to protect patient privacy and can still provide critical clues to health researchers, investigators, public health agencies, and others to be able to better understand measures of population health.

Kind of a concrete example of that in the Query Health Project, one of the priority user story the community is working on is an expanded analysis of diabetes which is based on this notion of clusters where you have many different measures for the disease and by understanding all those different measures when you throw a lever to try and improve things in your community, you can see how it responses across that, those different elements and those could be in the case of this expanded analysis many different quality measures, different types of exams - eye, foot, knowing smoking status, what categories of meds they're on, having an idea of demographic stratification by population, by age, sex, ethnicity, and so on. And being able to ask that question to a number of data sources letting the patient data stay behind the organization's firewall and aggregated information coming back to the agency requesting it.

So that just gives you a context. And lastly just to round out the picture of Query Health, this is no centralized database (inaudible). This is no central planning. It's voluntary network, voluntary association of requesters and responders, whether that's public health in the community, whether that's payers working with providers to be able to share and figure out an effective - - cost effective treatment plan, so all of that is possible once we can have a better flow of information on population measure.

And last thing just to note before we move on to the next presenter is that population health management, federal health IT strategic plan plays a significant and prominent role. There are five strategic objectives in the overall health plan. You can see them on this chart and I tried to highlight out some of the extracts, which I'm sure these slides will be made available to you. I'm not going to read them here. But the Office of National Coordinator and number of the agencies within the federal government are very, very focused on population health, a critical component of a learning health system and ensuring that you have the necessary information and the standards for it that will allow that clinical transformation to take place and I think that the presenters you're going to hear from now

are reading in many respects to what we're going to see more generally as this plays out over the next few years.

And so with that, I'd like to turn it over to Bob Kohl, our next presenter, and thanks again for the opportunity to be with you.

Bob Kohl: Thank you, Rich, and thanks to HRSA for this opportunity to present today. Today, I'd like to give you an update of what's going on in the State of Maine regarding population health. Give you first, I'd like to start with a little bit of background on what's going on in general in HIT in the State of Maine. Next I'd like to focus in on what the health center-controlled network along with a PCA is doing for the FQHCs in Maine, and then move on to discuss a little bit about our population health activities and challenges and future work that we are engaged in.

So just to give you an idea of what's going on with HIT in Maine, I think most of you know we're a rural state. We also have a very high EMR adoption percentage. We're right at - - it's really 100% of the FQHCs have either adopted or are in the process of implementing. We have two that are implementing right now and most have adopted in previous years going back five or six years or so. We do have a statewide HIE that is very active and should be including I'd say most of the hospitals by the end of 2013 in their database and they're actively trying to incorporate ambulatory practices as well at this time. We do have a beacon community, the Bangor Beacon Community, which includes a number of hospitals, a variety of practices, including five FQHCs now, home health agencies, behavioral health, public health, long-term care. So that group is looking at HIT as a best practices in HIT to share information so that the right information is available at the right time on a given patient. We also have a number of patient-centered medical home activities going on, two that have been ongoing for some time, including all-payer pilot, which has 26 practices in the State of Maine, including three FQHCs. We also have a collaborative that's sponsored by the Primary Care Association, which includes most of our FQHCs, 13 out of the 18.

I'd like to give you an idea of our main tool that or our main, yes, tool that we've designed is our clinical data warehouse which once we had our - - most of our FQHCs with EMRs in place, we - - the Health Center Controlled Network decided it was good to look forward and to develop a database that could be used for quality purposes and for encouraging enhanced reimbursement, so we have - - we started this activity around 2008. It hasn't been a straight line, but I'll give you an idea today of some of the progress we've made and some of the bumps along the road and where we're headed.

As far as this is - - we have six FQHCs participating right now and that comprises of a little over half of the activity of the State of Maine. We have a secure Web portal where our health centers, the authorized users at our health centers can view quality reports. They can drill down from the... They can look at the FQHC level or they can drill down to the site, provider, or the patient level to view various reports that have the ability to filter them for various characteristics, active patients, age, sex, can just delineate a span of time whether it's a year ago or the coming week to identify patients that are scheduled to come in for a visit. And the primary quality tool or reports that we have available, as you can see on the slide, are diabetes and cardiovascular disease for or chronic diseases at this time. We also have the prevention reports that are listed - mammography, colorectal, pneumonia, and flu vaccine. What most centers do with these reports, they've been able to use them to obtain - - to really improve the indicators for - - especially for the chronic care, to improve their indicators to get PCMH or NCQA recognition for diabetes and heart stroke, as well as for PCMH, patients centered medical home. Some centers in Maine have also used these reports to justify through - - enhanced quality indicators have been able to justify enhanced reimbursements from private payers through the Pathways to Excellence

Program in Maine, which is a program that where payers, employers, and providers of care agree on certain quality indicators for that enhanced reimbursement.

Some other tools that we have, we do have some of the public health reporting that Rich mentioned. We have from our data warehouse, we send a nightly feed to our state public health department for Syndromic surveillance purposes and we also have a flu report that we send to the health department, and that's a weekly report that ends up I believe in the weekly report to the national CDC in Atlanta. We have an immunization registry interface that I'll mention more detail about later, but that's where we send information to the state registry and import historical information back into the EMRs of the participating health centers.

