

Diagnosis and Treatment Meeting
 July 28, 2009
 Arizona Department of Health Services
 150 N. 18th Avenue
 Conference Room 540A
 Call-In Number: 1-866-751-5726, then hit *1186832*

Attendees: Kathy Asprey, Sharon Jaycox, Sherryl Lewis, Marie Russell, Gena Zischke
 On the phone: Hannah Carlson, Bill McMullen

Agenda Items	Discussion	Follow-up Items
Review prior minutes	Previous minutes were reviewed by committee.	
Clinical Applications of Telemedicine – Dr. Maria Lopez	<p>Dr. Lopez went over her presentation on Clinical Applications of Telemedicine. Here is some talking points/overview below. Please see handout(s),</p> <p>How does a medical consultation become a telemedicine consultation?</p> <ul style="list-style-type: none"> ▪ When you think about telemedicine, what we're doing is removing from the interaction that we are all accustomed to the medical consultation interacting directly with the patient to a telemedicine consultation. <p>What are the goals for Teleconsultation? What are the most common goals?</p> <ul style="list-style-type: none"> ▪ To increase access to specialty care (i.e. it could be a patient in a remote community where there are no oncologists and the doctor has a question, like what lab test to order in order to confirm for lupus or rheumatoid arthritis). ▪ To confirm a diagnosis (to confirm means hiding the specialty care and with triage where the patient could be managed locally or needs to be transferred). <p>What would make up a good teleconsultation?</p> <ul style="list-style-type: none"> ▪ Having complete data. (When a teleconsultation is requested the local site coordinator reviews the information, the medical director at the remote site reviews the information, comes to 	

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	<p>our facility, our site coordinator reviews the information and then I review the information. All of that before we contact the specialist who would be doing the teleconsultation. In addition to having the complete data, if there are any images that are being transmitted, we really review all the documentations and images to make sure that the important information is available.</p>	
	<p>What sort of information is the Telemedicine providing? What are the ways that we can utilize the telecommunication technology to help us to care for the patient?</p> <ul style="list-style-type: none"> ▪ Looking at visual specialties (looking at range of motion, swelling, and skin changes or having the patient directly interact with you.) ▪ Technology is providing an image or a sound that is being interpreted (we're switching from a real time stethoscope to a store and forward stethoscope, where we are listening to recorded sounds of the stethoscope.) ▪ Video conferencing is being done and where is the "Talk is the treatment". (i.e. telepsychiatry, nutrition education and support services). <p>We have Visual specialties.</p> <ul style="list-style-type: none"> ▪ Rheumatology ▪ Orthopedics ▪ Dermatology ▪ Neurology <p>Illustration(s) from the power point:</p> <p>The Joint Exam: Everybody does a physical exam in a slightly different way. If a</p>	

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person normally examines a patient a certain way is patterned very similar to the way it would be done in person. The other way is to position the camera in the optimum way so that the exam is illustrated fast. The image on the left, the camera is off to the side, and you can see muscle tone much better; camera to the right side, the examiner is accessing for tendon insertion tenderness. The consultant needs to trust what the in-person examiner is doing. We set up a number of trainings where they can really work together.

In Teledermatology:

In looking at this gray image, the problem with this image is that you don't know where in the body you are. You don't know where this eruption begins or where it ends. Even if you are able to get a diagnosis based on this image, you are not able to get a sense on how severe this infection is. We request that any time photographs are being transmitted, that the photograph being viewed not just on the camera but on the computer screen before the patient leaves. That way you are able to know before the patient other the images are good quality or not.

Teleneurology:

We have a movement clinic, a headache clinic and done some work in stroke. We have the use of the camera so that you can illustrate the exam as easily as possible. A lot of training and standard operating procedures.

