



ANGELS



2014
ANNUAL
REPORT

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Leadership



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Administrator*

The ANGELS mission is to ensure that every woman in Arkansas at risk of having a complicated pregnancy receives the best possible perinatal care.

This annual report was produced by Creative Services and the Office of Communications & Marketing,
University of Arkansas for Medical Sciences

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Leadership

Every passing year with ANGELS amazes me. I reflect on our meager beginnings, with just a small group of dreamers, and even I couldn't have imagined where those dreams have taken us over the last 11 years. I can walk through our offices and see new faces full of spirit and hope for change, and I can see familiar faces with the exact same spirit and hope. I consider myself a very lucky man to have seen such a far-reaching and tremendous concept unfold and grow before my eyes. It is our people that make this metamorphosis complete.

In 2014, we have secured funding to translate the ANGELS model to mobile health technology, with the emergence of a postpartum home monitoring system for preeclamptic pregnancies, aimed at diminishing inpatient costs for postpartum management of this population, while also giving these women an at-home recuperation following difficult deliveries. Moreover, with over 30% of our website users accessing ANGELS' evidence-based guidelines through mobile devices, we recognized the need to make our guidelines easier to view and access on-the-go. In a massive group effort, we transitioned all of our evidence-based guidelines to a new website that is mobile-device-friendly, as well as easier to view and search with all devices.

Additionally, our online education portal, Learn on Demand, officially launched in 2014, with 114 ANGELS educational modules launched in its premiere year. With over 6,500 participants from 32 states accessing live presentations and/or enduring materials through Learn on Demand, we can safely say that ANGELS education is in demand.

This year, we also suffered the loss of our friend and colleague, Adam Rule. Adam's dedication to ANGELS and the spirit of learning never waned. He became part of our ANGELS family, which makes the loss all the tougher for all of us. It is to Adam I wish to dedicate this 2014 Annual Report. He made so many of the achievements listed in these pages possible. Your ANGELS family will always remember you, Adam.

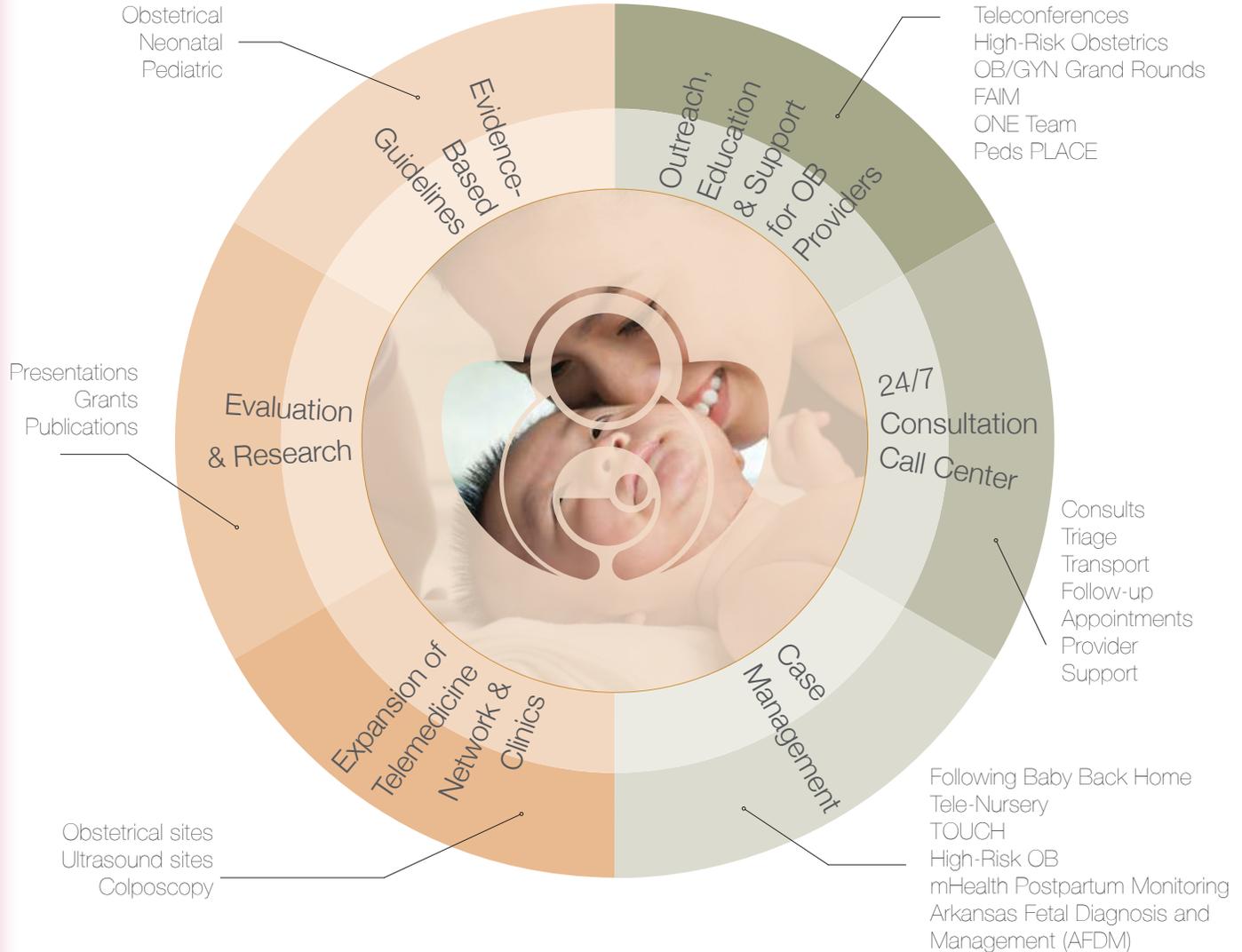
Every new year is a new challenge, but with the support of our unmatched team of ANGELS staff and rural partners, we can navigate any obstacle. I am honored to work alongside such a dedicated team year after year.

