

2018-2019 Projects

Visuospatial Abilities And Success in A Physical Therapy Program: Is There a Relationship?

The purpose of this pilot study is to examine the predictive validity of a battery of visuospatial tests in predicting student success in laboratory based courses in a physical therapy curriculum. The selected visuospatial battery is comprised of brief, validated tests with published normative data that measures visuospatial attention, visuospatial memory, visual perception, visuospatial construction, and visuospatial reasoning. Our central hypothesis is that visuospatial tests can predict student success in laboratory based courses in our physical therapy curriculum.

The following aims in incoming UAMS physical therapy students will be tested:

Aim 1: To test a standardized visuospatial battery's ability to predict student performance in laboratory based courses in a physical therapy curriculum.

Aim 2: To identify which aspects of visuospatial function best predict student performance in laboratory based courses in a physical therapy curriculum.

Christopher Walter - College of Health Professions, Department of Physical Therapy
Denise Compton - Walker Memory Center, Thomas and Lyon Longevity Clinic

Funding: \$3,121

Providing Quality Laboratory Results at Community Health Fairs

This project aims to 1) provide education to testing personnel on the guidelines provided by the Clinical Laboratory Improvement Act, 2) increase student competence and confidence in providing quality laboratory test results, 3) provide access to health screenings to a underserved minority population in the Little Rock community in an effort to identify and provide intervention treatment options for health fair attendees, 4) monitor the prevalence of cardiovascular indicators among minority populations of the Little Rock metropolitan area and 5) establish an opportunity for students to collaborate and satisfy the required inter professional education practice activity by providing a meaningful learning experience through participation in a health fair.

Lindsey Gilbert - College of Health Professions, Department of Laboratory Sciences
Jason Key- College of Health Professions, Department of Laboratory Sciences
Nathan Johnson - College of Health Professions, Department of Laboratory Sciences
Cherika Robertson - College of Health Professions, Department of Laboratory Sciences
Amber Teigen - College of Health Professions, Department of Physician Assistant Studies

Funding: \$5,000

A Longitudinal Study of Student Stress in Physical Therapy and Physician Assistant Students

The purpose of this pilot study is two-fold: 1) evaluate and characterize stress levels in CHP physical therapy students and physician assistant students throughout the first and second years of their academic program; and 2) explore the relationship between student stress levels and GPA. The goal of this study is to provide information for CHP academic faculty in regards to trends in student stress levels and the relationship of stress levels on academic performance so that academic faculty and leadership may implement effective strategies to further support student success in these programs. The long range goal is to expand on the findings of this pilot study to include all students in CHP in a larger subsequent study.

Angel Holland- College of Health Professions, Department of Physical Therapy
Tiffany Huitt Amber Teigen - College of Health Professions, Department of Physician Assistant Studies

Funding: \$3,470

An Interprofessional Fluoride Varnish and Silver Diamine Fluoride Program

Caries screening for children enrolled in the UAMS Head Start Program. All children determined to need treatment will receive silver diamine fluoride (SDF). Specific aims: 1) arrest active decay with SDF within a vulnerable low socioeconomic status (SES) population; 2) oral hygiene education for children, their parents within a vulnerable low SES population; 3) interprofessional collaborative oral health education and training for students and faculty preceptors from other professions at the 12th Street Health and Wellness Center. The outcomes include decreasing the prevalence of caries through SDF, decreasing incidence of caries through oral hygiene education by way of interprofessional collaboration.

Melissa Clark- College of Health Professions, Department of Physician Assistant Studies
Claire Tucker- College of Health Professions, Department of Dental Hygiene

Funded: \$2,767

Use of Imaging to Validate Increased Neural Connectivity Following Hearing Aid Use and Brain Training In Older Adults with Hearing Loss

The goal of this preliminary study is to validate the changes in brain's neural connectivity following brain training and hearing aid use in older adults with hearing loss. Lately, there has been great interest in interdisciplinary research that combine auditory and cognitive science to better understand speech perception difficulties faced by the elderly persons with HI. The current proposal expands this line of research using randomized control study to validate the benefits of brain training (auditory-cognitive training).