Technology is providing an image or sound. The following are primarily store forward cases:

- Cardiology
- Pulmonary
- Otorhinolaryngology
- Retinal screening

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	<ul style="list-style-type: none"> ▪ Colposcopy ▪ Radiology ▪ Pathology <p>There is a lot that can be done with store forward. There is a lot of potential for store forward telemedicine.</p> <p>We have an electronic stethoscope. We do sounds that are recorded. This has both pediatric and adult attachments. We use these both for cardiac and pulmonary patients.</p>	
	<p>Tele-echocardiography: We talked about the neonatal echo clinic. We do adult echo and stress echo. With the technology, the techs feel that they learn a lot because they have the opportunity to learn from the technician that is present when the physician is doing the interpretation. The way we have this set up is at the distance site, we have the patient fact but at the consultant site we have the physician or cardiologists who is reading the echo at the tech from our end. It really helps guide the person at the distance site to do a better study.</p> <p>Otorhinolaryngology: We have a couple of school based clinics where a lot of what we do is ENT. A lot of patients who come in, having colds and where images of the tympanic membrane are recorded. This is a great tool to do the interpretation and do the exam. It's good to have a record of what happened.</p> <p>Tele-ophthalmology: Tele-ophthalmology is a really important application in our region. Diabetic retinopathy is incredibly prevalent. To be able to do this without dilating the eye, it is very helpful. We have diabetic retinal clinics that we do through many sites.</p>	

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	<p>Telecolposcopy: This is where you take a photo of the cervix. These are women who have had abnormal pap smears. The photo is taken and then an interpretation is provided based on that photograph.</p> <p>Teleradiology: There is a standard of pixels that has to be used and the equipment that has to be used in order to have an accepted teleradiology consultation. We're one of the first sites to do teleradiology. This is an important application.</p>	
	<p>Fetal Ultrasound: The reason why ultra sounds are mostly done is because a lot of the interpretation is really done when you are right there with the patient. Fetal ultrasound are similar to the echoes are done with the interpreting doc present as well as the tech. These are level II and level III ultrasounds where you are looking at cardiac development and spinal development. We're looking to make sure the fetus is growing appropriately. With this intervention, the patients that have participated in this, they would travel four miles on wherever the site would be and do this In person, have them back in another four hours and then wait two to three weeks to know that everything is okay or not. With this intervention, the patient doesn't travel and the patient leaves with the diagnosis about whether everything is developing appropriately or not.</p> <p>Telepathology: We are one of the pioneers in this area. In pathology, what has really revolutionized this, when you think of telepathology, problems would be to have a glass slide, in the past it could be done to take a photograph of the field. It would be difficult for the consultant to feel comfortable making a diagnosis based on one field. You want to see the whole slide and set of slides. Robotic pathology was an option</p>	

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	<p>and that is when you have the pathologist at one site and then you have the robot controlling the slide at a distance site and the slides are reviewed. Working with folks in optical sciences, we were able to digitize an entire slide. In urgent medicine we are able to for the first time last year, if the students did not receive a set of slides as they normally do, they received access to digital images of the slides that they needed to learn. So a very different approach because digitize images are now possible.</p>	
	<p>“The talk is the treatment”: The primary application is psychiatry/psychology. Other options are:</p> <ul style="list-style-type: none"> ▪ Genetic counseling – we’re currently setting up a cancer genetics clinic ▪ Pain management – multidisciplinary ▪ Nutrition –video conferencing technology being used ▪ Support group – video conferencing technology being used ▪ Hospice care – video conferencing technology being used <p>Telepsychiatry: This is a very intimate exam. Will patients be comfortable in doing this on the computer? Actually, patients are very comfortable. What we hear from patients is that they feel more comfortable seeing their psychiatrist through the network and in person. They will make comments saying that the psychiatrist/psychologist pays more attention in this manner. When you look at this slide you see the psychiatrist and you see the patient in the monitor and then you see a box within a box, and there you see what the patient sees. My hypothesis is that the patient just sees a headshot of the psychiatrist and the patient really feels being paid attention to.</p>	

