COLLEGE OF COMMUNITY HEALTH SCIENCES

4th Annual
Research Day

April 13, 2012

touching lives
Management of a 1000 Injuries Following an F5 Tornado
Daniel M Avery

Abstract: On April 27, 2011, the City of Tuscaloosa, Alabama suffered the worst natural disaster in its history. A one mile wide F5 tornado with 200 mile an hour winds damaged a significant portion of the city. There were 53 casualties and more than 1,000 injuries. DCH Regional Medical Center is a 583 tertiary care hospital and Level II Trauma Center servicing patients of West Alabama. Two hundred of the 300 active staff recognized the gravity of the disaster without being summoned and immediately responded to help render care. Patients were triaged into two areas: the Emergency Department for those seriously injured needing immediate intervention and surgery, cardiopulmonary resuscitation in progress, head injuries, etc and Non Emergency Department Areas for those less seriously injured. Drills and planning for 200 patients can be expanded for much larger numbers of patients. Regularly rehearsed plans can be implemented quickly. Having physicians trained in large scale emergencies and disasters is essential. The Tuscaloosa medical community arose to the occasion of providing high level care to the large number of patients injured by the tornado.

Advocating for tobacco-free pharmacies: Past and current efforts
Alan Blum, Vinayak M Jha

There are more than 56,000 pharmacies in the United States. Most (39,000+) of these pharmacies are owned and operated by national pharmacy corporations, supermarkets, or discount stores; and almost all of them still sell tobacco products. This is in stark contrast to the 17,000 independents, most of which long ago stopped selling tobacco.

Nearly fifty years after the landmark 1965 Surgeon General’s Report on Smoking and Health, cigarettes remain the leading preventable cause of cancer and heart disease. Yet, incredibly, most US pharmacies still sell cigarettes. Ending pharmacy tobacco sales will decrease its availability and contribute to de-normalizing its use.

Uncovering strange bedfellows: 35 years of exposing allies of the tobacco industry
Alan Blum, Anthony Brown, K Michael Cummings, Julia Purpera, Eric Solberg

Outcomes: A key strategy of Dr. Blum has been to shame health-related allies of cigarette manufacturers, in the belief that this helps to isolate and ostracize a rogue industry. Examples of the “sick bedfellows” and “healthcare hypocrites” that Dr. Blum has helped expose over the past 35 years are the subject of this poster.

Conclusions: The relationships between the tobacco industry and organized medicine, sports teams and leagues, universities, hospitals, chain drug stores, arts organizations and museums, airlines, and the pharmaceutical industry offer sobering lessons for policy makers attempting to identify barriers to reducing demand for tobacco products.
Information Technology Trends for Community Health Sciences

Suhua Fan

Objectives: Literature indicates that using information technology makes health care more comprehensive and easier within and among communities, especially in Rural Health. Information technical tools help health care workers find solutions in issues such as distance, money, lack of health literacy, disabilities, and etc. The study examines and illustrates the emerging information technical tools which can be used to enhance instruction, research, productivity, accessibility, and networking in Community Health Sciences.

Methods & Discussions: The following tech tools are examined and categorized with a focus on the need of researchers and practitioners in Community Health Sciences:

- Instruction tools: E-learning system Blackboard, Clicker, Tegrity, Camtasia, E-textbooks, Skype
- Research tools: REDCap (Research Electronic Data Capture) is a secure web application for building and managing online surveys and databases, Vovici, RefWorks, Citeulike, Mendeley, Zotero
- Networking tools: Drupal, Wordpress, Google blogger, Libguides, PBworks, GoToMeeting/GoToWebinar, Wallwisher
- Presentation tools: Prezi, Slideshare, Flickr, AudioBoo, Podcasts, Jing, Smartdraw
- Productivity tools: GoogleDocs, Mobile apps, Microsoft Publisher, Microsoft OneNote, Evernote, census.gov – interactive maps
- File sharing/management: Dropbox, Microsoft Skydrive, IDisk
- Accessibility tools: Adobe Pro X, Web accessibility verifier

Conclusion: It is important for researchers and practitioners in the field of Community Health Sciences to keep up with information technology trends with time in order to conduct quality health care and research projects. The study aims at reaching out to the health care community to facilitate research and practice by sharing recommended useful online technical tools, mostly open sources. Note: Some of the recommended tech tools in the study are from the research paper “Leveraging Social Networking Tools to Connect with Patrons” that I will present with Dr. Fatima Barnes from Meharry Medical College in Tennessee at the Annual Conference of Medical Library Association in Seattle, WA on May 23, 2012.

