Disclaimers

- AngelEye™
- AirToco™
ANGELS Overview & Achievements

Curtis Lowery, MD
Chair, OB/GYN
Founder & Director, ANGELS, Center for Distance Health
University of Arkansas for Medical Sciences
Patients First
• “It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.”

Charles Darwin
Health Care Disparity

Where you live should **not** determine whether you live or die!
Origins of ANGELS/CDH in AR

- In 2002, DHS approached UAMS with high risk OB support concept
- Innovative program was able to leverage federal dollars to increase access to care
- UAMS provides state match portion, resulting in requirement of no state funds
ANGELS in Action
More high-risk mothers diagnosed earlier in pregnancy

More preterm infants born in hospitals with neonatologists

Neonatal mortality rates have declined.

Mothers from rural areas more likely to deliver high-risk LBW babies at UAMS.

AHRQ named ANGELS the OB/GYN TM model for the nation
2004
The Council of State Governments Award (Finalist)

2005
Nominated for Southern Growth Innovation Award by Governor Mike Huckabee

2006
Harvard Ash Institute for Democratic Governance, Innovations in American Government Award, Top 50 finalist

2007
Harvard Ash Institute for Democratic Governance, Innovations in American Government Award, Top 18 finalist

2007
AT&T Center for Telehealth Research and Policy at UTMN, Hugo Gernsback Award for Clinical Innovation

2007
American Telemedicine Association Innovation Award for the Advancement of Telemedicine

2008
People's Choice Award for Biggest Impact, Rural Telecommunications Congress

2011
American Telemedicine Association Institutional Award, Best National Program
AR Telemedicine Model

Offer
Community Needs-Based Services

- Education & Training for Providers
- Centralized Tech Support & Scheduling Call Center 24/7
- Telemedicine Network & Infrastructure
- Evaluation and Quality Improvement
- Case Coordination & Evidence-Based Guidelines/Protocols
## ANGELS Sites

### Obstetrical and Neonatal Sites

<table>
<thead>
<tr>
<th>Site</th>
<th>Location</th>
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<tbody>
<tr>
<td>Batesville</td>
<td>Independent County Health Department</td>
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<tr>
<td>Batesville</td>
<td>White River Medical Center</td>
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<tr>
<td>Blytheville</td>
<td>Great River Medical Center</td>
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<td>Camden</td>
<td>Ouachita County Medical Center</td>
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<td>Clarksville</td>
<td>Johnson County Health Department</td>
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<td>Clarksville</td>
<td>Johnson Regional Medical Center</td>
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<tr>
<td>Conway</td>
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<td>Crosscutt</td>
<td>Ashley County Medical Center</td>
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<td>DeQueen</td>
<td>Sevier County Health Department</td>
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<tr>
<td>Dumas</td>
<td>Delta Memorial Hospital</td>
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<td>El Dorado</td>
<td>Medical Center of South Arkansas</td>
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<td>El Dorado</td>
<td>AHEC South Arkansas</td>
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<td>Fayetteville</td>
<td>Northwest AHEC</td>
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<td>Fayetteville</td>
<td>Washington Regional Med Center</td>
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<td>Fayetteville</td>
<td>Willow Creek</td>
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<tr>
<td>Fort Smith</td>
<td>Fort Smith AHEC</td>
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<td>Fort Smith</td>
<td>St. Edward's Mercy Medical</td>
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<td>Sebastian County Health Department</td>
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<td>Fort Smith</td>
<td>Spares Health System</td>
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<td>Harrison</td>
<td>North Arkansas Regional Medical Center</td>
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<td>Helena</td>
<td>Delta AHEC</td>
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<td>Helena</td>
<td>Helena Regional Med Center</td>
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<td>Hope</td>
<td>Hempstead LHI</td>
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<td>Hot Springs</td>
<td>National Park Medical Center</td>
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<td>Hot Springs</td>
<td>St. Joseph's Mercy Health Center</td>
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<td>Jonesboro</td>
<td>Willow Creek Women's Center</td>
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<td>Northside AHEC</td>
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<td>St. Bernard's Medical Center</td>
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<td>Lake Village</td>
<td>Chicot Memorial Hospital</td>
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<td>Little Rock</td>
<td>Arkansas Children's Hospital</td>
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<td>St. Vincent's Medical Center</td>
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<td>Saint Mary's Regional Medical Center</td>
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<td>Searcy</td>
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<td>Texarkana</td>
<td>Miller County Health Department</td>
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<td>Texarkana, TX</td>
<td>Southwest AHEC</td>
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<td>Texarkana</td>
<td>Wadley Regional Medical</td>
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### Pediatric Sites

<table>
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<tr>
<th>Site</th>
<th>Location</th>
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<tr>
<td>Fayetteville</td>
<td>Mana Northwest Arkansas Pediatric Clinic</td>
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<tr>
<td>Jonesboro</td>
<td>Children’s Clinic</td>
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</tbody>
</table>
ANGELS Call Center
Triage Call Center

Facilitates Acute telemedicine

Coordinates Transports

Communicates to Providers & Patients
In 2013:

- Staffed by 6 appointment center specialists
- Handled 206,481 phone calls
- Processed 26,662 appointments
- 1824 Urgent care visits avoided by triaging
ANGELS Call Breakdown

Average monthly calls:
- 800 nurse triage
- 300 nurse information
- 650 nurse follow-up
- 225 nurse triage follow-up
- 50 actual maternal transports
ANGELS Telemedicine
ANGELS Telemedicine Visits: Overview 2003 - 2013