Best regards,



Curtis L. Lowery, M.D.
Director, ANGELS





Education & Support

Variety is the spice of life. ANGELS' education team provides variety for health care professionals in Arkansas related to education. We provide multiple ways to attend educational events as well as multiple educational methods, such as on-site rural education, simulation drills, teleconferenced education and on-line education. By giving this variety, health care providers can choose what works best for them.

3,456 live participants plus participants
completing enduring materials from LOD **1,807**
for a **Total** education participants of **5,263**

Additional LOD Information

114 ANGELS
Educational Modules live on
LearnonDemand.org

Education Team



Education & Support

Top 5 accessed ANGELS's educational modules in 2014

1. Postpartum Hemorrhage
2. Obesity Complicating Pregnancy
3. Obesity Complicating Pregnancy: The Dietitian's Perspective
4. Facilitating Bonding After Birth
5. End-of-Life Issues and Pregnancy

100 CE hours
were awarded for ANGELS'
modules in 2014

1,807 health care providers accessed
ANGELS' modules in 214



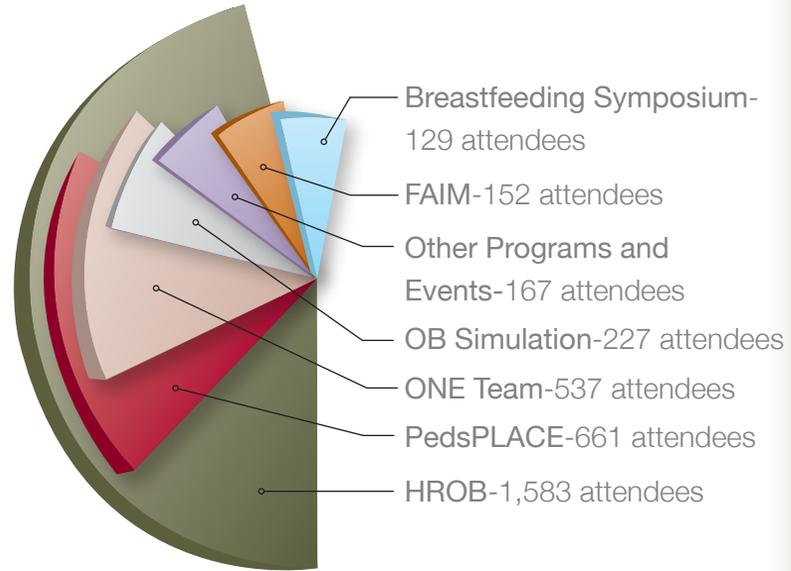
*Education
Team*

2014

Teleconferences Stats

Special Event Topics

- ≡ Basic fetal heart monitoring
- ≡ AWHONN Intermediate Fetal Heart Monitoring
- ≡ AWHONN Advanced Fetal Heart Monitoring
- ≡ AWHONN Fetal Heart Monitoring Instructor Course
- ≡ STABLE
- ≡ STABLE Instructor Course
- ≡ APRN Statewide Teleconference
- ≡ OB Simulation Drills
- ≡ Breastfeeding Symposium
- ≡ RNC Certification Review Course – Inpatient Obstetrics and Neonatal Intensive Care



Teleconferences Offered Each Month

Teleconference	Dial-In Number	Date	Time
ONE Team Nursing Teleconference	068773	1st-4th Friday	Noon - 1:00 p.m.
PedsPLACE	070231	Thursday Weekly	12:10 - 1:10 p.m.
OB/GYN Grand Rounds	060130	Wednesday Weekly	8 - 9:00 a.m.
HROB Teleconference	Call 501-686-8666 to register	Thursday Weekly	7 - 8:00 a.m.
FAIM	030230	4th Friday	7:30 - 8:30 a.m.

Visit LearnOnDemand.org for topic listing and a detailed calendar. Click the education events tab at the top of the page and the calendar will display below.

Although the education team attempts to have complete attendance numbers each month, the nature of our state-wide educational efforts provide a challenge to get 100% of these numbers in a month's time frame. At the end of each year, we get a summary from Arkansas Children's Hospital and from the Office of CME of health care providers attending our events. Our year-end totals are larger and depict the accurate numbers. The monthly numbers give an in-room snapshot of attendees and not state-wide attendance.

Total
3,456 Education attendees
in 2014

Evidence-Based Guidelines



Utilizing a growing telehealth network, ANGELS extends the expertise of Arkansas' urban specialists into the hands of community providers and patients. Education is a key component to the ANGELS mission through interactive video teleconferences and the collaborative development of evidence-based obstetrical, neonatal and pediatric guidelines that focus on Arkansas' rural providers.

More than 200 expert authors, reviewers and out of state physician peer reviewers developed the current guidelines over a ten-year period of growth. Each guideline is reviewed annually to ensure the most up-to-date information and recommendations.



Although our mission focuses on Arkansas' rural providers, our borders expanded with registered users representing 35 countries and almost every state in the Union.

What we learned: Health care providers wanted unfettered access wherever their duties took them. Last year, over 30% of guideline users accessed our website built for desktop use from mobile devices.

Guideline access beyond the traditional desktop was a must. That challenge led ANGELS to transform our website into a new, modern web application that was mobile friendly for devices such as smart phones and tablets.



