

Nutrition Center Affiliates Present Innovate Research at APHA this year

A number of Nutrition Center Affiliated Scholars will be traveling to Boston November 2-6, to present innovative research at the American Public Health Association Annual Meeting. This year the following research abstracts were accepted for presentation:

Household food security

Urban very low food-secure families experience similar demands, but have fewer assets to adapt compared to other food-insecure families

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The US has set a goal of eliminating very low food insecurity in children (VLFSC) by 2015, but little is known about why some families experience VLFSC. The Family Adjustment, Adaptation, and Response model provides a framework for examining the potential differences between VLFSC and other food-insecure families. We hypothesized that VLFSC is associated with more crises, greater demands, and fewer assets. The Midlands Family Study used in-person surveys to investigate household and community conditions associated with VLFSC. Using the Household Food Security Scale, we compared VLFSC (n=100) families to other food insecure (n=108) families. Caregivers were recruited from randomly selected food systems sites (e.g., food pantries, CACFP day cares, farmers' markets) in Columbia, SC. Using logistic regression, we calculated the odds a family was classified as VLFSC compared to FI using valid and reliable measures of demands and assets. VLFSC families experienced more crises in the past year than other FI. Demands, such as bills, homelessness, and domestic violence were not significantly different in VLFSC. VLFSC families reported statistically significantly ($p < 0.05$) reduced odds of having assets, such as \$500 in monthly income (OR=0.82), family support (0.85), and their child participating in a summer feeding program (OR=0.52). Families experiencing VLFSC are similar to other food insecure families but have fewer assets to manage crises. Policies to improve wages, increase access to summer feeding programs, and allow families to remain in communities with extended family support are important for eliminating VLFSC.

Contextual factors associated with use of healthy and unhealthy food choice coping strategies among food insecure parents

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INTRODUCTION: Parents' struggles to integrate multiple demands when feeding their families often involve the use of food choice coping strategies (FCCS). Food insecure families may be particularly vulnerable to the use using greater unhealthy and fewer healthy FCCS. The purpose of this study was to examine associations between individual and contextual factors and the use of different FCCS among food insecure (FI) parents. METHODS: FI parents (n=204) participated in a survey to examine experiences of hunger. FCCS including speeding up (e.g. increased processed, ready-to-eat meals), individualized eating (e.g. family members eat meals at different times), and planning (e.g. prepping ingredients for meals in advance); Individual level factors including affinity with a healthy eating identity, stress, positive and negative life events; and contextual factors including urbanicity and social support were assessed. Data were analyzed using ordered logit and OLS models. RESULTS: Urban residence and reporting fewer positive life events over three years was associated with speeding-up meals (OR=1.99;p<.05 and OR=0.95;p<.05). Affinity with a healthy eating identity and social support from friends were positively associated with planning meals ($\hat{\alpha}=.14$;p<.05 and $\hat{\alpha}=.06$;p<.05). There were no associations between stress and any FCCS or between individual and contextual factors and individualized eating among these FI parents. DISCUSSION: Food insecure parents cumulative positive life experiences, an orientation toward healthy eating, and social support from friends may influence use of healthier FCCS. Food insecure parents living in urban areas or experiencing fewer positive life events may be susceptible to using unhealthy FCCS than their rural counterparts

Lifetime racial discrimination and risk of household very low food security

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Introduction –To achieve the USDA's goal of eliminating very low food security (VLFS), a better understanding of the factors that distinguish VLFS from low food security (LFS) is needed. Historical and contemporary racial discrimination produce inequalities in housing, education, and food access, which all can decrease food security; yet, the association between racial discrimination and food security has not been explicitly examined. Using cumulative inequality theory and a food justice framework, we investigated the association between lifetime racial discrimination and food security status. Methods – Survey data were obtained from a predominantly African-American sample (n=143/175) in SC. Participants were classified as VLFS or LFS based on the USDA Household Food Security Survey; they answered demographic questions and the Perceived Ethnic Discrimination Questionnaire (PEDQ) which uses 17 items to measure lifetime racial discrimination (Cronbach's $\alpha = 0.91$). We dichotomized the response to each item and summed across all items. Using descriptive statistics and multivariable logistic regression, we examined the association between lifetime racial discrimination and VLFS. Results – Seventy three percent of the sample experienced discrimination (mean PEDQ 4.6, SD PEDQ 4.9) and 67% were VLFS. In the logistic regression, after adjusting for demographic information, a one standard deviation difference in the PEDQ was associated with a 46% increased odds ($p = 0.045$) of being VLFS. Discussion –Among a VLFS and LFS sample, those with increased reports of lifetime racial discrimination were more likely to be VLFS. Addressing racial discrimination in the context of food security and food justice may reduce VLFS.

