ANGELS Serves as Nationwide Telehealth Model

For a program that began only three years ago with two people, a tiny table and a single computer, ANGELS has truly come into its own. The amazing results of this unique telehealth program are being recognized not only within the boundaries of Arkansas, but by various medical entities nationwide.

In fact, ANGELS recently received the distinctive honor of being named by the Agency for Healthcare Research and Quality (AHRQ) as one of five Medicaid programs in the United States to serve as models of how to develop patient care and outreach programs. AHRQ, a part of the U.S. Department of Health and Human Services, sponsors and conducts research that provides evidence-based information on health care outcomes. With the information provided by AHRQ, patients, clinicians and health care leaders are better able to make informed decisions and improve the quality of their health care services.

Representatives from ANGELS and the four other programs will collaborate on a pilot study, funded by AHRQ, that will translate these programs into a workable model that other states may emulate. Although this pilot study has only just begun, people are already knocking on ANGELS’ door, asking for guidance on how to develop an effective telehealth program. After being approached by the Baton Rouge Women’s Hospital in Louisiana, ANGELS has entered into a contract with the hospital to help it develop a similar program. Through the contract, ANGELS staff will provide programming expertise, including assistance in establishing the necessary policies and procedures, as well as guidelines for staff training.

In addition, a team from the Aurora Women’s Pavilion in Aurora, Wis., recently visited the University of Arkansas for Medical Sciences and then invited Curtis Lowery, M.D., medical director of ANGELS, to the Women’s Pavilion in order to learn about the program. ANGELS remains in contact with the Women’s Pavilion as it works out the details of setting up its own variation of the program.

And the connections don’t end at the U.S. border – a Russian hospital may soon be the next link in the expanding ANGELS telemedicine network. Following negotiations with ANGELS and Lowery, Tandberg, a global visual communications firm, agreed to supply the Volzhsky Medical Center in Volgograd, Russia, with equipment necessary to establish communications, including video sessions, via the Internet with ANGELS. The Russian hospital and ANGELS have communicated for several years and will continue to work together to improve training in family planning and other components of reproductive health for health care providers in both university and clinical settings.

Clearly, ANGELS is at the forefront of significant and far-reaching changes in our national health care system, which have allowed medical specialists to more effectively connect with the patients who need them. At the core of this success is the awareness of how important it is to establish and maintain relationships … between patients and physicians, as well as among physicians in distant communities. Such networks can be self-perpetuating, as evidenced by the growing interest in ANGELS, and can only continue to improve people’s access to high-quality medical care.
Focus on ... Deanna Jackson-Moore

Management can be dry, dusty work. Or it can be creative, fun and inspiring. Just ask Deanna Jackson-Moore, L.M.S.W., the ANGELS telemedicine program manager.

As the telemedicine program manager, Jackson-Moore must be familiar with virtually every component of the ANGELS program and able to communicate with a wide variety of professionals, from call center nurses and staff to clinicians and research scientists, as well as leaders within the Department of Obstetrics and Gynecology.

“I make sure all of our projects are focused and that they are a good fit for the community, as well as the ANGELS program,” she explained. “Dr. Curtis Lowery has a vision for this program, and what I try to do is create a strategy that fits his vision. If something does not fit with the ANGELS mission, we don’t do it.”

To keep the ANGELS program on track, Jackson-Moore handles contract and billing issues and makes sure all existing programs are running as expected. She also works with other ANGELS staff to conduct frequent needs assessments and studies within various Arkansas communities, and she keeps up to date on internal projects, such as research grants. Once she analyzes these various sources of information, she can help to determine where the greatest need for ANGELS programs lie and how to maximize ANGELS’ interface with communities throughout the state.

“As an example, we may be trying to plan some new community programs in Fort Smith,” Jackson-Moore said. “A research pilot that just began may tie in with these programs and may later receive grant funding. The funded research may then be published in a scientific journal, giving our Fort Smith program national coverage. I try to keep all these pieces coordinated so that ANGELS can be as efficient and effective as possible.”

But, she readily admits that she could never accomplish all this alone. “The people here are just amazing,” she said. “When we begin to discuss a new project, there’s not one person on the team who won’t volunteer to help, whether it’s to write proposals, research information or do whatever else is needed.”

Jackson-Moore said she loves the dynamic atmosphere she has found in the ANGELS program. “Our program is ahead of the curve, so we can create as we go,” she said. “My favorite thing about this job is when we meet and have brainstorming sessions. I have two children and was working from home. I always said it would take something truly worthwhile, something that really makes a difference, to convince me to work out of the home. This is it.”

