



Poster #1

*Arkansas Clinical Data Repository (AR-CDR)*



Ahmad Baghal, MD, MS

The AR-CDR is the University of Arkansas for Medical Sciences (UAMS) research data warehouse that provides a single and secure source of data for use in clinical and translational research. The AR-CDR houses data that are extracted from the Epic EMR system, dates back to mid- 2014, and from legacy systems, dates back to early 2000. The AR-CDR is continually enhanced to incorporate new data sources, including genomic data and tumor and trauma registries.

The AR-CDR includes a large number of clinical facts that are suitable for the conduct of research studies. In addition to patient data, that includes demographics, admissions, encounters, and social and family histories, there are a large number of clinical data elements, including diagnoses, allergies, immunizations, vital signs, laboratory results, medications, procedures, anesthesiology and surgery, oncology, and obstetrics.

Since its inception in 2011, the AR-CDR has served UAMS clinicians and researchers by providing quality data for the purpose of answering clinical and translational research questions through:

- Access to self-service cohort identification tools
- Provision of IRB-approved rich clinical data sets
- Access to clinical limited data sets and data preparatory to research
- Leveraging natural language processing (NLP) technology to extract knowledge from unstructured data (coming soon!)

Poster #14

*Discovering Database Gems via the UAMS Library*



UAMS researchers are familiar with PubMed; however, many do not realize the extent of the Library's database collection. Database resources available through the UAMS Library are described herein. Information is provided on access points, content parameters for each, and tips for searching each. Access and availability of other research databases are described and RCSS services explained.

Poster #13

***Pediatric Emergency Department Visits After All-Terrain Vehicle Crashes, Motor Vehicle Crashes, and Sports Activities Using the Nationwide Emergency Department Sample (NEDS)***



Rosemary Nabaweesi, DrPH, MBChB

The Nationwide Emergency Department Sample (NEDS) database represents approximately 130 million discharges annually, resulting in the largest all-payer emergency department database in the US. The database allows for the study of relatively uncommon events and trends over time. Data for Emergency Department visits comes from approximately 1,000 hospitals annually from a 20 percent stratified sample of US hospital-based Emergency Departments in 30 states reporting data to HCUP. The NEDS incorporates discharge-level weights that can be used to create regional and national estimates of ED care.

Poster #2

***Improving Access to Care for Rural Veterans: Build More clinics?***



**Databases at the VA available for Research:**

- 1) VA corporate Data Warehouse: This nationwide data warehouse contains data from a variety of clinical and administrative systems across the Veterans health administration. It has data from the VHA electronic health record that includes data of service for inpatient and outpatient care, location of services, diagnostic code associated with service use, patient demographic information, vital signs, laboratory test dates and results, and pharmacy records.
- 2) VA Survey of Enrollees: An annual nationwide sampling of Veterans enrolled in VHA care, it includes questions about demographic information, employment information, perceived health status and perceptions of VA care.
- 3) VA survey of Healthcare Experiences of Patients (SHEP): This survey uses the CAHPS data from CMS and regularly solicits responses from Veterans related to a specific episode of outpatient or inpatient care. The survey design uses a stratified random sample without replacement.
- 4) Area Health Resource File (AHRF) – This dataset from the US Health Resources and Services Administration provides information at the county, state and national level in eight broad areas: health care professions, health facilities, population characteristics, economics, health professions training, hospital utilization, hospital expenditures and the environment.

Poster #3

***Data on the Healthy, the Addicts, the Infirm and Everyone Between:  
Leveraging Commercial Claims Data to Guide Clinical Care***



Xiaocong Li, Gary Moore and Bradley C Martin

LifeLink is an administrative claims database that

- Captures bills paid to health providers by over 80 insurance and managed care plans including,
  - Demographic and enrollment information
  - Geographic (state) of member residence
  - Diagnostic information (ICD-9-CM)
  - Procedures (HCPCs CPT-4) and Lab tests, and
  - Prescriptions Dispensed.
- Adjudicates claims for more than 80 million unique enrollees per year (2006-2015)
- 10% member random samples obtained by UAMS TRI
  - Approximately 9 million persons
- Permits LONGITUDINAL follow up of subjects
  - Over half of persons can be followed for more than 2 years

Poster #12

***Health Interest Areas Among 3,500 Diverse  
ARresearch.org Registrants Reflect Arkansas'  
Major Health Challenges***



Jean McSweeney, Ph.D., R.N.; David Robinson, B.A.; Anthony McGuire;  
Pamela Christie, B.A.; Sandra Hatley, M.H.A.;  
Martha Rojo, Ph.D., R.N.; and Laura P. James, M.D.

The UAMS Translational Research Institute (TRI) launched the online participant registry and website, ARresearch.org, in April 2016 to recruit diverse research participants. Recruited primarily from Arkansas to help researchers at UAMS, the registrants agree to be contacted about research opportunities based on their selected health areas of interest for future participation. TRI used community focus groups and worked with UAMS Communications & Marketing and plain language experts. Our comprehensive promotion plan included local media coverage, video testimonials and materials developed for our Spanish language and Pacific Islander populations. Registrants may select up to 29 health interest areas offered on the registry form. Their selections reveal that they are most interested in research related to weight management, mental health, heart disease and sleep disorders. In 15 months, nearly 3,500 individuals have been recruited from 74 of Arkansas' 75 counties. In addition, as the number of registrants grows, the data show trends that reflect some of Arkansas' biggest health challenges. The UAMS research community should find the information of interest, especially investigators in the fields that were most popular among registrants. Over time, the information will inform future research decisions and help ensure that UAMS is responsive to the state's needs.