The new website is:

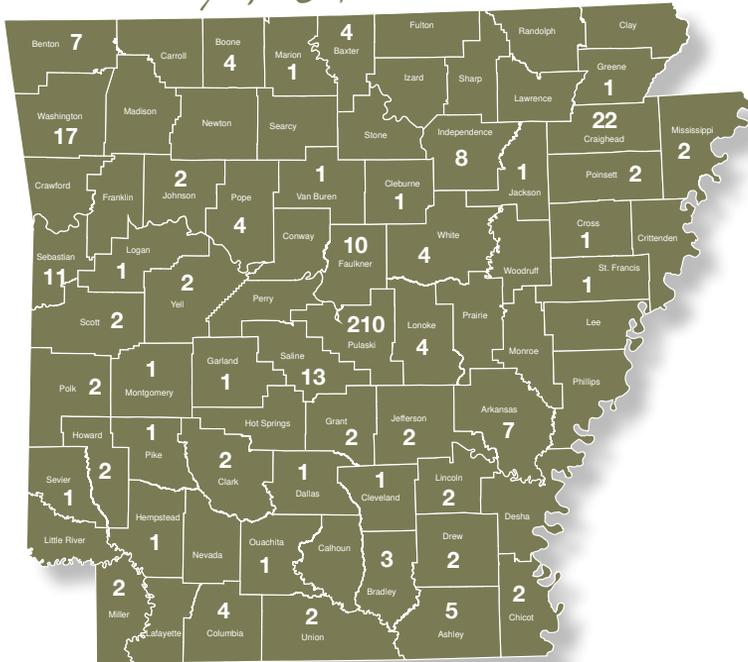
- ≡ Easier to use
- ≡ Users may remain logged-in for up to two weeks
- ≡ An icon has been created for desktop and mobile devices
- ≡ It is mobile friendly
- ≡ Users may bookmark specific guidelines
- ≡ There is an easy keyword search feature

Launched July 1, 2014, 487 health care providers have already participated.

We invite you to join this exciting network by visiting us!

<http://angelsguidelines.com>

ANGELS Guidelines Users in Arkansas Since July 1, 2014



OB Simulation



ANGELS' education team partnered with the UAMS Centers for Simulation Education to travel to rural hospitals in 2014 to facilitate interprofessional OB simulation drills. The high fidelity manikin, Noelle, which can simulate birth was used for the drills. The four events were located at Ashley County Medical Center, Bradley County Medical Center, Drew Memorial Hospital and White River Medical Center. Surrounding hospitals, including Chicot Memorial Medical Center and Delta Memorial Hospital, sent staff to these host sites to participate in the drills. Attendees completed a pre/post test, participated in the drill and then completed an evaluation. Continuing medical education and continuing nursing education were provided. In 2015, we will also provide respiratory therapy continuing education. The drills included shoulder dystocia, eclamptic seizure, postpartum hemorrhage and breech delivery.

Kudos to hospitals that participated in 2014

- ≡ Ashley County Medical Center
- ≡ Bradley County Medical Center
- ≡ Chicot Memorial Medical Center
- ≡ Delta Memorial Hospital
- ≡ Drew Memorial Hospital
- ≡ White River Medical Center

If you would like an OB simulation drill at your facility, please contact cdheducation@uams.edu or call 1-866-273-3835.

179 healthcare professionals attended and evaluated the simulations

- MDs (OB-Gyn, Family Practice, Emergency Medicine) **11**
- Nurses (RNs and LPNs) **140**
- Other Medical Professionals (Respiratory Therapists, Scrub Techs) **28**

Guides

Sometimes a quick reference guide can help labor and delivery and neonatal providers receive immediate assistance. Our nurse educators, Margaret Glasgow and Tesa Ivey created these quick reference guides. There are four reference cards available – Shoulder Dystocia, Postpartum Hemorrhage, Fetal Heart Monitoring and HIV L&D care.

Quick

If you would like a laminated copy for your facility, please contact cdheducation@uams.edu or call 1-866-273-3835.

Quick Reference Guide
Post-Partum Hemorrhage

WHO IS AT RISK?
 Protracted Labor Fetal Macrosomia Multiple Gestation Grand Multips
 Prolonged 2nd & 3rd Stage Induction Cervical or Extensive Lacerations

Source: Uterus, Cervical/Vaginal Laceration
Therapies: 2nd I.V. Access, Fluid Bolus, Frequent VS, Foley, Blood?
Uterus: Consistency and Position
Medications, Mend, Massage Uterus
Plan Post-Partum Care, Serial Labs, Pad Counts, I&O

DOCUMENTATION

History: Brief Clinical History: Describe the Episode Completely
Assessment: VS, Output, LOC, Lab Results
Loss: Quantify Blood Loss (Weigh Blood-Soaked Materials & Clots. Subtract Dry Weight *1gm, 1ml)
Therapies: What did you give/do?

Quick Reference Guide
Shoulder Dystocia - Maternal

WHO IS AT RISK? EVERYONE
 Maternal Obesity Previous Shoulder Dystocia LGA Baby
 Excessive Weight Gain DM: Pre-Gestational/Uncontrolled & Gestational

Invoke Team Members to Deliver
McRobert's: Lower HOB, Knees to Ears
Supra-Pubic Pressure: Anterior Shoulder-Depressed, Rotated, or Both
Turn Baby: Woods Maneuver, Rubin Maneuvers
Under: Delivery of Posterior Arm
Cut Episiotomy-Be Generous
Knee-Chest: Maternal Position Change-Gaskin Maneuver

DOCUMENTATION
 Must have consistent time entries for all team members
 Should have summary containing:
 Time Recognized All Maneuvers (Even Unsuccessful) All Staff Present
 Time Head Delivered Time Body Delivered

Quick Reference Guide
Shoulder Dystocia - Newborn

Expect to Resuscitate: PEDS in Attendance
X-Ray if Injury is Suspected
Palsy: Dependent on Where Injury is Located (C5-TD)
 Emotional Support, Information and Updates to Parents
Clavicle: Local Tenderness or Crepitus
Tone: Flaccid Arm, Hand, or Both

Quick Reference Guide
Newborn At Risk for Hypovolemia

If Known Maternal Potential for Hemorrhage:
 3 P's: Pallor, Weak Pulses, Poor Response
 Abnormal Placental Implantation
 Other Maternal Conditions such as Rh Isoimmunization
 TTTS

Follow NRP ©/STABLE © Guidelines for Resuscitation

Supplement O₂
 Volume Replace

Teaching the Teachers

ANGELS, STABLE Trained Nursing Instructors

S ugar/safe care
T emperature
A irway
B lood pressure
L ab
E motional Support

Through ANGELS, the STABLE instructional program for nurses working in neonatal critical care expanded this fall to nurses throughout Arkansas. This program uses evidence-based practice to stabilize the newborn infant in distress, thereby reducing

mortality and morbidity of infants born in any given hospital in AR.