Implementation of a Satellite Teleconference on Sickle Cell Disease Targeting First Responders

Pamela Payne-Foster, Glenn Davis

Introduction: A review of the literature indicated there is very little curriculum or training which addresses sickle cell disease management for first responders. Therefore, a coalition of partners planned and implemented a satellite teleconference training program for first responders and other health care workers to address this gap.

Methods: A planning committee consisting of leadership from sponsoring agencies came together to plan and implement the videosatellite program accessed by health care professionals via the Alabama Department of Public Health website. Sponsoring agencies included: Sickle Cell Association of West Alabama, Institute for Rural Health Research, and the Alabama Department of Public Health. A variety of clinical presenters used a variety of teaching methodologies including didactic, personal testimony, and case studies. The program was conducted in two one hour segments with moderators who maintained the flow of program as well as fielded questions from participants who posted questions online. Topics focused on a general clinical overview of sickle cell disease and trait including managing medical emergencies in sickle cell disease, and policy issues for first responders. Program evaluation and continuing education was completed online by all participants after completion of the program.

Results: Evaluations were completed by 84 participants with 36 RN/CNP and 7 LPN; 24 social workers and 17 others. The majority of participants rated the content of speaker presentations as very useful/useful especially in increasing awareness and knowledge. Several participants expressed a need for similar future programming.

Discussion: This collaborative program describes the real life unique application of a training program planned and implemented to meet the needs of health professionals in an identified gap by increasing awareness and knowledge of participants. Expansion of this unique program in the future is being considered.

The Challenges of Growing Our Own: Preparing Rural Minority Students for Health Careers

James Leeper, Pamela Payne-Foster, Lea Yerby

Introduction: The Department of Community and Rural Medicine has successfully produced pipeline programs which have produced physicians who practice in rural Alabama, but few have been African American
and practice in the Alabama Black Belt, where significant health disparities occur. In 2009, we developed a targeted graduate program aimed at increasing the number of African Americans into this pipeline. This study evaluates success and ongoing challenges in this targeted approach.

Methods: From 2009-2011, eighteen African American students were recruited from historically black colleges and universities (HBCUs) and were invited to interview for the Rural Community Health master’s program. Preference was given to students who lived in rural areas of Alabama or who expressed desire to practice medicine in rural Alabama. Qualitative and quantitative data which included program/faculty barriers and student barriers was collected, analyzed and summarized.

Results: Students have been recruited from a variety of HBCUs, mostly in Alabama. Major student challenges include financial hardships, longer matriculation times to graduation, transitional issues and challenges with standardized testing especially the Medical College Admission Test (MCAT), despite some informal MCAT review courses added to the curriculum. Major program/faculty challenges include tailoring the curriculum to fit individual needs for remediation to strengthen basic science foundation. Eleven graduates have pursued a variety of health related interests; however, none of the graduates have been accepted to medical school.

Discussion: Despite success at recruiting African American students into the Rural Community Health master’s program, several challenges prevent students from gaining admission to medical school and practicing in rural Alabama. Attention paid to these challenges and continued gathering of data to ascertain other support which may be unique to this special population need to be further addressed.