I mentioned the statewide HIE. We've designed our data warehouse so that it's the on ramp, can be an on ramp for our health centers to upload information into the statewide HIE. Through the Beacon Program, we're starting to make that happen for our first health center in I'd say in the next two months, so we're excited about that. Finally, as far as current reports, we have an eligibility report for Medicaid, and this allows us - - our health centers to look at patients who are about to lapse their coverage in Medicaid so that they can follow-up and keep them on Medicaid instead of having them lapse and have to reenroll.

I'd like to give you a brief look at some of the population health activities. As Dr. Harris mentioned earlier, we are working with our patient panels, so we'd love to have the gold standard of... We're looking at all of our community data, but we're talking in particular in our data warehouse about the patients that attend our health centers so that the primary population health tool that we use is really around the patient-centered medical home model. So what most centers have found effective is using reports for pre visit planning. What... They often will run a series of reports for the patients that are about to come in for the coming week and each medical assistant for a given provider or set of a providers will have the information they need about patients who are coming in in this coming week, so they anticipate who needs a hemoglobin A1c or who needs a blood pressure check or a foot check or an eye check and they also look at who needs a mammogram or colorectal screening and can anticipate this and prepare or plan accordingly for the patients that are coming in. They also use the data warehouse to provide reports that could be for any timeframe. It could be for the past year to see who's out of date on their indicators or it could be for a provider meeting or QA meeting. They could define the parameters in a different way and drill down to either a provider level or they could look at a site level for various types of reports depending on the audience and the purpose.

The second major tool that we're or major activity that we have besides PCM - - patient centered medical home, would be the patient navigation process and here we are starting to look at not only the - - whether an indicator is met like a screening for a mammogram, for example; but if there is a bad mammogram, we want to be able to track that eventually through maybe a follow-up mammogram, perhaps a biopsy to determine a diagnosis and perhaps a referral and other follow-up, so we're looking at the - - both the data support as well as the people process and the roles of the PCMH team and getting that through those - - that process of patient navigation and appropriate education.

Next I want to just highlight a couple of the challenges we've had and finally go through some of the future work that we plan to do. We... The first three, I'm going to skip over for the sake of time, but we changed the way we connected our health centers to our data warehouse and now we have a more efficient way of transferring nightly through a secure transfer the data that we need for the data

warehouse to be - - produce the reports we need. We also changed vendors and we went to a vendor agnostic data warehouse, so it's very flexible for all our FQHCs, hopefully for more than the six we have now. The most... The last two bullets - embedding the tools in the staff workflow and the cost model, these are two of the biggest challenges we have currently. We're... As I mentioned with the patient navigation process, we're trying to make sure that the tools are used at the health center level, that they're - - that the medical assistants or the providers or the clinical director is using the pre visit planning and other types of tools effectively, so we share experiences and we share best practices in that regard. The other challenge is how to make this happen from a cost standpoint. It cost money to connect to the data warehouse. We've gotten it down to about \$25,000. We also have maintenance fees that are in the \$6-to-12,000 range, and we also have unfortunately - - in addition, we have other fees to connect to the statewide HIE and those are in the \$35,000 range plus some maintenance fees that are on a per provider basis, \$600 per year currently. So all those fees adding up is a steep climb for some of our FQHCs, so we're - - that's a bit of a barrier right now for us.

In the future, we're planning on - - we're working right now on a two-way immunization registry interface and this would make everything flow completely from the EMR to the immunization registry and as well as the historical information back to... We're planning to design additional reports that can help us with the UDS process with meaningful use, and our clinical committees have designed some PCMH reports. We've also are... We're looking at using the reports to support the quality-based reimbursement, enhanced reimbursement through our quality enhancements, so we're - - and we're also developing a number of managed care entities and approaches, including a co-op application that we just put in and some others that are in the works, so we hope to extend this to utilization reports that can help us manage our - - the process from not only primary care but also the in-patient and emergency room utilization.

So with that, I'd like to thank you again for this opportunity, and I believe that Heather and John are next.

Heather Law: Good morning and good afternoon to you all. During this presentation, John Williams and I will be discussing how our Pacific Innovation Collaborative and other HIT-related projects are being used to manage population health outcomes for Asian American, Native Hawaiian, and Other Pacific Islander communities, and here is a photo of some of our project members taken during our last face-to-face strategic planning meeting in Hawaii earlier this year.

So my name is Heather Law, and I'm a research associate at the Association of Asian Pacific Community Health Organizations, or APCHO, in Oakland, California. In my role, I also coordinate the Pacific Innovation Collaborative Health Information Technology Network, the incentive (inaudible) outcome, paying for population health at (inaudible) FQHCs, and as well as the enabling service (inaudible) health information exchange projects, and John Williams will also be co-presenter. And Mr. Williams is the chief information officer at Waianae Coast Comprehensive Health Center in Waianae, Hawaii, as well as the CIO for the Pacific Innovation Collaborative Project.

For our presentation, I will first provide you with some background information on the Association of Asian Pacific Community Health Organizations, or APCHO. I will also talk a little bit more about the PIC Project and after that John Williams will be providing you with a brief overview of our PIC dashboard and then lastly I will conclude by discussing our project's impact on patient outcomes as well as best practices.