Telemedicine Clinic Opens in Batesville

The ANGELS telemedicine network has expanded its outreach into Batesville, Ark., about an hour and a half drive northeast of Little Rock. This newest telemedicine clinic, which opened in early October, is located at the White River Medical Center, in the Josephine Ray Rogers Imaging Center.

The clinic is already thriving, and the response from both physicians and patients has been overwhelmingly positive.

“We've been trying to establish this for a long time,” said E.J. Jones, M.D., a private-practice obstetrician in Batesville. “Once the clinic opened, we almost immediately used up the teleconference time allotted to us, but ANGELS quickly opened up more. This clinic has allowed obstetricians in Batesville, which is a fairly rural community, to provide our patients with the top-level care they would ordinarily have to travel to Little Rock to receive. The patients love it, and we continue to receive uniformly good reports from them.”

Mandi Dixon, R.D.M.S., an ANGELS ultrasonographer, agreed. “They like not traveling to Little Rock and have been very pleased at how well they can see the live ultrasound,” she said.

The Batesville clinic, like other ANGELS telemedicine clinics throughout the state, was put in place specifically to facilitate the care of high-risk pregnancies in rural regions of Arkansas. Local obstetricians may refer a patient to the ANGELS program whenever they determine that the patient or her fetus has increased health risks. For example, a screening may indicate that the fetus has a higher risk for Down syndrome or spina bifida. Referrals may also be made when the mother or father of the baby has a family history of an abnormality, such as a congenital heart defect or cleft lip and palate. Another common reason for referral is advanced maternal age.

It can be quite difficult for these women to travel the long distance to Little Rock for the specialized medical consultation and care they may need. The Batesville clinic allows the maternal-fetal medicine (MFM) specialists at the University of Arkansas for Medical Sciences (UAMS) to consult with these women and their obstetricians in real time, via a satellite uplink at the White River Medical Center, saving the women from a time-consuming and possibly strenuous trip.

“This clinic has allowed obstetricians in Batesville ... to provide our patients with the top-level care they would ordinarily have to travel to Little Rock to receive.”

Patients are seen at the Batesville clinic every second and fourth Monday of the month. Once a patient is referred to the ANGELS program, she undergoes a live ultrasound viewed by an MFM specialist at UAMS and sometimes the referring physician. During the teleconference, the patient will talk with a genetics counselor from Fayetteville via satellite, who
will explain the risks specific to her pregnancy, the reason for her referral and the targeted anatomy viewed with the ultrasound. Following the ultrasound, the MFM specialist will talk to the patient about the results of the ultrasound and answer any questions the patient may have. From there, the doctors in Little Rock and Batesville decide whether any follow-up, such as a second ultrasound, is necessary. Occasionally, a visit to UAMS is recommended, but most follow-up procedures are handled locally, allowing the mother to remain at home during her pregnancy.

In addition to these patient/physician conferences, the clinic's telemedicine facilities are used by medical professionals, including nurses and sonographers, to attend distance education programs and by physicians who wish to participate in the ANGELS guideline review, held each Thursday morning. Future plans are to extend the telemedicine program into other disciplines, such as oncology and cardiology.

The 22nd Annual UAMS Conference on Perinatal Care will be held April 13-14, 2006, at the Peabody Hotel in Little Rock, Ark. The theme of this year's conference is “Connections: The Key to Quality Care.” Conference topics and speakers are listed below. For more information about the conference, please contact Brenda Campbell at (501) 686-5847.

### Thursday, April 13

**General Session**

(7:30 a.m.-1:30 p.m.)

1. The State of Health Care in Arkansas and the Nation (Political Panel)
   **Curtis Lowery, M.D., moderator**

2. Keynote Address: Connecting to Promote Continuous Quality Improvement in Health Systems
   TBA

3. A Model of Connections: The ANGELS Program (with demonstration)
   **Curtis Lowery, M.D.**

4. ANGELS Neonatal Outcome Data
   **R. Whit Hall, M.D.**

### Obstetrics Track

1. Middle Cerebral Artery Doppler Studies
   **Nafisa Dajani, M.D.**

2. Helping Patients Cope With Perinatal and Neonatal Loss
   **Joseph Banken, Ph.D.**

3. 17 Alpha-hydroxyprogesterone Caproate
   **Helen Kay, M.D.**

4. Abnormal Pap Smear in Pregnancy
   **A. Sandy Burnett, M.D.**

5. Dispelling Common Myths in Obstetrics
   **Paul Wendel, M.D.**

6. Who Should Bank Their Baby's Cord Blood?
   **Shannon Barringer, M.S.**

7. Who Needs a Fetal Echo?
   **Renee Bornemeier, M.D.**

8. 3-D Ultrasound in Obstetrics
   **Curtis Lowery, M.D., and Mandi Dixon, R.D.M.S.**