Perception of EMR Attributes Among Alabama Family Medicine Physicians
Melanie Tucker, Jason M Parton

Objective: The purpose of this study was to determine the perception of electronic medical records (EMR) attributes by rural and urban Alabama family medicine physicians. According to Roger’s Diffusion of Innovation Theory (DOI), the attributes of an innovation (EMR) are based on the perceptions of the individual (Family Medicine Physician) and helps to explain the rate of adoption. The diffusion of an innovation (EMR) is a social process that takes place among members of a specific group. Many rural physicians practice in relative isolation, thus slowing the rate of EMR adoption. The study will answer the following research questions:

Research question #1: Are perceived attributes of EMR different among EMR users and Non Users?
Research questions #2: Are perceived attributes of EMR different among EMR users and Non User’s organizational characteristics?
Research question #3: Are perceived attributes of EMR different among EMR users and Non User’s individual characteristics?

Methods: This cross-sectional study evaluates EMR
attribute perceptions among Alabama family medicine physicians (N = 1197).

**Conclusion:** The collection and analysis of the data allowed for the exploration of the perceptions of EMR attributes among Alabama Family Medicine physicians and how that correlates with physicians’ adoption and use of EMR in their practices. As a result, this study contributes to the understanding of the impact and utilization of EMR within the Alabama family medicine practice. Being able to identify these perceptions can help physicians and educators develop education programs to expand the health care provider’s knowledge of the EMR adoption and use process.

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**Utility of a Background Knowledge Based Probe for a Type 1 Diabetes Pharmacy Lab**
Heather Whitley, Jason M Parton

**Background:** As of 2011, Alabama was named as the State in the Union with the largest prevalence of diabetes (12.2%). This progressive disease costs patients, employers, and society millions of dollars annually. As pharmacists we are strategically located to provide valuable information regarding the control and improvement of this disease state.

**Objectives:** To adapt an assessment tool from an anthropology course to effectively determine student pharmacists’ background knowledge of 5 terms/phrases regarding type 1 diabetes and to determine level of knowledge retention over a 6-month period.

**Methods:** 1. A 5-item survey was adapted from the anthropology course and given to all third-year pharmacy students at Harrison School of Pharmacy before they attend the pre-lab type 1 diabetes lab. The anonymous data was analyzed prior to the type 1 diabetes pre-lab and presented to the third-year pharmacy students while they attend the pre-lab lecture. Immediately following the completion of the type 1 diabetes lab and again at 6 and 12 months, third-year student pharmacists were e-mailed links to identical assessment tools to determine change in and retention of knowledge.

**Results:** Each answer choice per item was categorized based on Bloom’s and Krathwohl’s taxonomy of Cognitive Domains; taxonomy progress from knowledge/remember up to synthesis/create. 91 participants completed both the pre- and immediately post-surveys. Every participant progressed to a higher Cognitive Domain for each item after completing the weekly pre-lab lecture and lab. Most notable increases were for “plate method,” “basal-bolus,” “insulin-to-carbohydrate ratio,” and “insulin sensitivity factor.” Six-month follow-up data have not yet been analyzed; the 12-month survey will be administered in September 2012.

**Conclusions:** The anthropology background knowledge based probe was effectively adapted to type 1 diabetes for a pharmacy lab and was used to assess baseline and change in participants’ cognitive domain relating to each term.

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**Lessons Learned in the Development of a Rural Telepsychiatry Program in Rural Alabama**
Lloyd Williamson, Amelia E delos Reyes, Pamela Payne-Foster, Thomas Whitten

There are major gaps in pediatric and adolescent psychiatric coverage as well as access to care for many rural communities, particularly in Alabama for a variety of reasons: 1) the large burden of those who require mental health services; 2) the large burden of those who need services and do not receive them; 3) the severe shortage of psychiatrists and specialists such as child psychiatrists; 4) difficulty in recruiting and retaining mental health professionals in rural areas; and 5) barriers in access to services in rural areas such as stigma, transportation, lack of insurance coverage. Telepsychiatry is a great tool to eliminate some of these gaps and provide much needed services to regions that most need them. We will examine development and preliminary evaluation of an academic/community partnership to deliver Telepsychiatry services to a rural community in Northeast Alabama. Telepsychiatry services for children at the DeKalb County Youth Service Center fills a need that existed for this region, since no child and adolescent psychiatrist practices services for youth in this part of Alabama. This was determined to be a sustainable service, since each stakeholder expressed an interest in long term collaboration.