Ginny Smith, R.N., director for nursing for the Women's Health Service Line at UAMS, said the benefit to UAMS is having other hospitals use STABLE is the establishment of continuity of care for those infants, many of whom are transferred to a higher level of care.

"It's learning to go through the next steps after resuscitation in a methodical way,"

The new instructors meet strict qualification standards, and must agree to teach at least two STABLE courses over two calendar years. This ensures at least 30 hospitals will receive a STABLE certification course between 2015 and 2017.



60 RNs, LPNs and EMTs trained and certified in STABLE principles. From Russellville, Bentonville, Benton, Crossett, Monticello, Dumas and Batesville.

15 newly certified STABLE instructors

Call Center Focus

The ANGELS Call Center (ACC) is continuing to improve internal efforts. There were three areas of focus in 2014.

- ≡ One such effort is our second-level triage. For second-level triage, if the algorithmic protocols say to send the patient to the Emergency Department (ED) or Labor and Delivery (L&D), the Call Center nurse immediately brings in an APN or physician to review the patient's symptoms and history to ensure an ED or L&D visit is appropriate. This effort decreases unnecessary ED and L&D visits and provides the patient with the most appropriate care.
- ≡ "We are streamlining services we have always had in the call center, focusing on getting those patients served and the providers into the loop of the treatment management plan," said Tammy Bowen, R.N., ACC nurse project manager. We have embedded a nurse in our Call Center to specifically address this need. "That way the providers know what to do with that patient when they go back to that community."
- ≡ In 2014, ACC nurses were a key part of the mHealth Postpartum Home Monitoring project, which is assessing the safety of the early discharge of patients with preeclampsia after delivery. Each shift, a nurse is assigned to monitor the incoming data from the patients, looking for any abnormal findings or alerts. When an alert is triggered by an abnormally high blood pressure (or other reading) the nurse calls the patient for triage, evaluating



her blood pressure and associated symptoms. Care advice is given that may range from rest and reevaluating blood pressure, calling the physician for a medication change, or possibly to come into the Emergency Department for evaluation. The goal is to safely evaluate the patient's condition from a distance and allow her to remain at home.

Call Center 2014 DATA

Month, 2014	Total # Urgent Care Visits w/ Telephone Triage	Total # Non-Urgent Care w/ Telephone Triage	Total # Urgent Care Visits AVOIDED w/ Telephone Triage
January	377	867	132
February	318	862	108
March	335	876	122
April	355	933	141
May	325	949	119
June	307	863	124
July	302	868	137
August	348	960	168
September	410	757	201
October	401	921	130
November	376	682	59
December	398	871	126
2014 Totals	4,252	10,409	1,567

in 2014, there was a total of

17,829
calls for the ANGELS Call Center

which include **611** OB transport requests, **551** OB transport arrivals, **439** OB consults and **16,228** nurse triage calls

in 2014, there was a total of

31,312 calls for the appointment center and

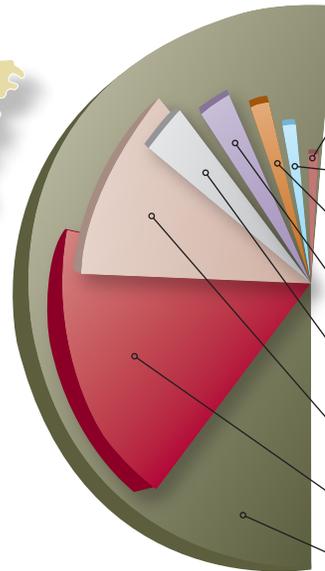
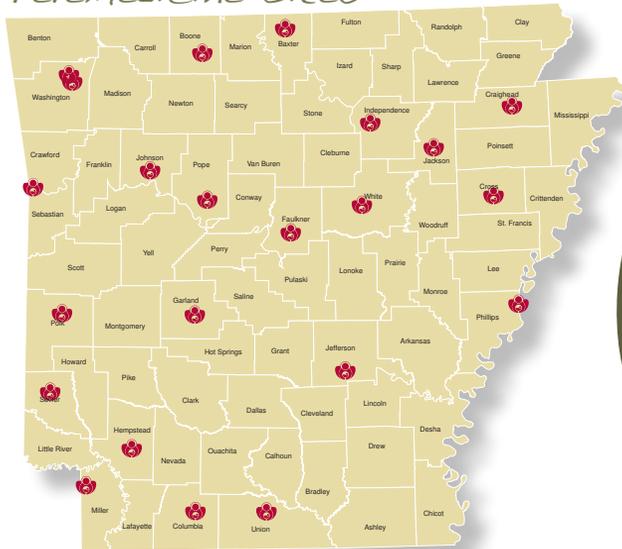
200 Arkansas Department of Health calls

Telemedicine Network & Clinics

In 2014 **3,465**

telemedicine visits

Telemedicine Sites



- Infectious Disease (Jan-Jun 2014)-29 visits
- Fetal Non Stress Test-62 visits
- OB Psychiatry-95 visits
- Fetal Echocardiography-131 visits
- HROB-276 visits
- Other-465 visits
- Colposcopy-632 visits
- OB Ultrasounds-1,775 visits

Telemedicine Team



Rosalyn Perkins, M.N.Sc., A.P.N.



Mandi Dixon, R.D.M.S.



Margaret Glasgow, B.S.N.,
R.N.C.-O.B., C.S.M.



Lori Heil, R.D.M.S.



Stacey Johnson, A.P.N.



Jeni Warrior, A.P.N.

Telemedicine Network & Clinics



632 colposcopy
exams

identified **107**

women with high-grade
lesions requiring treatment

and **4**
diagnosed with cancer

2 new sites for 2014,
El Dorado and Magnolia

Colposcopy APN Team



Becca Austin, A.P.N.



Tesa Ivey, A.P.N.



Delia James, A.P.N.



Gordon Low, A.P.N.