Hence the specify aims of the project are;

1. to validate the functional changes in speech perception ability after auditory-cognitive training in first time hearing aid users.
2. to document changes in temporal and frontal lobe neural connectivity using resting state fMRI following auditory-cognitive training in first time hearing aid users.

Amy Amlani - College of Health Professions, Department of Audiology and Speech Pathology
Naveen K. Nagaraj - College of Health Professions, Department of Audiology and Speech Pathology
Gopee Krishnan - Department of Speech & Hearing, School of Allied Health Sciences, Manipal Academy of Higher Education, Manipal, India
MM Kishan - Department of Speech & Hearing, School of Allied Health Sciences, Manipal Academy of Higher Education, Manipal, India

Funded: \$5,000

2017-2018 Projects

Project: A Mindfulness and Cognitive Based Educational Workshop for Students in the Health Professions

Project Co-Directors: **Tiffany Huitt**, Ph.D. and **Amber Teigen**, M.M.Sc.-PA-C (Department of Physician Assistant Studies)

Category: Education Enhancement

Problem or Need: Graduate education in the health sciences is a highly demanding and rigorous experience that often induces stress, anxiety and potential depression in students. The impact of these conditions can be detrimental to a student's health, cognitive abilities and overall academic performance. In an environment of increasing cognitive load and stress associated with increased performance expectations, it is imperative that we provide our students the skills necessary to manage stress and improve cognitive performance in their curriculum. To meet this need, this project will introduce students to the evidence based methods of Mindfulness and cognitive based educational practices.

Proposal: We will deliver a high quality educational workshop available for all students and faculty in CHP on the evidence based methods of Mindfulness and cognitive based educational practices. Extending the benefits and offerings of the innovative and novel PA Mindfulness Training program, this 3 hour workshop will include 1) a 90 minute keynote presentation by Molly Beauregard, professor of sociology and co-founder of Tuning the Student Mind Foundation; 2) 60 minute presentation on the evidence based methods of mindfulness and meditation; and 3) 30 minutes of practice based application in meditation and self-reflection.

Expected Outcomes: Through mindfulness training, students will be provided with skills to lessen the impact of stress and anxiety with the aim of improving health, cognitive abilities and overall academic performance.

Amount Requested: \$4,320

Project: Improving the Outcome Measures in Stroke Rehabilitation using Rasch Analysis

Project Director: **Manjeshwar Sahana Kamath**, PT, Ph.D. (Department of Physical Therapy)

Category: Research

Problem or Need: The outcome measures used in stroke individuals are not sensitive enough to effectively capture the changes occurring as a result of rehabilitation. Our project addresses this issue present in stroke outcome measures and aims to make them more sensitive to changes occurring in patient's functional status. This project will concentrate on the commonly used outcome measures considered the gold standard in the stroke patient population assessment. Recording the changes truly representative of the change in patient status would help impact the quality of healthcare as well as the motivation of the patient.

Proposal: The Rasch analysis technique would be used to itemize content items in the Fugl Meyer Assessment (FMA) scale in order of difficulty of performance. Patients would be tested on performance of each of these items. If patient is able to successfully perform a test item higher on difficulty scale while being unable to complete easier items on the outcome measure, the easier item would be marked as the source of bias which may reduce sensitivity of the outcome measures. These outcome measures would then be retested with or without these "bias causing" items to assess the change in their sensitivity.

Expected Outcomes: The patients will be assessed using the Fugl Meyer Assessment scale before and after Rasch analysis is applied to the items on it. The comparison of the extent of change seen in the score with and without Rasch analysis will be assessed using statistics. This would help understand how much more sensitive the outcome measure got with the elimination of the items that were the cause of bias.