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	<p>Health Care System: Overall, most of our clinical site testing placed within hospitals. We have now moved forward to doing this in community health centers and some office practices and we are looking at setting up systems in the home. It is a great way of increasing access to care. What is the appropriate technology to use for the appropriate clinical needs? In some situations you need to be monitored and following patients at home.</p> <p>Home Health Care Applications: This home health unit has a stethoscope attachment, a camera, a stethoscope, and the patient can transmit the blood pressure. The system has the capacity for the patient to transmit glucose levels and the system has a glucometer attached.</p> <p>Cross Cultural Issues: When thinking about providing care, it is important to think about the diversity within the state of Arizona. There are potentially lots of cultural issues. Will patients be comfortable transmitting images of themselves and can be difficult in some populations. Because of the prevalence of television that patients are really comfortable. Some patients will conceptualize and say to their doc "I really need to see that doctor on television again".</p> <p>Limitations: What are the limitations? The main limitation is that we are not really able to palpate. You can do the entire exam but you can't really feel. There are ways to get around this. First, by focusing the camera in a certain direction. Telemedicine is a translational science.</p>	
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	<p>Virtual Reality Palpation: When there is a problem or question, we work with our engineers and we mention this to them and they come back with solutions. There is virtual reality palpation that is being developed and optimized. I would put my hands in the gloves, the doc in Phoenix could put their hands in the gloves, you could be with the patient, palpate the patient's abdomen and I could perceive what you are feeling. A lot of development, growth and possibility.</p>	
<p>Summary – Kathy Aspery</p>	<p>Dr. Lopez presented her telemedicine PowerPoint to the committee and fielded questions on telemedicine. She emphasized the importance to good assessment, determining the reason for the consult and thorough review of the past and present records.</p> <p>Special Interest in the area: Telepathology for earlier diagnosis. This does require special equipment to read and send images. To use the UA for your hub it cost \$20,000.00 for the digital equipment and a \$5000.00 membership fee. The most common to oncology is digital mammography. The virtual colonoscopy is designed as well for early diagnosis of colon CA.</p> <p>Currently for oncology there is very little use of telemedicine. Dr. Lopez sees the greatest use with tumor boards and pathology. Consult to Patient's surgeon for what is the next step. Possibly use with the initial Dx for clarification and determination of treatment for the primary Dr.</p> <p>Dr. Lopez suggested the use of a survey to see where the chemo certified nurses are in the remote areas and how they could be used to administer chemo closer to the patient's home. A second survey on Physicians willing to work as a hub. Dr. Lopez brought in the idea of using mid level providers in these areas. There is a survey used by the SPIN Grant and Marie Russell will check into being able to</p>	

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	<p>use the survey and look at results.</p> <p>The success of telemedicine was seen as needing to evolve a strong patient navigation and support structure. The consistency of one person to go to seems paramount in the success of diagnosis and treatment of cancer.</p> <p>Sharon brought up the need of committees collaborating to accomplish these goals.</p>	
Upcoming events	<p>On Friday, August 28, 2009, 2:00-3:00 p.m., Dr. Peter Lance is doing a presentation on Colorectal Cancer Screening Advances. The event will be held at the Mountain Park Health Center, Baseline Clinic, 635 E. Baseline Road, Phoenix, AZ 85042.</p> <p>Also, on Saturday, November 21, 2009, the Colon Cancer Alliance presents the Undy 5000. The event will be held in downtown Phoenix. For more information, go to: www.Undy5000.org.</p>	<p>Scan flyer announcement on Dr. Lance's presentation on Colorectal Cancer Screening Advances. Once scanned, it will be sent along with the minutes.</p>
Resource Directories	<p>Dr. Lopez is requesting copies of the Resource Directories.</p>	<p>Sharon or Kendra will send Dr. Lopez the Resource Directories on CD's.</p>
Next Meeting	<p>TBD</p>	