### Neonatal Track

1. Oxygenation in the Neonate
   **Luanna McAdams-Bailey, A.P.N.**

2. Developmental Care: Newborn Positioning
   **Luann Jones, A.P.N.**

3. Thermoregulation in the Neonate
   **Audra Prince, M.D.**

4. High-risk Newborn Follow-up
   **Robert Lyle, M.D.**

5. Things We Think We Know But Don’t in Newborn Care: Myth Versus Fact
   **Bryan Burke, M.D.**

6. Congenital Herpes Simplex Virus
   **Ashley Ross, M.D.**

7. Attentional Disorders in the Ex-preterm Neonate
   **R. Whit Hall, M.D.**

8. Parental Rights and Wishes Versus Baby's Unspoken Ones
   **Bonnie Taylor, M.D.**

### Friday, April 14

(7:30 a.m.-3:15 p.m.)

1. Exercise in Pregnancy
   **E. Albert Reece, M.D., Ph.D., M.B.A.**

2. Anatomic Contraindications to Circumcision
   **John Redman, M.D.**

3. Connecting to the Legal System: Interpretation and Practical Use of Garrett's Law
   **Karen Farst, M.D.**

4. What are the Connections Between Mother and Fetus in Maternal Thyroid Disease?
   **Helen Kay, M.D., and Billy Thomas, M.D.**

5. The Critical OB Patient: The Key is a Connected Team
   **Paul Wendel, M.D.**

6. Fetal and Newborn Metabolic Screening
   **Stephen Kahler, M.D.**

7. Neural Tube Defect: A Lifetime of Implications
   **Becky Bregy, R.N.**

8. Making the Connection: Neurological Disease in the Fetus and Newborn
   **Curtis Lowery, M.D., and Lina Chalak, M.D.**
Expansion of Distance Health Services Discussed at ANGELS Retreat

During an October retreat held in Hot Springs, Ark., the ANGELS staff learned of a sweeping new initiative that is geared to expand the ANGELS distance health services across several other medical disciplines at the University of Arkansas for Medical Sciences (UAMS).

This proposed expansion will promote telehealth services for the entire UAMS College of Medicine. Still in its initial planning stages, it hopes to combine the expertise and leadership of two successful programs at UAMS: ANGELS and the UAMS Rural Hospital Program. Its goals are to facilitate coordinated, successful implementation of clinical and education telemedicine and outreach services for the many specialties and disciplines at UAMS. Physicians in all disciplines will be able to consult with patients throughout the state, including rural and underserved areas. It will also serve as an organized research and outreach network and provide a unified legislative and funding effort.

Specialties at UAMS that have expressed interest in the program include anesthesiology, cardiology, oncology, pulmonary and critical care medicine, reproductive endocrinology, general surgery and transplant surgery, as well as the UAMS College of Pharmacy and the Department of Surgery at the John L. McClellan Memorial Veterans Hospital.

Also discussed at the retreat were plans to develop educational programs for providers and/or patients that can be presented via interactive video, and research models to determine the efficacy of patient/physician relationships via telemedicine compared to the traditional clinic setting.

Spring Guidelines Scheduled

In collaboration with volunteer family practitioners, obstetricians, neonatologists and pediatricians in Arkansas, ANGELS is developing guidelines for best practices in maternal-fetal medicine and neonatology. The following guidelines are scheduled for review via teleconference:

**March 2**
Obstetrical Guideline: Management of Ectopic Pregnancy

**March 16**
Neonatal Guideline: Apnea of Prematurity

**April 6**
Obstetrical Guideline: Post-Term Pregnancy

**April 20**
Neonatal Guideline: Gastroesophageal Reflux

**April 27**
Anxiety Disorders in Pregnancy

**May 4**
Obstetrical Guideline: Chronic Pain in Pregnancy

May 18
Neonatal Guideline: Breastfeeding Management

June 15
Neonatal Guideline: Trisomy 21 and Other Trisomies

Physicians do not need to attend the scheduled teleconferences in order to participate in guideline development. All ANGELS guidelines and their most current updates may be accessed on the ANGELS Web site at http://www.uams.edu/angels/guidelines.asp. An online provider feedback form is also available for those who wish to participate in the review process.