Amount Requested: \$5,000

Project: Reaching New Heights: Reflecting the ARChild Mission Statement through Reading and Educational Activities

Project Director: **Melissa Clark**, Pharm.D., M.P.H. and **Amber Teigen**, M.M.Sc.-PA-C (Department of Physician Assistant Studies)

Category: Education Enhancement

Problem or Need: Children at ARChild have a limited number of readily available books. Although their current selection may contain culturally diverse or health care themes, the collection is limited secondarily to budget constraints.

Proposal: With this grant, we will increase the size and variety of the book collection at ARChild which will subsequently increase the exposure of ARChild students to both cultural diversity as well as health care. The purchase of various educational tools will assist the PA Students in developing health care related educational activities. These activities will be designed to promote good health practices among the ARChild population.

Expected Outcomes: The effectiveness of the project will be achieved by comparing the current number of available books at ARChild that focus on medicine or diversity to the number of books provided by this grant funding. In addition, PA Student reflections and surveys, as well as surveys of the administrators and teachers at ARChild will provide feedback on the impact the additional books and educational tools have provided. These surveys will include satisfaction surveys and perceived impact of the increased access to books and the educational activities developed by the PA students. All educational activities will be approved by the administration at ARChild

Amount Requested: \$3,500

2016-2017 Projects

Project: Interprofessional Simulation Training in the 1-3-6 Timeline among Audiology, Nursing, and Speech Language Pathology Students

Project Co-Directors: **Ahmad A. Alanazi**, Au.D., Department of Audiology and Speech Pathology (Student), **Nannette Nicholson**, Ph.D., Department of Audiology and Speech Pathology

Category: Education Enhancement

Problem or Need: Given the importance of neonatal hearing screening, diagnosis, and intervention including IPE/IPP, training to achieve the knowledge and skills necessary for effective services is paramount. The training of audiology, nursing, and speech language pathology students regarding how to: (a) conduct infant hearing screening and diagnosis, (b) counsel the parents regarding the results and next steps in the hearing loss identification and re/habilitation process, and (c) appreciate the benefits of the 1-3-6 timeline, is critical to the success of the Early Hearing Detection and Intervention (EHDI) initiative. Therefore, audiology, speech language pathology, and nursing students need training on how to conduct and appreciate the importance of the 1-3-6 timeline.

Proposal: The PI and study personnel will develop and stage an 'educational simulation scenario' in which (audiology, speech language pathology, and nursing students have the opportunity to learn and practice hearing screening or testing and intervention with Baby ISAO, and (b) learn and practice counseling skills with standardized parents. The impact of the simulation on learners' knowledge, skill, and confidence will be assessed.

Expected Outcomes: (1) The Infant Hearing Screening, Intervention, and Counseling simulation sessions will prove efficacious and become an important training and pedagogical tool for participants. (2) Participants' skills and confidence levels will improve after the simulation sessions.

Amount Requested: \$2,240

Project: Arkansas Stuttering Network

Project Co-Directors: **Ashlen Thomason**, M.S., Department of Audiology and Speech Pathology (Student), **Betholyn Gentry**, Ph.D., Department of Audiology and Speech Pathology

Category: Education Enhancement

Problem or Need: For the estimated 29,600 Arkansans who stutter, access to treatment and supportive resources is limited. Finding local speech-language pathologists with experience or expertise in the treatment of fluency disorders is improbable. The search for community resources for overcoming functional, stuttering-related challenges relative to academics and employment is ineffectual. Opportunities for connecting and gaining support from others who stutter and their families are scarce. The Arkansas Stuttering Network is a service project designed to challenge the obstacles of access to holistic care for our community members who stutter.

Proposal: The Arkansas Stuttering Network is a support system of people who stutter, local therapists, fluency specialists, and speech pathology graduate students uniting to elevate the quality of care available to Arkansans who stutter. The hub of the Arkansas Stuttering Network is a website connecting people who stutter to support groups, a list of local therapists who desire to serve people with fluency disorders, access to a phone line designed to allow practice for making calls, appointment availability for rehearsal for interviews and presentations, mentor-mentee matching among kids and teens who stutter, and a scholarship for a college-bound student who stutters.