Telemedicine in the Nursery

Telenursery

The Telenursery program is in its sixth year of providing three-times-a-week virtual rounds to nursery sites statewide. These rounds include neonatology and subspecialty consultations, coordination of transports and back transports, follow up, collaboration and education.

Whit Hall, M.D., Professor of Neonatology in the UAMS College of Medicine, leads these virtual rounds to 26 nurseries statewide. Consultations have been done through telemedicine this year not only by the Department of Neonatology, but also others including Genetics, Urology and Dermatology.

Mother-Baby Connections

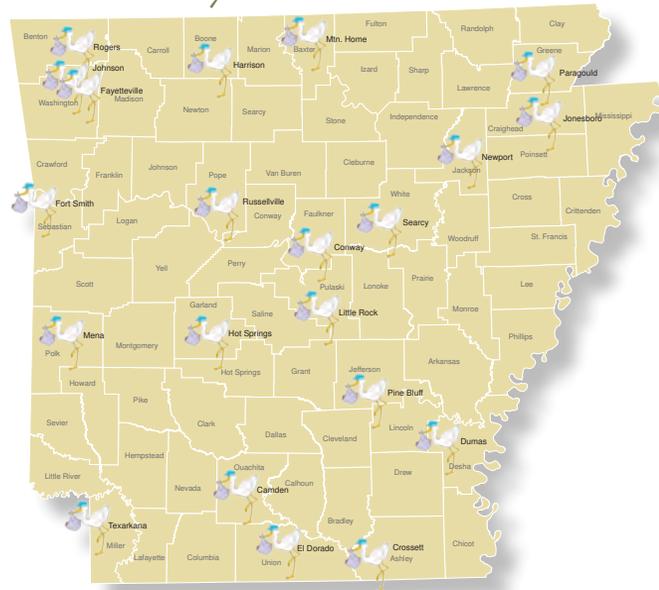
A major benefit of having telemedicine units in nurseries is the ability to connect postpartum mothers with their babies who were transferred to Arkansas Children's Hospital (ACH). When the mother delivers a baby that needs to be transferred to ACH for treatment, the mother typically remains hospitalized for 24 hours or more at UAMS or her distant hospital. But thanks to the Telenursery technology, she can still connect to her baby and see and speak directly to the nurses and physicians providing care.

146 Telenursery virtual rounds in 2014

12 consults 26 Back transports from UAMS/ACH to referring hospital and

40 Mom/Baby connections

Telenursery Sites



Technology

mHealth Postpartum Monitoring



ANGELS started monitoring women participating in a mHealth Postpartum Monitoring study who during pregnancy were diagnosed as having pre-eclampsia, a condition of extreme hypertension. “Our goal is to see if earlier discharge for women with pre-eclampsia can be safe for them with careful home monitoring,” said Donna Richardson, R.N., a nurse project manager in the UAMS Center for Distance Health.

Project development included researching available technology and selecting products that would meet the desired project goals and also be cost effective. Five sets of mHealth equipment were purchased and included Bluetooth enabled devices that took health readings on blood pressure, oxygen saturation and weight. Protocols were developed and ANGELS call center nurses were trained in usage of the mHealth equipment, procedures for enrolling participants, and the protocols for monitoring incoming patient data.

Using the mHealth devices they take home, the women enrolled in the program collect data regarding their health status. Through a wireless connection, the data goes to the ANGELS Call Center, where it is monitored by triage nurses. If the readings exceed certain parameters, an alert is set off and a nurse calls to evaluate her health and give advice that may range from rest to going to an Emergency Department for evaluation. Ten women completed the monitoring period, which lasted two weeks.

ANGELS Gives Mom Reassuring Care

Pregnant with her first child, Kylie Clark had special reason to celebrate on Christmas 2013. Little did she know, her biggest surprise would come the following day.

“I found out I was having twins on Dec. 26,” Clark said. After her initial ultrasounds didn’t show a membrane separating the babies, her OB/GYN, Laura Collins, M.D., of HerHealth at Washington Regional Medical Center in Fayetteville, determined the babies to be rare monoamniotic-monochorionic (mono-mono) twins. Accounting for only about 1 percent of twin pregnancies, mono-mono twins share the same amniotic sac and placenta, putting them at risk for complications.

Collins recommended Clark, who lives in Fayetteville, see a maternal-fetal medicine specialist at UAMS, and after some research she chose Paul Wendel, M.D. “Dr. Wendel and Dr. Collins worked closely throughout my pregnancy,” Clark said.

Thanks to the ANGELS telemedicine program, Clark stayed at home for her prenatal care, with occasional trips to Wendel’s Little Rock office. She received ultrasounds in Fayetteville while Wendel and



other health care providers consulted via live video from UAMS.

“It gave me a sense of security to know I had two doctors looking after me,” Clark said.

When Clark developed preeclampsia and began having contractions at 30 weeks, she was transported by ambulance to UAMS where she delivered two girls by cesarean section June 1.

After 55 days in the UAMS Neonatal Intensive Care Unit, the twins were released to go home. “My experience with UAMS was amazing. Having the benefit of a high-risk doctor and still being able to stay at home for my pregnancy was so reassuring,” she said.

Women's Mental Health



Zachary N. Stowe, M.D.

ANGELS and its call center played a central role in 2014 as a point referral for the Women's Mental Health Program (WMHP), and in the expansion of services provided for women with opiate exposure in pregnancy.

Pregnant women with a history of opiate exposure represent a complex clinical challenge, often requiring a special approach to pain management through delivery and close observation of the baby following delivery. Neonatal Abstinence Syndrome (NAS) is a common problem for babies exposed to opiates in pregnancy that may require extended hospitalization for neonatal withdrawal symptoms. Clinical research studies in opiate dependent pregnant women, such as the Maternal Opioid Treatment Human Experimental Research (MOTHER) study, have demonstrated improved outcomes for the mother and her baby when buprenorphine is used and when other mental health needs, such as depression, are addressed.