So first for some background information on my organization. So APCHO is a non-profit national association that was established in 1987 with a mission to improve the health status and access of Asian Americans, Native Hawaiians, and Other Pacific Islanders, or AANHOPIs. We are based in Oakland, California, and are governed by a national board of directors. Our board of directors consists of representatives from community-based organizations that have full membership status in our association, and APCHO is primarily supported by federal and foundation grants. Our member organizations are located in seven states and one U.S. territory. Most are community health centers in Hawaii, California, Washington, New York, and Massachusetts, and all are located in areas with a high concentration of Asian Americans, many of whom are medically underserved.

Many of our community health center partners are at the forefront in providing community responsive, financially affordably, and culturally and linguistically appropriate primary healthcare services. So in emerging healthcare environment, community health centers are part of the community safety net and through our HIT-related projects and initiatives, we hope to improve the value of community-based health center activities in collaboration with others. And lastly, through such projects, we hope to share data that will not only show the value of what community health centers do, but ultimately improve patient care and safety and reduce the cost of healthcare. And during this presentation, Mr. Williams and I will be demonstrating how our PIC and other related projects have helped to achieve such goals.

And now I would like to provide you all with some background information on the PIC Project. So the Pacific Innovation Collaborative Health Information Technology Project is a Department of Health and Human Services Health Resources and Services Administration funded network of eight community health centers and two health plans in Hawaii and Washington. The intent of the network is to design and develop an electronic infrastructure for community health centers in separate states to exchange patient information based on performance measures important to the network. The overall aim is to utilize electronic medical record systems to reduce health disparities by improving the safety, quality, efficiency, and effectiveness of healthcare delivery through pay for reporting, pay for quality, and lastly pay for savings.

And here is a listing of our PIC Project members. So this includes five health centers in Washington and three health centers in Hawaii. This project uses health insurance claims data, so a local care and community health plan of Washington send their patient data to two regional aggregation sites listed here, so that would be Hawaii Patient Accounting Services and PTSO of Washington for the federally qualified health centers. This data from the regional data depositories are then sent to a century depository based in APCHO's office in Oakland, California.

And here is a list of the performance indicators for the PIC Project, so this includes immunization, diabetes, primary care and emergency room utilization, well child visits, as well as a maternal care measure, and here is a listing of just some of our project strengths. So this includes the availability of historic data from 2007 as well as the availability of current data, so this is exchanged daily for Hawaii health centers and weekly for Washington. We also have data from multiple vendors and disparate systems, so we're collecting data from Nextgen, Centricity, as well as from Waianae Coast Comprehensive Health centers, practice management system. We also have DI identified data at the central report site, as well as disaggregate ethnicity data. Another feature is ability to compare data via the PIC comparative dashboard. We also share best practices at our CHCs and health plans across the states. This project also leads to the development of a HIE that serves as a foundation for many future projects and, lastly, we're also using the infrastructure of this PIC Project for HRSA (inaudible) patient-centered outcomes research project.

And now John Williams will provide you with an overview of the PIC dashboard. John.

John Williams: Thank you, Heather. Hello, everybody. I'll go ahead and move on to the next slide and discuss the dashboard. The Appalachian or the term "dashboard" for us not only represents the visual presentation of the data, access to reports, but the underlying technology used to conflate the data to extract, transform, load the data from the disparate information systems from health centers as well as payer organizations. And to that extent, one of our objectives technology was to pull the data from the source systems at the health centers without having to manually enter the data. For example on a spreadsheet to be uploaded to our portal. So another words, data should not have to be entered twice. For example, third next available metric that we're utilizing. We're extracting the data from the appointment scheduling systems at the health centers, so it's entered there and it should not have to be put by somebody else into a spreadsheet that then gets forwarded to our system. One of the other key features that we do support both sequel-to-sequel database interface as well as HO7 and the data currently is typically sent electronically through a point-to-point BPN tunnel on a nightly basis.

I just want to... Before moving on, I just want to touch on the data itself, and I know Heather did that, but I wanted to mention that one of our goals was to capture as much data as necessary, not only to report on the selected measures but to report on new metrics or to make adjustments to our existing metrics without having to re-import or re-interface the data. So some of the data that we have include patient visit data, including all the diagnosis, procedure codes, admission dates, labs. We originally started out with A1c data, but now we're interfacing all labs, immunizations, provider availability or appointment data, maternal care data, some other patient demographics. When it comes to our patient demographics, for our Pacific and Asian populations, our intent was to retain as much of the ethnicity detail as possible. This converting over to the UDS race and ethnicity values, we moved a lot of that detailed information, which we are attempting to keep and interface and soon we'll be adding medications. And one of the other things I wanted to just mention is that we also emphasize enabling service data, so we have data ad reports to support enabling services.

I'm going to go ahead and talk about the dashboard features as I go through the presentation, so I'm going to skip this one and this is the Homepage of our data warehouse portal, so users login securely and access the data this way. This is a screenshot of one of our comparative dashboards. And so having the type of data that we have from different organizations allows this type of reporting where we could actually compare house centers and see how they're doing relative to the metric. So on the left of this matrix, you have the health centers, the member organizations, and across the top you have different metrics. This allows you at a glance to see where you're doing at a given point in time relative to the other organizations. And then from our dashboards, you can drill down and start looking at more detailed information.