Year 2003: 215
Year 2004: 421
Year 2005: 548
Year 2006: 891
Year 2007: 1299
Year 2008: 1656
Year 2009: 2095
Year 2010: 3306
Year 2011: 3866
Year 2012: 5221
Year 2013: 4928
New Catchment of Patients Through Use of Telemedicine

<table>
<thead>
<tr>
<th>Year</th>
<th>Local Genetics Clinic</th>
<th>Telemedicine Genetics Clinics</th>
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<tr>
<td>2001</td>
<td>2209</td>
<td>215</td>
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<tr>
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<td>2011</td>
<td>2922</td>
<td>2045</td>
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Legend:
- Local Genetics Clinic
- Telemedicine Genetics Clinics

9 years
CDH Training: NATIONAL

- New Orleans, LA
- Memphis, TN
- Chattanooga, TN
- Panama City, FL
- Albuquerque, NM
- Oklahoma City, OK
Training Center: INTERNATIONAL

- Nepal
- India
- Nigeria
- Philippines
- South Africa
- Uganda
- Zambia
Spinoff Programs

Following Baby Back Home

Colposcopy

UAMS
CENTER FOR DISTANCE HEALTH
UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Arkansas Fetal Diagnosis and Management

OB Psychiatry

Newborn Screening
Following Baby Back Home Service Areas
FBBH Program Goals

Home visiting and care management for preemies by

- Reducing re-hospitalizations
- Reducing no-show to follow-up appointments
- Increasing immunization compliance
Genetics and Telemedicine

Arkansas Fetal Diagnosis and Management (AFDM)

- All anomalies are case managed by this program
- Patients are scheduled to see other specialists and can be done over telemedicine to local hospital.
- Our biweekly case conferences are held via TM.
Angel Eye
Angel Eye System
ANGELS Guidelines
Guidelines

203 best practices guidelines in Obstetrics, Neonatology, & Pediatrics

All New ANGELS Guidelines Website

angelsguidelines.com
4,254 visits from 25 countries in 2013
Interactive Video Conferences

- High Risk OB
- OB/GYN Grand Rounds
- ONE Team nursing teleconference
- Fetal Anomaly Interdisciplinary Management (FAIM)
- Peds PLACE
Education Courses

• On-site and via Interactive Video
  – S.T.A.B.L.E.
  – AWHONN Fetal Heart Rate Monitoring Courses
  – NRP
  – Breastfeeding mini-course
  – Nurse Certification Courses
    • Inpatient OB
    • High Risk Newborn
    • Low Risk Newborn
    • Maternal/Infant
Obstetrical Simulation Education

Obstetrical Emergency Drills
• Eclamptic Seizure
• Shoulder Dystocia
• Breech Delivery
• Postpartum Hemorrhage
Perinatal Conference

SAVE THE DATE
October 16-17, 2014
Little Rock Marriott
(formerly The Peabody)

30th Annual Perinatal Conference
4th Annual Women’s Health Update

Keynote: John Morrison, MD, MFM
Online Education

- Launched December 2013
- Over 100 modules
- >1000 users
- 65 of Arkansas’ 75 counties with users
- ANGELS content free to Arkansas residents
- Multidisciplinary
  - Continuing Medical Education
  - Continuing Nursing Education
  - Continuing Pharmacy Education
Patient Education Website

- To launch Summer 2014
- Allows for private discussion groups (HIPAA compliant)
- First educational initiatives will focus on maternal/infant education
National Telehealth Resource Centers
South Central Telehealth Forum 2014

save the date
SOUTH CENTRAL
TELEHEALTH FORUM 2014
Little Rock • May 8 - 9

presented by UAMS Center for Distance Health & South Central Telehealth Resource Center

#SCTF2014
SUPPORT YOUR LOCAL TELEHEALTH GROWTH.
Dissemination

Posters
• National & Regional
  – Arkansas Nurses Association
  – Research Day

Presentations
• National & Regional
  – AWHONN
  – American Telemedicine Association
  – Teaching with Technology
Broadband Technology Opportunities Program (BTOP)

$102-Million Telehealth Infrastructure
BTOP Benefits in Arkansas

- Healthcare
- Higher Education/Libraries
- Public Safety
- Research & Clinical Trials
Telemedicine Broadband and Equipment Overview

- 21 two-year colleges
- 11 four-year universities
- 8 Area Aging Institutes
- 2 Arkansas Department of Health
- 96 Community Health Clinics
- 16 home health
- 80 hospitals
- 6 Human Development Centers
- 9 Kids First
- 8 libraries
- 111 Local Health Units
- 2 medical education
- 1 MEMS
- 66 mental health clinics
- 3 Methodist Family Health
- 4 Pathfinder
- 12 therapy
- 1 UAMS – Center for Distance Health

454 sites total
Arkansas Telehealth Healthcare Reform Tool Box

- Call center consultations
- TM consultations
- Distance learning
- mHealth
- Image repository
- Workforce training
Summary of ANGELS’ Impact

• Increased Maternal transports to appropriate hospitals in SW, NE and NW regions
• Increased Newborn survival
• Supporting Local Practitioners using distance
  – Technologies
  – Guidelines
• MFM consults overall are up
UAMS-Where Telemedicine Lives!
Websites

• ANGELS Guidelines  
  http://angelsguidelines.com/

• Learn on Demand  
  https://learnondemand.org

• South Central Telehealth Resource Center  
  http://learntelehealth.org/