Expected Outcomes: The aim of the Arkansas Stuttering Network is to mitigate the ongoing lack of stuttering care in our state. Exposing a generation of clinicians to the void in stuttering services in Arkansas, an intimate view of the challenges faced by people who stutter, the satisfaction of helping people with fluency disorders, and the demand for services from clinicians competent in stuttering treatment will help to inspire clinicians to provide make available higher quality services to our neighbors who stutter. Drawing people who stutter to the University of Arkansas for Medical Sciences/ University of Arkansas Little Rock Speech & Hearing Clinic will increase the

number of clinical practicum hours that students will get with fluency disorders, raising the number of clinicians competent in stuttering in our state. The service experiences will make salient the importance of the information in their Fluency Disorders graduate course. The Arkansas Stuttering Network graduate assistantship will help to supplement financial support to a speech-language pathology graduate student. The list of contact information for local speech-language pathologists who desire to serve people who stutter will help people with fluency disorders to have an easier search for professional treatment. Local speech-language pathologists will have services like Fluency Phone, the Stuttering Mentorship Program, and free presentation and interview practice to point their clients toward for supplementary services outside of the therapy room. People who stutter will have access to network opportunities among others with fluency disorders through advertised camps or support groups as well as the Stuttering Mentorship Program. They will also have free services to help them overcome functional communication challenges like making phone calls, job interviewing, and giving oral presentations. Teens and kids who stutter will gain peers and potential role models who stutter. For one Arkansas teen who stutters, that support system will include scholarship assistance.

Amount Requested: \$5,000

Project: Enhancement of RES 4133: Patient and Family Centered Care

Project Co-Directors: **Kelly Betts**, Ed.D., College of Nursing, **Erna Boone**, Dr.P.H. Department of Respiratory and Surgical Technologies, **Tonya Cook**, M.Ed., Department of Respiratory and Surgical Technologies, **Mitzi Efurd**, Ed.D., Department of Dental Hygiene, **Kat Neill**, Pharm.D., College of Pharmacy and Center for Interprofessional Education, **Cindy Saylor**, M.Ed., Department of Imaging and Radiation Sciences

Category: Education Enhancement

Problem or Need: During the initial scenario of our current simulation in RES-4133: Patient- and Family-Centered Care, students remain in their "silos", focusing on their profession's role in patient assessment. The competencies of interprofessional education (IPE) and patient- and family-centered care (PFCC) are not being demonstrated until after they are de-briefed and begin to think about these domains.

Proposal: We want to develop a simulation that involves interprofessional behavioral counseling or health education. After randomly assigning teams to each of the simulations, we will compare the students assigned to the newly developed simulation compared to the students who work through the current simulation in terms of their proficiency in applying **IPE** and PFCC concepts during the simulation

Expected Outcomes: We will measure 1) student and facilitator satisfaction; 2) mean number of times each group of students demonstrates IPE and PFCC competencies during their assigned simulation; 3) pre/post simulation knowledge and attitudes and 4) themes students reveal during a reflection on the course to see if there are differences between the groups.

Amount Requested: \$4,917

2015-2016 Projects

Project: The Protective Role of Blueberry in Endothelial Cells

Project Director: **Rafaela G. Feresin**, Ph.D., Department of Dietetics and Nutrition

Category: Research

Problem or Need: Hypertension is a chronic disease that affects one billion people worldwide and its prevalence is associated with aging in both genders. Reduced endothelial function, characterized by increased vasoconstriction and decreased vasodilation, is one of the main features of hypertension. High levels of oxidative stress and inflammation are also involved in endothelial dysfunction. Life expectancy continues to increase which has contributed to the increased population at risk of developing hypertension. Thus, studies designed to identify nutritional strategies to prevent endothelial dysfunction and hypertension, are urgently needed to cope with these imminent challenges for public health.