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**Creation of an Autism Rural Community Outreach Program, Perspectives and Lessons Learned**
Lea Yerby, Michelle Deramus, Angela Barber, Kelly Dickey, Laura Klinger

Children living in rural areas, at or below poverty level, and minority children are more likely to receive delayed autism screening, and are more likely receive an improper initial diagnosis. The University of Alabama Autism Spectrum Disorders (ASD) Clinic received a grant to battle this disparity by creating the West Alabama Autism Outreach Clinic (WAAOC). The goals of this clinic were to: create a program that would provide earlier diagnosis and treatment for persons with ASD; increase the workforce of trained ASD professionals in rural West Alabama communities; and create an infrastructure to conduct re-
Residents

Defensive Medicine: Identifying Diagnostic Procedures Most Susceptible to Malpractice Concern – A Step Forward in Quantifying the Cost of Defensive Medicine
William Clifford

Background: The people and government of the United States are embroiled in debate regarding the future of healthcare delivery and payment. Central to the discussion is healthcare cost. Much is known about gross healthcare expenditures. Yet, a significant portion of the health care calculus remains a mystery. One such amorphous topic is the cost of defensive medicine. Though many have studied the topic, few have done so within the firmament of objective evidence. Much of the difficulty encountered by researchers studying the cost of defensive medicine is attributable to the confounding nature of coexisting variables.

Purpose: This study proposes that the absence of threatened individual tort liability in certain healthcare delivery models is associated with a decrease in intensity of diagnostic procedures, a finding that will help quantify the cost of defensive medicine. To that end, the focus of this work is to determine, through review of existing literature, whether diagnostic procedures most susceptible to malpractice concern have been identified. Once known, the next phase of study would focus on intensity of diagnostic procedure use across diverse practice paradigms.


Results: 1,320 abstracts were identified via database search, but only nine full articles met the inclusion criteria. Of those articles, all highlight a nexus between specific diagnostic procedures and malpractice liability pressures. However, none of the studies firmly establish a strata of diagnostic procedures most susceptible to malpractice concern.

Conclusions: The body of available research does not identify diagnostic procedures most susceptible to malpractice concern. Rather, in the aggregate, it provides robust evidence of procedures that should be considered in any future analysis/study.

Students

The Hale County Health Development Partnership
Theresa Berry, John Wheat, Melissa Cox

There is a chronic shortage of health professionals conducting primary care in Hale County. The shortage results from insufficient local students pursuing health care careers and difficulty in recruiting external physicians. The shortage of health care personnel and absence of a concomitant visible health care career track for local students places the community in the precarious situation of dependence on temporary physicians whose backgrounds and social commitments limit their effectiveness in local community development. The depth of medical care and professional influence on local educational and civic functions will be enhanced though a supply of locally grown health professionals who reside and work in the community. Hale County Health Development Partnership was designed to establish a local program of experiential education for students, kindergarten to professional, which promotes local health care careers. HCHDP is a continuation and a special focus of the West Alabama Rural Medical Care Alliance (WARMCA), a regional partnership established to address the 13-county West Alabama/Black Belt region's need for additional primary care health professionals. The University Of Alabama College Of Community Health Sciences/University of Alabama School of Medicine-Tuscaloosa has demonstrated conclusively that a successful Rural Health Leadership Pipeline Program (RHLP) promotes rural students into the health professions, including students from Hale County.

The Importance of OB/GYN Involvement in Infant Safety Seat Education: A Literature Review
Alan Cease, Daniel Avery