Zachary N. Stowe, M.D. and Shona Ray-Griffith, M.D., at the UAMS Women's Mental Health Program

oversee a new program for opiate-dependency during pregnancy as part of the Perinatal Opiate Project. The WMHP is partnering with colleagues in obstetrics, anesthesia, and neonatology to improve outcomes for these women. Expectant mothers requiring pain medication, or those misusing/abusing opiates and similar drugs receive a comprehensive evaluation and individual treatment plan. These treatment plans can include a risk/benefit analysis reviewing all treatment options, medication management, group and individual therapy, plan management plans for delivery, and in some cases hospitalization for opiate detoxification.

The primary goals of WMHP/Perinatal Opiate Project is to develop evidence-based guidelines to improve the care of these women, reduce obstetrical complications, and reduce neonatal distress. As part of these goals, the faculty are conducting several clinical studies to better characterize the impact of maternal stress, fetal activity, course of pain in pregnancy, maternal and neonatal metabolism of opiates, and impact on maternal/infant interactions. Participation in these studies is voluntary and does not influence treatment planning.

The Women's Mental Health Program continues to be the academic center of excellence for the treatment of neuropsychiatric illnesses during pregnancy and the postpartum period. A woman or her obstetrician calls the ANGELS Call Center and then are referred to the WMPH providers.

Sonographers Provide Valuable Service Across Arkansas

One of most highly anticipated moments for an expectant mom is the sight of her unborn baby on an ultrasound screen. But, for women experiencing a high-risk pregnancy, this moment can turn from excitement, to stress, to even fear.

To ease the burden of travel on expectant mothers and ensure more healthy deliveries, the ANGELS program at UAMS has established a network of highly trained sonographers across the state to provide ultrasounds for women close to home.

“As members of the ANGELS team, our sonographers provide a high level of expertise that helps put women at ease,” said Mandi Dixon, a registered diagnostic medical sonographer who supervises the sonographers at 23 ANGELS sites throughout Arkansas.

When an OB patient is referred to ANGELS/UAMS, clinical findings warrant two pathways. The first is to direct the patient to UAMS initially, and then follow up with visits via telemedicine from an ANGELS site near their home. The second pathway, again based on clinical findings, allows for the patient to be seen at the ANGELS site near their home without traveling to Little Rock. “The comfort of staying in a familiar environment is one of the most



important services we offer our patients,” said Dixon. During this visit, a UAMS doctor of maternal-fetal medicine, a genetics counselor and an advanced practice nurse view the procedure via video in real time.

When the ultrasound is complete, the team can discuss its findings and options for future treatment with the patient by video. If necessary, they also can work with the primary obstetrics provider and patient to have her care co-managed or transferred to UAMS, and to arrange for delivery at either a local hospital or UAMS.

“As members of the ANGELS team, our sonographers provide a high level of expertise that helps put women at ease.”

Nutrition Education for Diabetes in Pregnancy

With an epidemic of obesity in Arkansas and the nation, there is a growing number of patients with diabetes in pregnancy, thus an increased need for maternity nutrition education.

The ANGELS program offers a comprehensive approach to patient nutrition education, either in person or via telemedicine, for expectant mothers diagnosed with diabetes, including type 1, type 2 or gestational. Often patients with type 2 may not even be aware of their condition prior to pregnancy.

The program begins by obtaining a patient's nutritional history to get an idea of what they've eaten in the past day. It continues with individualized meal planning, with cultural preferences taken into consideration, and easy-to-understand literature with, for example, illustrated explanations of what a proper serving of carbohydrates looks like.

Dieticians continue to work with patients throughout their pregnancy, consulting on a weekly or biweekly basis to keep blood glucose levels under control. Services are offered by telemedicine throughout the state, and while usually patients are seen as outpatients, the most serious cases can be admitted for inpatient treatment.

In 2014, an online education program called WIN (Web-based Instruction on Nutrition) was developed for patients to receive nutrition education on pregnancy. It is a series of three online interactive modules that teach patients how to create a meal plan for the management of hyperglycemia in pregnancy. The first serves as an instructional overview on gestational diabetes and its risks. The second offers in-depth information on nutritional guidelines and disease management. The third is about postpartum





nutrition management. When patients arrive for their education, iPads are available for them to view the modules. They then see a certified diabetic educator (CDE) to review for retention of the material and have the opportunity to ask questions.

This curriculum is endorsed by the AADE at the UAMS Obstetrical Center for Education and Self-Management of Hyperglycemia, which received accreditation in 2014.

In 2015, the curriculum will be translated for Spanish-speaking patients.

ANGELS utilizes four certified diabetic educators, who are available through telemedicine and onsite consultation.

To find out how you can access the modules for your patients, contact us at cdheducation@uams.edu or call 1-866-273-3835



Jesimy and Eric Jenkins credit UAMS and the ANGELS program both for the healthy birth of their 8-year-old son Keeghan and the encouragement to keep trying that led to the healthy birth of daughter Sutter in 2014. The couple lost two daughters to Fryns syndrome, one before Keeghan and one after, and suffered miscarriages when trying again to get pregnant in 2013.

“They helped us maintain our sanity,” said Eric Jenkins. “Without UAMS and the support we had from the ANGELS team, we probably wouldn’t have

Healthy Baby Girl a long awaited gift

had the strength to go through it again, and then we wouldn’t have our daughter now.”

Paul Wendel, M.D., and genetic counselor Shannon Barringer “are family,” said Jenkins. As both parents can pass on Fryns, a genetic syndrome that can lead to many complications at birth, the experts were always straightforward yet compassionate when explaining the odds of potential complications.

The ANGELS team was able to stay closely connected to the Bentonville couple throughout their experiences, particularly this last pregnancy, thanks to telemedicine, which made physicians in Little Rock “easily accessible any time we had a concern.” It also allowed them to work closely with the Jenkins’ obstetrician Amy Scott, M.D., a graduate and former resident of UAMS.

“In the journey we’ve been through, these folks were always very understanding, supportive and compassionate,” Jenkins said. “We never felt like a patient, so to speak, or someone to make money off of. We felt valued. We felt special and cared for.”