Proposal: Angiotensin II, a peptide involved in the development of cardiovascular diseases, will be used to induce oxidative stress and inflammation in endothelial cells *in vitro*. Blueberry polyphenol extract has great antioxidant and anti-inflammatory capacities and will be therefore used in the attempt to ameliorate the aforementioned detrimental processes. The result of this project will provide a better understanding of the molecular mechanisms regulating the protective effects of blueberry polyphenols on preventing endothelial dysfunction and disease. In addition, the data generated will be used as preliminary data for federal grant applications and may become a student's thesis project.

Expected Outcomes: This study will be the foundation for future research to develop therapeutic interventions that use natural compounds to prevent/treat age-related diseases relevant to public health. More importantly, this study will bring forth new evidence that blueberries can be used as a complementary and/or alternative therapy to prevent endothelial dysfunction and hypertension and reduce the risk of CVD. The results from this project will be used as preliminary data in support of proposal that will be submitted to the following programs: (1) Function and Efficacy of Foods Program which is one of the areas of the Foundational Program offered by the Agriculture and Food Research Initiative (AFRI)-US Department of Agriculture; (2) R01 - the National Center for Complementary and Alternative Medicine (NCCAM); (3) Grant-in Aid Program: the American Heart Association. In addition, this project will allow students to be trained in basic research and molecular techniques in the area of nutrition and cell biology and may become a student's thesis project.

Amount Requested: \$5,000

Project: Use of Baby ISAO Simulator and Standardized Parents in Hearing Screening and Parent Counseling Education

Project Co-Directors: **Ahmad A Alanazi**, Student; **Nannette Nicholson**, Ph.D., Faculty; **Samuel R Atcherson**, Ph.D., Faculty; **Clifford A Franklin**, Ph.D., Faculty, Department of Audiology and Speech Pathology

Category: Education Enhancement

Problem or Need: Accurate hearing screening of newborn infants and competent delivery of test results to parents is a critical step in the process of early hearing detection and intervention (EHDI), and critical to the effectiveness of the state Infant Hearing Program at the Arkansas Department of Health. The purpose of this project is to pilot a curriculum designed for use with Baby ISAO (infant simulator) and standardized parents to facilitate the acquisition of knowledge, skills, and confidence of Au.D. students, nursing students, and other health related personnel in conducting infant hearing screening and counseling the parents regarding the results.

Proposal: (1) We will pilot the infant hearing screening and counseling curriculum with ~ 18 graduate students enrolled in the Doctor of Audiology (Au.D.) graduate program. (2) We will make revisions to the curriculum based on qualitative and quantitative pilot data and feedback from the simulation center. (3) We will validate the curriculum training module by partnering with the UAMS and UALR nursing programs to train student nurses in

best practice methodology for birth hearing screening and counseling. (4) We will submit the Baby ISAO Hearing Screening and Counseling model curriculum for a national presentation and publish an article about the pilot study.

Evaluation of Effectiveness or Impact: (1) Pilot study participants will complete a pre- and post-session questionnaire regarding level of confidence with specific hearing screening and counseling knowledge and skills. (2) Participants will complete a satisfaction survey of their learning experience using simulation and standardized parents (immediately after the session). (3) Participants will write a reflection paper about their experience with the simulation sessions on the day followed the simulation sessions. (4) Study personnel and participating faculty and simulation center staff will complete a rating scale following the simulation training sessions (Questions: What went well, what didn't go well, what can we do better next time?)