Here's an example where we're looking at trends for immunizations, for diabetes, primary care access, and then you could drill down further. So this is the place where you'd look for trend analysis and then for further detail, you could drill down and see at either a patient level or an encounter level. Now earlier, Heather mentioned that we have two regional sites, so we have a central site where we do most of our population-based reporting and analysis, but we also have regional sites and this is a couple of screen shots from our Hawaii portal where clinicians and staff at the health centers can log in and see detailed information, including PHI information, which is actually not available at the central site.

Okay, I'm going to go back to - - go and touch on the benefits of our dashboard. So now that we actually have essentially the patient population-based data reporting off a central site but data available to clinicians with patient information, this allows the clinical staff to go in and identify and report on the data and make any changes at the clinic level in addition to of course just the population-based research. And one of our - - one of the goals here of our dashboard was to really align the strategies between the organization so that we can see how we're doing, not just between our organizations but to see what we want to do and to set goals for the future of the member organizations and to that extent we're now looking at using the data for predictive analytics and hopefully we'll be moving shortly to be able to report on that type of data. We're looking at different vendors and technologies for that.

And with that, I'm going to go back and turn the presentation over to Heather, and, Heather, I'm going to move down to your slide.

Heather Law: Okay. Thanks so much, John. So now I would like to discuss our project's impact on patient outcomes as well as share some of our best practices. So first I would like to discuss a project that was funded by the Robert Wood Johnson Foundation to actually utilize the HIT infrastructure from PIC. So the intent of this project was to examine whether a team level pay for performance for P4P incentive program as well as HIT intervention improved the process measures among patients served by four community health centers who suffered from - - whose patients suffered from multiple co-morbidities. More importantly, so in this intervention, provider team had the ability to track patient data on the selected performance measures via an online reporting tool. So this study is significant for several reasons. First of all, it aims to improve the quality of care through a data exchange between health centers and a Medicaid payer health plan. Secondly, it provides a team focus and culturally appropriate P4P quality improvements as well as HIT intervention model to guide decisions made by policymakers, health organizations, and health plans serving high risk populations. Lastly, this project aims to reduce health disparities for Asian American, Native Hawaiian, and Other Pacific Islander high risk populations. So we're currently in the evaluation phase of our project, and now I would like to share with you some of the preliminary findings from this study.

So one of the performance measures of this study was emergency room utilization, so on this slide you can see that the percentage of health-centered patients visiting the ER decreased by 3.66% within one year. And on this slide, you can see that the average number of ER visits decreased by 0.09 from 2009 to 2010. So just to quickly summarize, preliminary findings show that implementing the P4P and HIT intervention program led to decreased ER utilization among patients at the four FQHCs and furthermore this study contributes to reducing and eliminating health disparities by assessing the effectiveness of P4P and HIT at CHCs that serve predominately Native Hawaiian and Pacific Islander patients who also face multiple co-morbidities.

I'm actually going to skip this slide since we're running a little late here. So now I just want to talk to you quickly about some of our best practices. So one of the main themes that arose during our evaluation of our project was the topic of data utilization, so overall project members suggested that the ability to capture, compare, and utilize data across health centers was a useful mechanism for quality improvement. Also one of the main goals of our PIC Project is to improve the safety, quality, efficiency, and effectiveness of healthcare delivery. So another theme was quality improvement as well as leadership and support. And finally, a frequently stated concern of the PIC Project when we conducted our evaluation was a lack of resources and actually a lack of sustained resources including time, funding, or staffing at health centers is a barrier and this is a major point of discussion for many project participants because the general idea of integrating health information technology into health centers is

fairly new to some member centers and not to others, so overall the PIC and other related projects have really helped APCHO's CHC members address these barriers.

And that concludes our presentation. Our contact information is listed here. So thank you so much for your time, and I would now like to pass it on to Lawreen Duel.

Lawreen Duel: ...everybody. Thank you for having me today. My speech is going to be talking about how we use health IT to improve health indicators for migrant and seasonal farm workers. Our mission at Finger Lake's Community held us to ensure accessible and affordable healthcare to the communities that we serve using the medical home common steps which we have a patient-centered approach whereby healthcare team works together to coordinate and support primary and preventative care for an individual.

Where our services are delivered. We have seven community and migrant health centers that provide medical, dental, behavioral health, medical nutrition, therapy, telehealth services, and enabling services. We also run a mobile medical program for migrant and seasonal farm workers in 22 counties in New York State. Mobile dental program is another service that we offer for migrant and seasonal farm workers providing services at nine (inaudible) business child development centers, eight migrant summer school programs, and large migrant labor camps. We also are one of 21 voucher programs in the United States that provide migrant vouchers to 42 counties of New York State.

FLC Health has integrated in its EMR system eClinicalworks into all of our community and migrant health centers. Our providers are provided with a laptop that travels with them to any of the facilities in which they're scheduled to work in. Each facility is equipped with spot vitals, digital electrocardiograms, spirometry, and otoscopes and ophthalmoscopes that are integrated into our electronic health record. Each of our facilities also have telehealth and video conferencing units that are used to access specialty care services with specialty providers for whom (inaudible) has contracted with. These units can also be used to link patients with educational resources. Our mobile medical program for our migrant and seasonal farm worker population is staffed with a medical provider, either an MD or a midlevel, and a community health worker who visit migrant labor camps and private housing to provide acute care to our patients. They do screenings and immunizations are provided in the camp.