Case Management

Arkansas Fetal Diagnosis and Management (AFDM)

Arkansas Fetal Diagnosis and Management (AFDM) is a multi-disciplinary program developed for pregnant woman and their families that have been given a diagnosis of a fetus with a known congenital anomaly or genetic or chromosomal abnormalities.

AFDM uses a team approach to case coordinate and provide treatment options, as well as delivery planning and plan of care for the newborn. The multi-disciplinary team meets regularly to discuss individualized plans for each patient, and the team is notified of scheduled deliveries with the proposed plan of care. Follow-up is provided to referring physicians.

AFDM Team



Paul J. Wendel, M.D.



Ashley Ross, M.D.



Lori Gardner, R.N.

Total **341** new cases admitted into AFDM program

166 live deliveries at UAMS

94 babies transferred to ACH

ANGELS Sonographers



Lisa Caine, R.D.M.S.



Mandi Dixon, R.D.M.S.



Bill Hickey, R.D.M.S.



Lynne Tate, R.D.M.S.

UAMS Sonographers



Arkansas Reproductive Genetics Team



Shannon Barringer,
M.S., C.G.C.



Sarah R. Green,
M.S., C.G.C.



Noelle R. Danylchuk,
M.S., C.G.C.



Christopher Ciliberto,
M.S., C.G.C.



Stephanie Jez, M.S.



Angie Hunton, B.S.N., R.N.C.

Maternal-Fetal Medicine Team

Starting at left: E. "Pat" Magann, M.D.; Curtis L. Lowery, M.D.; Nafisa Dajani, M.D.; Adam Sandlin, M.D.; Paul Wendel, M.D.



Maternal-Fetal Medicine Fellows

Starting at left: Kelly Cummings, M.D.; Nader Rabie, M.D.; Imelda Odibo, M.D.



ANGELS' genetic counselors saw

3,062 patients with an 8.51% DNKA rate

416 Abnormalities were diagnosed

Outreach Case Management



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APN Case Management Team



Guide for Suggested Provider Management for High-risk Pregnancy Cases

In Arkansas we have multiple levels of providers that provide prenatal care. This guide will help providers discern management strategies for high-risk pregnancies they encounter. There are only a few diagnoses that warrant maternal-fetal medicine assumption of care, but many that may need collaboration.

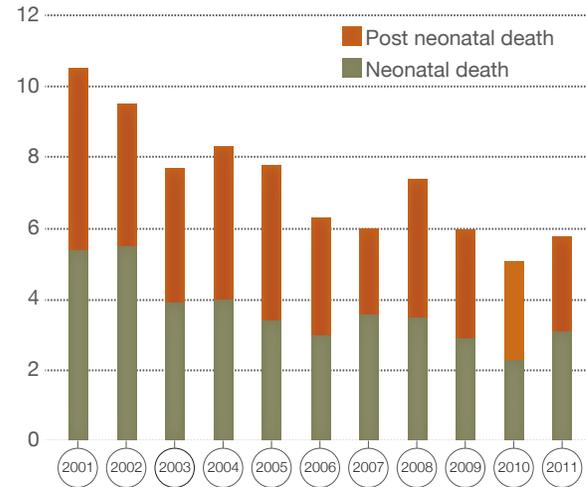
This chart may be viewed at <http://angels.uams.edu/healthcare-providers/provider-education/suggested-provider-management-for-high-risk-pregnancy-cases/>.

Evaluation and Research

This year the evaluation and research team compiled an additional two years of data from claims, birth certificates and hospital discharge records. This data was used to update the dashboard of standard metrics including both maternal and infant demographics, health indicators, and costs.

Based on these metrics, the team was able to draw some general conclusions about the state of the Medicaid maternal population during the time ANGELS has been in place. Birth outcomes for the Medicaid covered population in Arkansas improved markedly between 2001 and 2011. While the demographics of the population changed, the demographic changes do not account for the improvement in rates of preterm birth and neonatal mortality.

Elements of routine prenatal care have improved, including earlier start of prenatal care, more



availability of obstetrics specialists and more continuity of care. The portion of all births that occurred in hospitals with neonatology services increased.

Evaluation and Research Team



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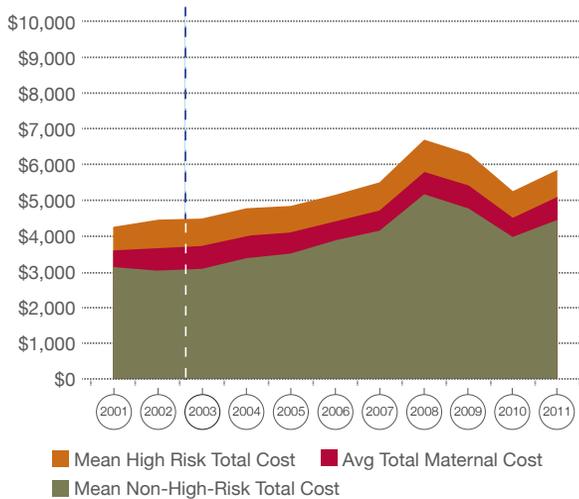
Janet Bronstein, Ph.D.



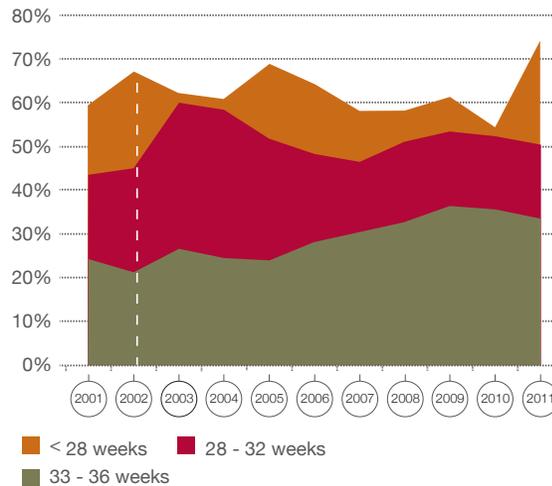
Rachel Ort, B.A.