Motor vehicle accidents are among the leading causes of death and disability for children in the United States every year. Up to 82% of children are improperly restrained which results in excessively high death rates for child passengers, the highest of which is for infants who are less than six months of age. This is due in part to the lack of education of parents regarding this issue. The purpose of this literature review was to analyze effects this education in prenatal and post-partum periods and the role of OB/GYN's in this education. Despite a thorough search for articles on this topic, only a small number of such articles could be found. It was seen however, that parents who received some form of formal child passenger safety (CPS) education had statistically higher rates of correctly restraining their children. It was found that there is a lack of CPS education.
in the prenatal period despite it’s proven effectiveness: parents who received some form of prenatal child safety education had rates of 96% of correct car seat use versus 78% for parents who received no such education in the prenatal period. However, the sources of prenatal education have traditionally been prior parenthood which was determined to be an unreliable source of education or prenatal classes or prenatal pediatric interviews which are unfortunately considered by many to be “luxury items” that few parents participate in. This left only one reliable source of education on the topic that would be encountered by almost every mother: the OB/GYN. However, research showed that only a minimal amount of OB/GYN’s actually provide such education in their daily practice despite it being called for by the American College of Obstetricians and Gynecologists. With the results found in the study, it is clear that prenatal child passenger safety is both necessary and effective. If OB/GYN’s implemented this education into their practices on a large scale, these actions would have a significant effect on increasing the number of child safety seats being used correctly and thus decrease the number of injuries and fatalities during the immediate postpartum period.

Should we be performing skeletal surveys on infants presenting with failure to thrive?
Katie Gates, Michael Taylor

Neglect, including failure to thrive, is the most common type of child maltreatment in the US. Definitions of neglect vary widely by state statute, but usually involve omission of care that leads to significant harm to a child. Since 1962, it has been routinely recommended that a skeletal survey be included as part of a complete child maltreatment assessment of young children. More recent recommendations have omitted FTT (due to nutritional deprivation) from the list of conditions that should be routinely evaluated by skeletal survey. This research was completed to extensively review the published literature for information related to the use of skeletal surveys in the evaluation of children less than 2 years of age who present with FTT as a result of caretaker neglect. The literature review was completed through an extensive PubMed inquiry. Twenty-three articles were identified that mentioned FTT in conjunction with child neglect. Twelve related articles either mentioned FTT as linked with evidence of physical abuse or were primarily related to the association of FTT and physical abuse. Five articles published the positive yields for skeletal surveys performed in infants being assessed for FTT without overt physical findings suggesting abuse. The reported positive yields for skeletal surveys performed for FTT are comparable to other presenting conditions for which skeletal surveys are currently recommended to be routinely performed.

These findings indicated that the child abuse community should revisit this issue and either modify the indications for skeletal surveys or complete further research linking FTT and physical abuse.

Rural Pediatric Oncology: How far is too far when traveling to receive healthcare?
Lauren Gibson, Melanie Tucker

Background: Cancer is the leading cause of death by disease in children (1-14 years old) in the United States. It has been proven that the ability to travel to urban hospitals/cancer treatment centers is linked to healthier patients with better prognoses.

Objectives: Explore the driving distances which Black Belt residents must travel in order to receive pediatric oncology treatment. This will ultimately reveal the need for more cancer treatment centers and satellite locations, as well as expose the added difficulties which cancer patients/families must bear as rural residents.

Methods: All licensed general practitioners and pediatricians in the Black Belt Region of Alabama (as defined by the Alabama Rural Health Association) were located using the Alabama Board of Medical Examiners Database. These physician offices were used as the reference points from which the patient would travel to receive treatment. The pediatric oncology treatment centers were located by finding the locations of Pediatric Hematology/Oncology physicians in the Blue Cross Blue Shield database. Geographic information system mapping was then used to compute the commuting time between the various rural practices and the pediatric oncology treatment centers.

Results: There were 22 pediatric oncologists in Alabama (2 in Huntsville and 20 in Birmingham). Of the Black Belt physician offices, 59% (13/22) lie outside of the 1 ½ hours traveling range. The minimal commute time for treatment of Black Belt patients was found to be thirty minutes. The maximum commute time was well beyond a two hour commute.

Conclusions: Finding a clear cut solution to this problem will be very difficult; however, one approach is establishing satellite treatment centers such as the one at DCH. This cancer treatment center is a satellite branch of the highly esteemed MD Anderson Cancer Center in Houston, Texas.