Amount Requested: \$3,620

Project: VOLARE-Video Observation of Learning in Auditorily-Responsive Environments

Project Co-Directors: **Mary Ellen Nevins**, Ed.D., Department of Audiology and Speech Pathology; **Kathleen Sussman**, Weingarten Children's Center, Redwood City, CA

Category: Education Enhancement

Problem or Need: Accreditation standards for speech language pathologists and audiologists are based on knowledge and skill competencies. Learning content alone does not guarantee competence in service provision. Best practice models for student education include observation, practice, application and reflection. Unfortunately, students have limited opportunity for exposure to highly competent service providers demonstrating listening and spoken language skills across a range of children who are deaf or hard of hearing on which to model skill development. Principles of adult learning call for *seeing* best practice as a prelude to developing targeted strategies; however, a dearth of resources is currently available.

Proposal: In partnership with the Weingarten Children's Center (WCC) in Redwood City California, a well-regarded listening and spoken language center of excellence, the VOLARE Project will create a video library of 100 instructional video segments that demonstrate the important fundamental through advanced provider skills that encourage excellent listening and spoken language outcomes for young children with hearing loss. This library will be available to course instructors for video-embedding and will serve as a "lab" for students for comprehensive skill development.

Evaluation of Effectiveness or Impact: The quality of a random sample of videos will be evaluated by volunteers from the UAMS Educator's Academy using select items from the Questionnaire for User Interaction Satisfaction (QUIS) or a similar user satisfaction survey (<http://www.lap.umd.edu/quis/>). We will collect quantitative data regarding the number of videos recorded, the number of participating instructors modeling best practice behaviors and skills, and the number of students/professionals viewing videos in classes/continuing education courses. We will collect qualitative data regarding observations of best practice videos through course related process observation guided inquiry learning (POGIL) activities.

Amount Requested: \$4,799

2014-2015 Projects

No Dean's Society Grants were awarded in 2014-2015

2013-2014 Projects

Project: Coordinated School Health Fairs: A Collaborative Service-Learning Project between the UAMS College of Health Professions (CHP) and the Central Little Rock Promise Neighborhood (CLRPN)

Project Co-Directors: **Erna Boone**, Dr.P.H., Department of Respiratory and Surgical Technologies; **Carla Coley**, Pharm.D., Department of Imaging and Radiation Sciences

Category: Service-Learning

Problem or Need: The CHP Service-Learning Task Force seeks to improve health through implementation of coordinated health fairs for over 2,000 children in the CLRPN and to enhance cultural competency, interprofessional collaboration and civic engagement of CHP students through participation in and reflection on their health fair experiences.

Proposal: The Task Force will continue to add to the template for health education and screening activities, especially for the CLRPN middle school. Additionally we will continue developing pre- and post-activities for the college and we will continue working to increase awareness about the benefits of and objectives of service-learning.

Evaluation of Effectiveness or Impact: The Task Force will use survey and focus group data to help determine the impact of the health fairs on all participants. In addition CHP participants will participate in pre- and post-activities such as reflection pieces which will aid in evaluation.

Amount Requested: \$5,000

Project: Interprofessional Student Training and Intervention for Individuals with Dual-Sensory Loss

Project Co-Directors: **Lori Dean**, M.S., Department of Genetic Counseling; **Jennifer Franklin**, Au.D., Department of Audiology and Speech Pathology; **Suzanne Hansen**, M.S., Department of Ophthalmic Medical Technology; **Pat Highly**, Au.D., Department of Audiology and Speech Pathology; **Tim Lim**, Au.D., Department of Audiology and Speech Pathology; **Debra C. Vattimo**, M.S., World Services for the Blind

Category: Education Enhancement

Problem or Need: There is an increasing prevalence of individuals with dual-sensory impairments (vision and hearing loss). These individuals require a unique interdisciplinary intervention plan designed by a specialty team including low vision specialists, psychologists, rehabilitation teachers, counselors, mobility specialists and audiologists. The interdisciplinary nature and specialized population would provide audiology, speech pathology, genetic counseling and ophthalmic medical students with a unique training opportunity.

Proposal: The Department of Audiology and Speech Pathology will work with World Services for the Blind (WSB) in Little Rock to establish an on- and an off-campus audiology clinic for their clients. Faculty and students will provide staff training, screening, diagnostic and intervention services.