Poster #11

*Long Term Effects of the 2009 USPSTF Guidelines on Variation in Rates of Mammography Screening*



Clare Brown, MPH, Adrienne Nevola, MPH,  
and Bradley C. Martin, PharmD, PhD

This project made use of the Pharmetrics LifeLink+ database. The project used the nationally representative administrative insurance claims database to show the impact of the 2009 United States Preventive Services Task Force guidelines for mammo-graphy screening. Highlights of the Pharmetrics LifeLink+ database are provided.

For example, the analysis was able to separate screening and diagnostic mammography, as well as to analyze geographic patterns in mammography use.

Poster #4

*Arkansas All Payer Claims Database for Team Research*



Anthony Goudie, PhD

Access to timely, accurate, and relevant data is essential to improving quality, mitigating costs, and promoting transparency and efficiency in the healthcare delivery system. Pursuant to the Arkansas Healthcare Transparency Initiative of 2015, the Arkansas Center for Health Improvement (ACHI) hosts a comprehensive all-payer claims database (APCD) on behalf of the Arkansas Insurance Department (AID). The APCD houses member enrollment data, medical claims, pharmacy claims, dental claims, and provider data. The Arkansas APCD is a dynamic tool that will enable the state to further its transparency objectives by collecting healthcare data from public and private sources and empowering Arkansans with information to better understand how and where healthcare is being delivered and how much is being spent.

Poster #5

***Arkansas Central Cancer Registry (ACCR): Data Approval Process***



Xiaoyan Egbe, MPH

The Arkansas Central Cancer Registry (ACCR) is a population-based registry designed to collect data on all cancer cases diagnosed and/or treated in the state. The registry is the gold standard registry certified by the North American Association of Central Cancer Registries (NAACCR). It collects approximately 16,000 cases annually, which includes diagnostic information, demographics, first-course treatment information, criteria to stage cancer at the time of diagnosis, and follow-up mortality data. The ACCR data are used to identify populations at increased risk of cancer, investigate public concerns of suspected excesses of cancer due to environmental or other factors, and to monitor trends in cancer incidence and mortality.

Poster #10

***Variation in Home Health Spending and Quality of Home Health Care***



Robert Schuldt, Hsueh-Fen Chen and Mick Tilford

Removing unwarranted variation in post-acute care would reduce 73% of variation in total Medicare spending. Home health represents a growing segment of post-acute care covered by the Medicare program. Between 2002 and 2014, Medicare expenditure on home health grew by 85% to \$17.7 billion and a significant number of for-profit home health agencies entered the market. Geographic variation in home health availability exists. Previous studies extensively examined variation in Medicare spending for chronic conditions, pharmacy, or hospitals. However, little is known about geographic variation in Medicare home health spending

Poster #9

*Hospital, public health department, and area-level data sources*



Michael Morris, PhD, Saleema Karim, PhD, Adrienne Nevola

Several data sets with information on:

- individual hospitals and public health departments,
- county-, zip code-, and other area-level socio-demographic, provider supply, and Medicare spending information, and
- data sets identifying federally-designated regions within the US with poor socioeconomic status and under-resourced healthcare capacity are included.

Poster #6

*Variation in neuroimaging and hospital admission for patients presenting to the emergency department with dizziness*



Stephen Bowman, Saleema Karim, Sofie Morgan and J. Mick Tilford, PhD

The Nationwide Emergency Department Sample (NEDS) is an administrative database developed as part of the Healthcare Cost and Utilization Project and consisting of an estimated 30 million emergency department (ED) records across the US annually for the years 2006-2014. The NEDS, which can be used to generate national and regional estimates, contains over 100 variables, including patient- (e.g., payment source), hospital- (e.g., hospital ownership), geographic- (e.g., urban-rural status), and visit-level (e.g., ICD-9 codes) characteristics. The NEDS can be used to assess ED utilization and costs, quality of ED care, treatment effectiveness, or impact of healthcare policies on ED use and outcomes across different patient populations or conditions.

Poster #7

***Hospital readmission following hip fracture: Analyses from the Nationwide Readmissions Database***



Hsueh-Fen Chen, Regis Renard, Clare Brown and J. Mick Tilford,

The Nationwide Readmissions Database (NRD) is an administrative database developed as part of the Healthcare Cost and Utilization Project and consisting of an estimated 15 million hospital discharge records across the US annually for the years 2010-2014. The NRD consists of over 100 clinical and nonclinical variables, including linkage variables that allow for tracking of an individual across hospital visits in order to determine subsequent hospitalizations after an individual's index hospital stay. The NRD can be used to determine rates, costs, and reasons for readmissions as well as patient characteristics associated with readmissions across different patient populations or conditions.

Poster #8

***Long-term Care: Facts on Care in the United States***



Neeraj Dayama and Rohit Pradhan, PhD

Medical Panel Expenditure Survey (MEPS): MEPS, which began in 1996, is a large scale survey of individuals and families, their medical providers, and employers across the United States. MEPS collects data on the specific health services that Americans use, how frequency they use them, the cost of these services, and how they are paid for, as well as data on the cost, scope, and breadth of health insurance held by and available to U.S. workers.