We're in the process of piloting the EMR system in camp. A laptop and an Internet card are used by the team to access the patient's health record and document the services that are given by the team. This information then becomes part of our patient's record, so any patient who's identified with a chronic disease is then referred into our health centers and the information is readily available for the provider seeing the patient. The community health record is also able to access the health center's provider schedule to make follow-up appointments and schedule any necessary enabling services to ensure that the follow-up occurs.

Each IT is lowering the cost...

Anthony Oliver: Ms. Duel.

Lawreen Duel: Yes.

Anthony Oliver: I'm sorry. Could you.. I'm sorry, I'm having a little bit of difficulty hearing you. Could you speak up just a little bit?

Lawreen Duel: Oh sure. Is that better?

Anthony Oliver: Great. That's... Oh that's a lot better. Thank you.

Lawreen Duel: Okay. HIT lowering costs and improving quality care. So the HIT system is providing timely access to our patient's information. We're using a variety of integrated data sources, including a lab interface and an immunization interface increase safety results largely from alerts and reminders that we generate to our EMR system. Our HIT program helps prevention by scanning patient records for risk factors and recommending appropriate preventive care, and our EMR can identify patients in need of testing or other services.

So in my presentation and my session today, I'm going to explain to you how we use our EMR system to test to - - how we use our EMR system and put it to the test to improve the care provided to our diabetic migrant and seasonal farm worker population. Okay, so information was collected from our registry, was documented during pre visit planning. Our clinical staff meant to determine the health indicators that they wanted collected on our registry, so our registry, which is all generated through the system tracks hemoglobin A1c levels, blood pressures, LDL, microalbumin, diabetic retinopathy screening, foot exam, pneumovax shots, annual flu shot, aspirin therapy, medical nutrition therapy, and our annual dental examination.

A critical component that we found in this process was to ensure that we had appropriate clinical staff and staff champions that were recruited from the onset. The system needed to be reviewed to determine how the information was going to be captured to be able to query the information in the system and the information needs to be entered as structured data, no free text. And since health IT is so scary to many people, especially providers and staff who have grown up with paper charts, the provider and staff buy-in is critical. We have identified our champions, as I had said, and they've been an integral part of implementing the overall EMR program. They also had an interest in health IT.

So the first thing that we did was we captured our baseline. We went and reviewed our patient charts to determine our baseline information. We provided... We presented it to our clinical staff and then we had brainstorming sessions so we could determine how to increase or improve our baseline rates. We educated all of our health center staff on our process. So here are our rates before EMR. This is all captured by a manual chart review of our paper records. Each week the electronic chart is queried to gather the new data that had been captured during the week and placed in our registry for the providers to review on each of their patients. Monthly, the rates are reviewed by the providers at their meeting and brought to our QI committee.

So what we did was we identified our barriers for the patients. We wanted to know why our rates were so low. We found that the cost of testing being provided by the lab was one reason. Our cost of vaccinations, nutrition services weren't available for patients who did not speak English, specialty visits. There were transportation issues, cost issues, and translation issues. There were lack of services for non-speaking patients outside of our organization. So our baseline data showed that hemoglobin A1cs, LDLs, and microalbumin rates were as low as 30% - - 32%. Many of them were not receiving it because they could not afford the testing.

So what we did was to reduce these barriers was we contacted with a new lab service that had a bidirectional interface. We negotiated lower rates for lab testing and we educated our enabling staff on

the importance of routine lab services for the patients. Our hemoglobin A1c monitoring machines were put at each of our centers and with our mobile medical program. The vaccines... The cost of the vaccines were also an issue, so we secured additional free vaccines for adult migrant farm workers. We provided training sessions to enable staff on the importance of immunizations. All of this information once the test and the vaccines are done are put in our EMR system. We had a lack of nutrition services. We hired a bilingual nutritionist to provide the services at our center. We used telehealth for patients who were unable to access the health center. We collaborated with an extension program to offer a cooking class to our patients. All of these sessions with a nutritionist and the cooperative extension are documented in our EMR system, allowing our providers to have access at time of service documentation. Specialty care visits were an issue. There was lack of transportation to our specialty care visits, so we assigned enabling staff to accompany each of the patients. There was lack of translation services at these visits. Again, we assigned a bilingual enabling staff to accompany the patient. Our high cost of specialty care visits, we contracted with a specialist through our voucher mechanism for lower rates. We also purchased a digital retinopathy screening machine. Images are captured and stored in eClinicalworks and are sent electronically to a specialist in California who reads the images. Reports are then sent back electronically into our EMR system for the providers to review. We integrated our telehealth into all of our (inaudible) sites. All notes from the specialty care providers are integrated into the EMR system. Images are stored and forward, again saved directly in the system. The benefits from this are that there's an improved access to care for the patients and family. There's a reduced travel. There's timely appointments and services are provided in the location where they're comfortable. The providers like it because again it's an improved access to care. There's direct patient interaction and there's access to other experts. The benefits to our healthcare system, again, improved access to care, improved health outcomes, and expansion into rural areas and underserved populations. Increasing our enabling services we're offering and arranging transportation to appointments, again all using our EMR system. The hiring of the bilingual bicultural staff, assistance to migrant and seasonal farm workers to access all community resources. They also facilitate enrollment. We have those services available at each of our sites. Extensive health education is offered to all of our migrant farm worker patients by the enabling staff. We use our EMR system by all of our staff to schedule appointments. We also have a toll-free 800 number with multiple languages available. They also use our system.