Comparing autism screening instruments and physician surveillance techniques at 18- and 24-month well-child visits
Kevin Greer, AB Barber, A Evans, JM Pierucci, KM Dickey, MR Klinger, LG Klinger

Objectives: Objectives include examining the relationship among scores on the Ages and Stages Questionnaire 3 (ASQ-3), abbreviated 30-item research version of the Early Screening for Autism and Communication Disorders (ESAC; Wetherby, Woods, & Lord, 2009), physician concerns, and caregiver concerns in 18- and 24-month old children.

Methods: Caregivers completed the ASQ-3 and abbreviated ESAC at 18- and 24-month well-child visits. The ASQ-3 identifies delays in communication, gross motor, fine motor, problem solving, and personal-social areas. The abbreviated ESAC assesses interests/activities and interaction/communication. Physicians reported motor, language, and social delays.

Results/Conclusions: The ASQ-3 communication domain was negatively correlated with the abbreviated ESAC total (r = -.46, p = .006); this modest correlation indicates that the measures are related, but not redundant. Initial caregiver concerns and physician concerns about language skills were positively correlated with physician referrals (r = .70, p < .001 and r = .60, p < .001). No significant correlation was found between initial caregiver concerns and the abbreviated ESAC; however, caregiver concerns following completion of the abbreviated ESAC were significantly correlated with the abbreviated ESAC total (r = .36, p = .042). Thus, completion of the ESAC may increase caregiver awareness of autism-specific delay.

College students’ perceived adverse effects and satisfaction with ADHD Medications
Katie Howell, Meg Sheppard, Randi Henderson, Mark Thomas

The actual prevalence of ADHD among college students is unknown; however, estimates suggest approximately 2-8% of college students have ADHD. With any medication regimen, adverse effects caused by the medication should be evaluated. This study will examine the relationship between satisfaction with ADHD medication and severity of adverse effects. A retrospective electronic medical record review was conducted on college students who have been treated for ADHD at the student health center at a large public university in the southeastern US. Patients reported perceived severity of adverse effects caused by ADHD medication and their satisfaction with this medication. Descriptive statistics and chi-square analyses were run to determine differences between satisfaction with medication and perceived severity of adverse effects. The majority (53%) of the 1924 office visits were female visits. The top three reported adverse effects included decreased appetite, sleep disturbances, and dry mouth, with the largest percentage of students reporting mild adverse effects of each. Chi-square analyses reveal a significant difference between satisfaction with medication and severity of sleep disturbances ($\chi^2(2, n=297) = 8.622, p = .013$), while non-significant relationships were found among decreased appetite and dry mouth. The majority (92%) of patients were satisfied with their medication even if experiencing some level of sleep disturbances. Since college is often a time of unusual sleep patterns, students may perceive the disturbances in their sleep patterns are outweighed by the benefits of the medicine. Future studies should examine if satisfaction with medication impacts adherence to treatment regimen, increasing effectiveness and reducing availability of medication for diversion.

Elderly Prescription Use, Non-adherence, and Financial Burden
Andrew Jones, Melanie Tucker

The cost of prescription medications has become a major topic of discussion in recent years due to the rising cost of health care, and elderly patients are particularly at risk to the rising cost of prescription medications because many of them are on fixed incomes. Patients over the age of sixty-five years of age account for approximately in 42% of prescription drug market in 2002 due to the large proportion of patients who suffer from chronic conditions. Elderly patients in rural areas are particularly at risk due to increased financial burden associated with living in rural areas, and studies have shown that rural patients are more likely to delay or not fill prescriptions due to their costs. In this study, patients in rural Alabama at two health clinics in Greenville, Alabama were asked to answer questions concerning their prescription drug use, medication non-adherence, and methods used to reduce the cost of their medications. The purpose of this study was to determine the effects that prescription drugs costs have on patients’ lives and to attempt to assess the levels of non-adherence in rural areas.