Evaluation of Effectiveness or Impact: Pre- and post-testing of students' knowledge about dual sensory loss will be conducted. In addition, the student assistant will track the number of clients from WSB who receive services as well as the types of services provided. This data will be compared to historical data for estimates of percent increase.

Amount Requested: \$4,418

Project: Evaluation of the HEARLab™ Cortical Evoked Potential System in Bone-Anchored Implant (BAI) Users

Project Co-Directors: **Samuel Atcherson**, Ph.D., Department of Audiology and Speech Pathology; **John Dornhoffer**, M.D., College of Medicine, Department of Otolaryngology – Head and Neck Surgery; **Jillian Kimberlain**, Au.D., Arkansas Children’s Hospital, Audiology and Speech Pathology Department; **Nannette Nicholson**, Ph.D., Department of Audiology and Speech Pathology

Category: Research

Problem or Need: Bone anchored implants (BAI) are hearing devices fixed to the skull for individuals with conductive hearing loss or single-sided deafness. Compared to conventional hearing aids, BAIs cannot be measured objectively from an acoustic microphone placed in the ear canal. Cortical auditory evoked potentials (CAEP) recordings may be a valid substitute.

Proposal: We will use the new HEARLab™ system in BAI patients to record cortical brain responses to validate and compare pure tone audiometry at 500, 1000, 2000, and 4000Hz with soundfield results, and to verify the audibility of soft comfortable, and comfortably loud levels per recommended hearing aid procedures.

Evaluation of Effectiveness or Impact: Comparisons between HEARLab™ results and soundfield results will provide immediate feedback on inter-test reliability, and HEARLab™ results using speech stimuli will give us immediate feedback on the efficacy of the BAI surgery and programming of the device. Overall results should provide data to the broad audiology/ENT community.

Amount Requested: \$4,220

2012-2013 Projects

Project: Infant Hearing Decisions Pilot Study

Project Co-Directors: Nannette Nicholson, Ph.D., Department of Audiology and Speech Pathology; Josh Spann, Student, Department of Audiology and Speech Pathology

Category: Service-Learning

Problem or Need: Research suggests many parents of newly identified children with hearing loss are not well prepared to make necessary decisions in a timely manner regarding their child's hearing loss. Training and practice in the decision-making process can facilitate the intervention process and reduce intervention delays.

Proposal: The goal of this project is to develop and evaluate a DVD tool called Infant Hearing Decisions that will provide parents and family members of infants with hearing loss decision-making strategies regarding the education, communication, and technology use of their child.

Evaluation of Effectiveness or Impact: Effectiveness will be evaluated by conducting usability and performance tests with service providers and families and by pilot testing the prototype program with 20 parents and family members (total N=40) of infants with hearing loss.

Amount Requested: \$5,000

Project: Coordinated Elementary School Health Fairs: A Collaborative Service-Learning Project between the UAMS College of Health Professions and the Central Little Rock Promise Neighborhood

Project Co-Directors: Erna Boone, Dr.P.H., Department of Respiratory and Surgical Technologies; Julie Hall, M.Ed., University District Educational Network and Central Little Rock Promise Neighborhood

Category: Research

Problem or Need: Schools in the Central Little Rock Promise Neighborhood have chosen to meet Arkansas school requirements through health fairs. Needs include systematic and central organization to better utilize available resources (and identify new resources) and optimize attendance to effectively meet community needs and desired outcomes as identified by the Promise Neighborhood.

Proposal: We will create a template of health education and screening activities, a master menu of all "stations" for health fairs for schools to choose from, operation manuals for CHP stations, pre- and post-activities for CHP student participants, training for students/staff/faculty, develop screening referral forms, and hold post-evaluation with school principals/nurses.

Evaluation of Effectiveness or Impact: Collect data to help determine impact of the health fairs on all project participants, use surveys and focus group results and data obtained from all CHP participants during de-briefing sessions to assist in future health fair planning, and assess CHP student learning outcomes through pre- and post-surveys.