Laura Rakes, M.A.



Use of specialty care did not change notably, although the rate of prenatal hospitalizations increased. Expenditures, primarily for hospital services, increased,



but at rates reasonable compared to annual medical inflation.

What's New

in 2015

- **Patient Education Website**

In 2015, ANGELS, in collaboration with UAMS, will launch an interactive patient education website, patientslearn.org. This site is devoted to the education of patients based on various medical issues, with an emphasis in high risk obstetrics, neonatology, and pediatrics. User-friendly modules have been created with topics such as breastfeeding, childbirth, and diabetes during pregnancy.

- **Meet the Newest ANGEL - Margaret Glasgow**



Margaret Glasgow, BSN, RNC-OB has become the new face of ANGELS throughout the state of Arkansas. Margaret graduated from UAMS with her BSN and has been an L&D, antepartum, and postpartum nurse for 20 years. She is a certified Association of

Women's Health, Obstetric and Neonatal Nurse

fetal heart monitoring instructor, and a Neonatal Resuscitation Program Instructor. She and the team from the UAMS Centers for Simulation Education travel the state to deliver hands-on training for inter-professional OB simulation drills. Margaret also facilitates AWHONN Intermediate, Advanced and Instructor Fetal Heart Monitoring courses, S.T.A.B.L.E. courses, NRP courses, nurse shadowing on UAMS L&D and NICU, OB Simulation Drills, RNC review courses for Inpatient OB, Maternal Newborn and Low-risk and High-risk Newborn, as well as any other type of OB or NICU education. Margaret will travel to your facility to conduct the course or arrange interactive video to your site. We encourage all courses that ANGELS facilitates to be interprofessional, and not just limited to one type of health care professional. If you would like to schedule a training session with Margaret, please contact cdheducation@uams.edu or call 1-866-273-3835. She'll be seeing you in your hospital, soon!

Update

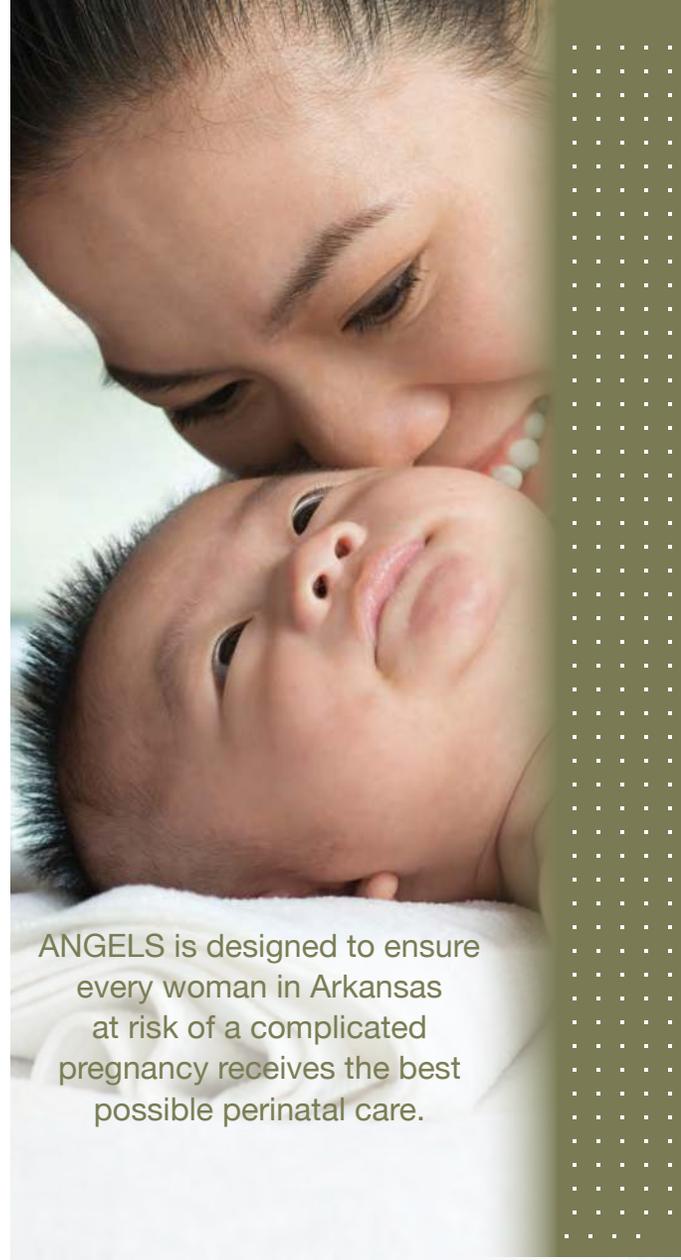
In response to Arkansas's need to reduce infant mortality, and to address policy recommendations to achieve a multi-level system of perinatal care, a Neonatal Intensive Care Unit (NICU) Classification Committee (now the Perinatal Regionalization Committee) was appointed by the Director of the Arkansas Department of Health. The Perinatal Regionalization Committee has spent the past 3 years developing designated state perinatal regionalization levels.

Levels of Care

These levels are very similar to the national AAP and SMFM recommendations and were approved by the Board of Health in April, 2014.

The levels are currently being voluntarily adopted by many birthing facilities across Arkansas. A meta-analysis of perinatal regionalization for very low birth weight and very premature infants published in JAMA in 2010 by Lasswell and colleagues, concluded that strengthening perinatal regionalization systems in states with high percentages of very low birth weight and very premature infants born outside of level III facilities could potentially save thousands of infant lives each year (JAMA. 2010;304(9):992-1000).

The Arkansas Department of Health has estimated that "getting the right mother to the right hospital for delivery" would save 20-25 infants every year. The Arkansas Perinatal Regionalization Committee expects that the implementation of perinatal regionalization will be a significant step toward lowering Arkansas's historically high infant mortality rate.



ANGELS is designed to ensure every woman in Arkansas at risk of a complicated pregnancy receives the best possible perinatal care.



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