Modulations in EEG Activity in Older vs. Younger Adults During a Working Memory Task
Jonathan Kentros, Kristina Visscher, Ryan Vaden

The way in which the brain processes any given input depends on the person’s task state. For example, you are more likely to remember stimuli to which you attended. Behaviorally, it has been shown that people who are better at ignoring irrelevant, distracting infor-
Information tend to have better working memory abilities, and that this distinction is especially apt for older adults. These experiments explored how ongoing neural activity characterizing the state of the nervous system is altered based on instructions. Electroencephalography (EEG) was used to determine whether brain activity before each trial of a task correlates with subsequent behavioral performance. The major goal was to quantify differences between older (65 - 90 y.o.) and younger (19 - 30 y.o.) adults in the levels of modulation of oscillatory neural activity in anticipation of a stimulus as well as to correlate this level of modulation with individuals' performance on a neuropsychological measure of working memory. Subjects performed different tasks requiring either ignoring or attention to various images followed by an image recall test. Reaction times and percentages correct for performance on each task were measured. For all tasks, older adults showed significant delayed responses in the Remember 2 task (p=0.0473) and significantly lower proportion correct in the Rember 2 task than did younger adults (p=0.0138). Across subjects, it was shown that the younger group of adults had higher prestimulus alpha levels than the older group, however this difference was not statistically significant (p>0.05). Younger subjects showed much sharper and more well-defined peaks in the alpha band than older subjects, whose peaks were typically flatter. This pattern was quantified and determined to be significantly different across age groups (p<0.05). This quantifiable pattern may allow a means for more precise investigation into the relationship between aging, memory, and EEG activity.

Implementing Pathology and Radiology into the Clinical Years of Medical School
Mary Catherine Laney, Daniel Avery

An important educational objective of the University of Alabama School of Medicine is the integration of basic sciences into the last two years of the medical school curriculum. Radiology and pathology are important areas in the field of medicine yet they have not been incorporated into the clinical years. Students could have the opportunity to study recently deceased, fresh, unembalmed bodies under the tutelage of forensic pathologists through the medical examiner’s office and the Alabama Department of Forensic Sciences at the University of Alabama School of Medicine Tuscaloosa Regional campus. This opportunity could more than fulfill the LCME requirements for gross anatomy, anatomical pathology, physiology, histology and pharmacology.

Diversity Among Alabama’s Farm Community: An Agromedicine Approach and Participant Action Research
Alexis Mason, John Wheat, James Leeper

Introduction: Programming interventions for the health hazards faced by farmers, farm families and farm workers is complicated by the reluctance of farmers to engage with would be benefactors, such as health care officials and university personnel.

Purpose: This project was conducted to engage farmers in a participant action research initiative through an agromedicine approach to explore the magnitude of the diversity among Alabama farmers that will need to be accounted for in planning interventions for their health concerns and risks. We explored the variation in farmers by race, age, and geographic groupings.

Methods: A pre-existing agromedicine partnership between Alabama Cooperative Extension System and the Rural Medical Scholars Program was expanded to develop an agromedicine policy committee of farmers that produced a questionnaire to characterize farmers, their concerns and risks. After pilot testing the survey in West Alabama, the policy committee directed the agromedicine research team to expand and diversify the use of the questionnaire, which led to collaboration with The Tuskegee University Cooperative Extension System, research assistants from Alabama HBCUs, and minority farmers.

Findings: We found it feasible to form an agromedicine partnership with a diversity of academic institutions, extension programs and agents, and farmers. The questionnaire was acceptable to the farmers in the focus groups, which constituted a convenience sample of 81 respondents, 60% white and 40% black. There was variation in the farm sizes, products, geographic location, worker makeup, health concerns, exposures, hazards, and health care experiences. Multiple variables among these types of characteristics showed significant associations to farmer race and age and to geographic grouping.

Conclusions: This exploratory study showed a) the utility of an agromedicine approach and participant action research with farmers and b) the suggestion of great diversity among farms and farmers that needs to be confirmed and consulted during the planning of interventions directed at the population of Alabama farmers and their families and workers.
From the Research Day Coordinator...

The College of Community Health Sciences represents a diverse combination of faculty, residents, staff, medical students, and graduate students. We are all diligently working, but we do not always know what our colleagues are working on. Therefore, we host the CCHS Annual Research Day to display our collaborative research efforts and inform ourselves and The University of our findings.

Lea Yerby, PhD

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Judges

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