So all of this again is documented into our EMR system, painting the picture for the provider seeing the patient. When a migrant and seasonal farm worker leaves the area, all of their information is sent to the provider at the patient's next location. We use a team approach, including clinical staff and enabling staff to complete comprehensive care with all documentation done within our EMR system. We use... We refer our chronic migrant and seasonal farm workers to services out of state when they leave. We use the National Center for Farm Workers Health Call to Health Program and we also use the Migrant Clinician Network Health Network.

So as you can see, once our EMR using it and documenting in it and fully integrating it into our EMR system, our rates have increased dramatically. Our hemoglobin A1c rates went from 39-to-44%. Our blood pressure is lower than 130 over 80 have increased from 49-to-64%. LDLs less than a hundred have increased from 32-to-52%. Microalbumin testing has increased from 65-to-77%. Retinopathy screenings, just by putting that machine in our office and not sending our patients out for specialty visits, went from 6% to 76%. Foot exams being performed in the office in structure data have went from 59% to 86%. Pneumovax vaccines being given have increased from 32% to 83%. The aspirin therapy has increased from 59-to-79%, and nutritional therapy has increased from 35-to-74%. The main reason this happened is because we were using our HIT to document and track these services, things that were being done weren't getting lost in the paper chart. They were all kept in one location. All services are enabling our

telehealth, our clinical services were all documented in one place. It was easy accessible for our providers and staff. And again, the dedication of our staff to meeting the needs of our farm worker population also helped in this process.

And again, I thank you for having me here today, and my contact information is on this slide. If anybody wants any more information or clarification, this is where I can be reached.

Alana Knudson: Great. Well thank all of you for this amazing presentation. You are all doing some very interesting work, and a number of our listeners have submitted questions. And the first question I'll pose to Richard Elmore, and the question for you is: What is quality of care?

Richard Elmore: I think that a lot of what we're trying to do in terms of measuring quality at this stage are really very much baby steps in terms of trying to make sure that the basics are being paid attention to by providers and that those are being appropriately measured in the quality measures that are part of the meaningful use program. So I think that the quality of care has many, many dimensions to it. It's well beyond kind of the information that we've asked providers through meaningful use strategies, the capability of the providers, the clinicians, the nurses, the many caregivers that are critical to our system and so on, so that's (inaudible) on that. I think it's really important to note that even on these very, very basic measures, introducing the presence of an electronic health record has meant that we've seen studies which indicate a very normal rise in compliance with the basics of providing care to individuals whether that's making sure that the right kinds of exams are done for diabetics, as we discussed earlier, or others that you expect to be done but can actually only be -- in the measures we've seen are without an EHR are done by a small percentage of the providers and those electronic health records are actually accelerating their improvements relative to those that are not doing these basic measurements. So with all due respect to the clinicians in the very many dimensions of quality of care, we just got to focus on some of the basics and try to create some measures around those (inaudible).

Alana Knudson: Well thank you. And in a similar vein, question is posed to Lawreen about: **What extent does your EMR help or hinder the achievement of your program goals?**

Lawreen Duel: Actually our EMR really helps with our achieving our program goals. The one thing that we were finding before when we were using paper charts is that as good as you -- as your staff is and as much as you expect of them to have everything put in the right place, with our EMR system with the use of our flow sheets and again using structured data, we have been able to have a quicker glance and an easier way to find all of the information that we need to bring this information to our providers and our staff's attention.

Alana Knudson: Thank you. And for Robert, for you: **When you're looking at the various EMRs that the centers in their warehouse use, could you describe a little bit more about what those EMRs are or what the various EMRs are?**

Bob Kohl: Sure. We have five EMRs that are represented throughout the State of Maine among the FQHCs and we have two represented in the six health centers that are utilizing the data warehouse. So the two that we're currently using are Nextgen and Centricity. The other EMRs that we're prepared to bring in once they find the resources, which I tried to laid out as one of the barriers, and those would include SuccessEHS, CompuGroup, which used to be HealthPort, and eClinicalworks.

Alana Knudson: And as a follow-up then: **Who manages the centralized database?**

Bob Kohl: Well we have basically two vendors that work for us and it's controlled by the Health Center Controlled Network, which is six community health centers, and we have a board that includes the CEOs of those groups, plus we have some clinical and technical committees, so they guide the group. And as staff, we hire - - I'm the staff person, we hire - - we've hired two groups. One is a technical group that's developed the software in the data warehouse functional components and the connections to the health centers and we have a second group that manages the hardware itself, the servers and the connections to the servers and the access to the system.

Alana Knudson: And I guess one follow-up to that then: **I believe you referenced that maintenance fees are 10,000 to 12,000 per year, is that per community health center?**

Bob Kohl: That's correct.

Alana Knudson: Okay.

Bob Kohl: And really what happens is, like I say, it's a health center-controlled network so the health centers determine the budget and how ambitious they may want to be in a given year and then... So basically what we do is we determine what the bare bones maintenance costs are and then add in any desired projects that... Sometimes they will have grant funding and sometimes it will be - - could be generated out of dues, but usually there's a combination of dollars available from dues plus grants and then there's a work plan that's approved as well as a budget, so the health centers determine how much they pay basically.