Amount Requested: \$3,000

2011-2012 Projects

Project: Interprofessional Collaborative Practice Education: Ventilator Bundle

Project Co-Directors: **Michael E. Anders**, Ph.D., Department of Respiratory and Surgical Technologies; **Tonya R. Cook**, M.Ed., Department of Respiratory and Surgical Technologies; **Theresa A. Gramlich**, M.S., Department of Respiratory and Surgical Technologies; **Karen Jeans**, Ph.D., College of Nursing; **Kendrea M. Jones**, Pharm.D., College of Pharmacy; **Tobias J. Vancil**, M.D., College of Medicine, Division of General Internal Medicine

Category: Education Enhancement

Problem or Need: Many patients receiving mechanical ventilation have complications that cause increased mortality, morbidity, and costs. Ventilator bundles prevent these complications, to the extent that health care providers adhere to them. Interprofessional collaborative practice and education are recommended; however, the feasibility and impact of an interprofessional ventilator bundle educational program are unknown.

Proposal: We will develop and use: (a) an interprofessional collaborative practice educational program, with Internet-based modules and clinical simulations and (b) measurement instruments to assess program feasibility and impact on knowledge, perceptions, and ventilator bundle competencies and team-based competencies. Our long-term goal is to conduct extramurally funded research to improve patients' outcomes.

Evaluation of Effectiveness or Impact: We will assess feasibility through a descriptive analysis. We will assess impact through an analysis of: (a) pre-and post-assessments of knowledge and perceptions among participants, (b) pre-and post-assessments of knowledge and perceptions between participants and comparison groups, and (c) ventilator bundle competencies and team-based competencies during clinical simulation.

Amount Requested: \$2,575

Project: Using Interactive Technology in the Nutritional Education of School-Age Children

Project Co-Directors: Lori Maddox, M.S.; Tina Crook, Ph.D.; Dana Gonzales, Ph.D., Reza Hakka, Ph.D., Department of Dietetics and Nutrition

Category: Education Enhancement

Problem or Need: Educating children to make healthy food choices is a critical component in combating increasing rates of childhood obesity¹ and associated health conditions. This project will address the need for innovative, age-specific nutrition lessons for Arkansas school children. Such lessons will provide children of grades K-12 a greater knowledge of nutrition using new, interactive educational technology.

Proposal: A collection of interactive white board lessons will be developed to present nutrition lessons to school-aged children. The lessons will address nutrition concepts important at the stage of development of the audience, presented in an age-appropriate fashion. With the use of the interactive whiteboard, children will be able to actively participate in the lessons.

Evaluation of Effectiveness or Impact: The effectiveness of the project will be evaluated by a survey tool assessing the increase of nutrition knowledge and attitudes pre- and post-lesson. Each survey will be age and developmentally appropriate to elicit the most accurate responses.

Amount Requested: \$2,984

Project: Distance Education Course in Dental Imaging

Project Co-Directors: Cindy Saylor, M.Ed., Department of Imaging and Radiation Sciences; Katy Warren, M.Ed., Department of Dental Hygiene

Category: Education Enhancement

Problem or Need: With the current practice of in-office training of dental assistants, there is great inconsistency in the quality and scope of the instruction being provided. With new imaging technology, there is great concern for the potential for a lack of understanding (and therefore practice) of radiation safety principles to safeguard both patients and assistants.

Proposal: We propose to develop a comprehensive self-paced course provided via distance education with an accompanying workbook (authored by the grant applicants). The on-line course would also include instructional videos and learning activities. Following completion of the course, participants must successfully complete an examination over the course content as well as clinical competency assessments under the supervision of the employing dentist.

Evaluation of Effectiveness or Impact: The effectiveness of the course would be assessed by the number of dental assistants completing the course and receiving a radiography permit. Descriptive comments on the quality, scope, and delivery of the course will also be included in project evaluation.

Amount Requested: \$2,100