Alana Knudson: Excellent. Thank you. We'll shift gears a little bit and talk about how we share best practices. This is a question specifically for Rosie, Heather, and John. The question posed is: **How do you share best practices across states, and what medium do you use to share those best practices?**

Heather Law: So this is Heather. So we really believe in the value of CBPR, or Community-based Participatory Research. So the way that that works for our PIC and other HIT-related projects is that we have a lot of meetings, many of which take place via conference calls. So for instance, every Thursday we have meetings with the technical staff at the CHCs and Hawaii and Washington states. We also have monthly conference calls with all of our project members and then lastly we always have a face-to-face meeting every year.

Alana Knudson: Great, lots of different ways of disseminating.

Heather Law: Yes.

Bob Kohl: If I could jump in. This is Bob from Maine.

Alana Knudson: Sure.

Bob Kohl: We have a health center that's located on an island that's not connected to the mainland, except by ferry and airplane, so what we often do is we have - - we just have WebEx or a webinar-type setting where people can participate as well as with the verbal through the phone, conference phone. It works pretty well. Not quite as good as in person, but pretty well.

Alana Knudson: Excellent. And how about the other two presenters, **do you have a means to share what you folks are doing with other collaborators?**

Lawreen Duel: This is Lawreen from Finger Lakes Community Health. We actually use our telehealth equipment, video conferencing equipment to work and talk to our collaborators.

Bob Kohl: Probably more important than the method of communicating is just the expectation that people will share their best practices and discuss the warts and all how it's really going, and we found that that helps - - has helped us to improve our processes and our reports.

Alana Knudson: And similar to that, one listener asked: **What is your source of state and national benchmarks for selected clinical measures? What are you all using? Who'd like to start with that one?**

Bob Kohl: Well I'd be glad to start. In Maine, we're using - - it's usually national quality forum measures that are pretty much the basis of all the meaningful use measures and UDS. They're all pretty much converging right now, so it's... But we use - - usually check the National Quality Forum for the numerator/denominator definitions.

Alana Knudson: Do any of the other presenters have any comments to that question? Well then we'll move on to another question. **Are there any examples of merging patients from different providers to approach a geographic denominator for a selected condition? How do you... Are you doing that in Maine for example?**

Bob Kohl: Well we have that in our heads a little bit. I mean we're able to cover some of the geography just from the FQHC standpoint at this juncture, but ideally if we could surmount the cost barrier and if we got all of our health centers into the statewide HIE, there would be an opportunity to do more I'd say geographic-based population health, which we would love to do. We have our toe in the water for that with our Beacon Program around the Bangor area, and I would say that most of the primary care practices are involved and are connecting to the statewide HIE, as well as the hospitals and, like I mentioned, nursing homes and home health and behavioral health and public health. So I think there's a chance for us to move in that direction over the next - - in the coming years. Mostly I think the blueprint will be established through that process at - - with the Beacon Program to some extent and to some extent with what we're doing with the Health Center Controlled Network and the Primary Care Association, but I think we're each have some strengths. We have strengths at the... With the health centers we've connected to the public health, for example, and we haven't yet done all the connections to the hospitals and others, but hopefully with resources, we'll able to build on those successes and have that be more extensive and then your future.

Richard Elmore: This is Rich. I think that this is an area where health information exchanges really can play a vital role in service to the community. There's some real challenges around being able to do the compliant with regulatory or policy restrictions on that sharing of information and HITs are perfectly positioned to do some of that patient matching and aggregation work that I think that the questioner is looking for.

Alana Knudson: Thank you. We have another question, and I'll keep this open to any of you who would like to answer it. **What are the various types of connectivity infrastructure models that are currently being used, for example, T1s, secured Internet? If you could share a little bit how you are approaching the connectivity issue.**

Lawreen Duel: This is Lawreen. We are currently using fiber at our clinical sites. And as I had said with our mobile program, we actually use Verizon Wireless cards with a light version of our system for them to run in the remote areas.

Alana Knudson: How about in Washington state?

John Williams: Heather or Rosie, did you want to talk about or did you want me to answer that?

Rosie Chang-Weir: Yeah, actually I was hoping you would answer that. Thank you.

John Williams: Well so our different health centers have different means of communication, obviously. So PTSO, which is a data center that hosts four or five of the health centers in Washington, they have a high speed connection for all the health centers that are hosted there. The health centers themselves have different types of connections themselves. Some of have... Some do have fiber. They have the T1 connections and some have other types of connections as well, (inaudible) connections. Now for our data warehouse, we fortunately are not - - it is not bandwidth intensive unless you're doing a large initial load, for instance, and because we do incremental transfers of data, the bandwidth required is minimal. So the good news is: We can transfer data on even connections that are less than T1 small bandwidth connections.

Alana Knudson: How about in Maine?

Bob Kohl: Well we're using a secure Internet to transfer data nightly. I did mention in my presentation that we switched methods. We're happy with that method that sounded similar to Washington and we're - - we used to do something called Log Shipping, which was done every 15 minutes and it was pretty much all transactions would be transferred every 15 minutes and it was kind of a nightmare and was difficult to manage and it just was not appropriate and led us to change our vendors and re-group, so that's our path to the current secure method.

Alana Knudson: Makes sense. Well thank you for that. The next...

Richard Elmore: This is Rich. Just a brief comment, there are something like 44 of the data organizations which have made included in their plans for communication the Direct Project which fit in a physical layer is some of the other responses we're talking about, but it's more of one logical path for being able to do this communication which basically you can think about it as secure email and it's useful in a number of cases and not useful for everything but it is up and comer. You're going to see a lot of capabilities there being sold at a state level and it may be worthwhile exploring that depending on the application.

Alana Knudson: Is there a good resource to help people explore that?

Richard Elmore: Yes, there is a coordinator, an initiative coordinator for the Direct Project. It's definitely a framework project of the Office of the National Coordinator for Health IT and I believe that you can find more information on resources at directproject.org. Again, that's directproject.org and also you can feel free to reach out to me, I'll get you to the right (inaudible).

Alana Knudson: Great. Thank you so much. We also have a specific question now for Lawreen. **And it is with regard to the electronic self-scheduled appointments that are available. Does the population actually use this option?**

Lawreen Duel: Oh no, I'm sorry. That must... That wasn't clear in my presentation. What we do is we have our staff when they're going out to the migrant labor camps or the enabling staff when they're working with any of our farm worker patients, they actually take their computer with them and again with a Verizon access card, they're able to schedule those appointments for the patients, working out if they need evening appointments, if they can leave the farm during the day to go into the clinic for an appointment. And at that point, we can also schedule the enabling services for transportation because the migrant farm workers need transportation to their appointments 95% of the time and for translation services.

Alana Knudson: Excellent. Thank you. And, Heather, we have a specific question for you. **Would you please expand a little on how your program impacted the ER utilization rate for your enrolled population?**

Heather Law: Sure. So just to clarify, so that's actually part of a different project, so it's the P4P Project that's funded by the Robert Wood Johnson Foundation. So just to expand upon that, this is actually part of a larger project where we're analyzing and P4P and HIT intervention, so we actually have a control as well as a comparison or a control group as well as an intervention comparison group. So for this project, only the intervention sites have the ability to log into the data reports and see which patients were basically - - I guess you could call them the frequent flyers to the emergency rooms and after that. So the provider (inaudible) really target those patients. So I'm not sure if I had mentioned this in my presentation, but all of the patients in this study are diabetic patients and they're also have some type of psychosocial condition, so hopefully that answers that question.

Alana Knudson: Yeah, thank you very much. Now I'm looking at our time, it's fast approaching 3:30; however, I think we have one last question that all of our presenters can speak to. And if we could start with, Richard, that would be helpful. And the question is this: **What advice do you have for health systems that are just starting to implement EMRs?**

Richard Elmore: There a lot of good resources that are out there. I think that the Office of the National Coordinator when they started on this journey a couple years ago recognized that there was going to be real important support needs for folks trying to get this work done. It's important. It's complicated. It's in addition to your day job. And they set up a set of reqs [sic] which cover the country which are resource centers that are able to (inaudible) provide access to information and expertise that can help you in that journey. So that would be the very first place I would start. There's one I believe in every zip code in the U.S. now and I think that they've already serviced or connected with over 100,000 providers and I think that there's (inaudible) structures to be able to help.

Alana Knudson: Great. Thank you. **How about Maine's perspective?**

Bob Kohl: In addition to the national resources, I would suggest looking at or assessing internally your readiness first, especially among your providers, and get some baseline on where they're at and I guess their attitudes towards automation. Secondly, I would visit others that are in various stages of using their EMR. I would visit some that are pretty mature in their use and I would visit others that are in the early stages and get familiar with multiple EMRs at the ground level, especially if you're an FQHC and

especially among other FQHCs. And finally, I'd recommend checking in with your local regional extension center. They have materials and sometimes contracts with EMR vendors that could be helpful in reducing your costs.

Alana Knudson: Great. Thank you. **How about the Washington State perspective?**

Rosie Chang-Weir: This is Rosie. I agree with all the suggestions that were given. We also have... When our member centers come to us with these questions, we also have a technical assistance program where we try to match them with those that are more experienced within a particular topic, like (inaudible) PMR, so I agree with the ability to really just talk to the folks that are more experienced and just get a better idea about the experiences. Another suggestion is just when you're developing the plans, just ensure that you have effective workflows. It's really important to be able to get clinic and the provider's buy in on what are the most effective workflows and so if you get their suggestions and buy in on what would be most effective, then they're more likely to follow it, so that's something that's been really important in our projects as well.

Alana Knudson: Great advice. **And how about Lawreen, what about from the Finger Lakes, what's your words of wisdom?**

Lawreen Duel: Well I agree with all of my co-presenters for ways to implement it in your organization. We didn't end up using any external agencies, we worked with our staff inside. We again chose our key people and our champions, our EMR champions, and they were all brought to the table and we reviewed different vendors and made our choice from there, so again your staff, just getting the right people at the table that can help make those decisions and get the buy in from everybody else on staff.

Alana Knudson: Excellent. Well thank you first of all to our incredible presenters for sharing their expertise with us today. We greatly appreciate it. We also appreciate all of you who joined in to listen to the webinar and sent some very thoughtful questions. Thank you very much, and we certainly are very appreciative of the Office of Health Information and Technology or - - and Quality for hosting this conference. And the information from this webinar, including the slides and the audio, will be made available very soon on the OHIT website on the overall HRSA website. So thank you once again for your participation and have a great weekend.