Food systems change

Children exposed to farm-to-school eat their veggies

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INTRODUCTION: Children in the United States consume too few fruits and vegetables (FV). Poor diet in childhood is associated with increased risk of obesity and obesity-related disease. The Farm-to-School (F2S) movement seeks to improve the supply of FV available to children. In 2011, South Carolina (SC) piloted F2S with four components: a partnership with local producers, SC grown foods in the cafeteria, promotion of SC grown foods, and a new or revitalized school garden. Our evaluation examined the impact of the F2S on children's FV consumption and parental perception of F2S on their families' food choices. METHODS: A quasi-experimental design using photographic plate waste methods at 18 schools compared FV consumption among children in F2S schools versus matched comparison schools. Five parental focus groups were conducted and field notes were taken to capture environmental contexts. RESULTS: In matched-controlled analyses children tasted and consumed more vegetables in F2S schools than in comparison schools (0.11 servings, $p < 0.10$), but children ate fewer fruits (-0.07 servings,

$p < 0.05$). This finding was attenuated when controlling for the sale of a la carte (ALC) snacks during lunch. Parents reported that children asked for more FV at home and that school gardens increased children's knowledge about food origin. **DISCUSSION:** Improving vegetable consumption is a public health priority, and the SC F2S initiative improved vegetable consumption. The influence of ALC items on fruit consumption reveals a need for advocacy efforts to address competitive food policies within schools. Overall, parents positively supported F2S, especially the garden component, and its continuation.

Copascities: Working together for food and systems change

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Childhood obesity develops within a community context in which families have trouble accessing and affording a healthy food supply. Communities are working to improve the food system by increasing farmer's markets, food processing, and farms and gardens. Encouraging consumers to take advantage of these early efforts and participate in meaningful ways is the dilemma that most communities face. In this presentation, we will describe a case study of a community organizing effort to engage families in food systems change in Chester, SC.

What do community coalitions need to be effective policy, systems, and environmental change agents?

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Determinants of health include policies, systems, and environments (PSE) that are designed to influence health behaviors. Little is known about designing capacity building trainings for community coalition members engaged in PSE change processes. This presentation will describe the quantitative and qualitative results of a survey completed by 75 individuals from 39 community coalitions in South Carolina involved in PSE change for healthy eating, active living, and tobacco-free living. Community coalitions' capacity levels and desired areas to increase capacity will be discussed related to policy advocacy, media advocacy strategies, community organizing, evaluation, needs assessments, and leadership. Results highlighted areas identified by community coalitions of needed priority and challenges related to planning and/or implementing PSE changes. Briefly, we found that a majority of community coalitions reported capacity building needs in developing funds outside of grants (76.9%), collecting data to prove a need exists (57.7%), and in aspects of community organizing, including social media advocacy (68.6%), emailing campaigns (56.9%), and legislative visits (43.1%). Survey results were used to design capacity building institutes. PSE change requires different skills and approaches than traditional public health programming, and systematic capacity building efforts are needed to prepare the new public health workforce. This presentation is likely to provide insights into designing and implementing capacity building trainings and can serve as a model for other communities interested in engaging in PSE changes.

Using photovoice as a tool for community engagement to assess the environment and health disparities and inform interventions

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Purpose: Photovoice, documentary photography, was used as a participatory research method to document perceptions of local environmental hazards, pollution sources, and potential impact on health among community members to inform action steps to address environmental health disparities.

Methods: A convenience sample of 16 adults (81% female) in Orangeburg County, South Carolina, a predominantly minority, underserved area with disparate health outcomes, was recruited and participated in a three-part implementation of photovoice. Participants completed a descriptive survey, received instructions, and took photos over specified period; selected and provided written descriptions for up to 10 photos; and engaged in a discussion after photo selection. Descriptive statistics were calculated for survey data. Photos and descriptions were reviewed using an iterative process involving participants, community leaders, and research team members.

Results: Photos depicted positive and negative implications of the environment and health across seven emergent themes: recreation and leisure; food access; hazards and pollution; health, human, and social services; economic issues; beautification; and accommodation and accessibility. Positive photos (e.g., fresh fruits and vegetables, community gardens) and negative photos (e.g., standing water, abandoned houses) demonstrated a high level of interest among community members in considering how the environment influences health and contributes to health disparities. Evaluation of photos resulted in preparation of an action plan to guide future advocacy to support positive elements of the environment and address negative ones.

Conclusions: Photovoice was successful in engaging participants in a thoughtful, strategic process of considering how the environment influences health and connects to health disparities. Participants were able to make connections that underscored the importance of environmental justice work in underserved communities. The next steps will include enactment of an action plan to sustain engagement and stimulate positive change to the environment to improve health in Orangeburg County.

Childhood obesity prevention

An interprofessional education program that includes clinical and community-oriented health professions fosters increased sensitivity to the complexity of childhood obesity

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INTRODUCTION: Long-term solutions to the childhood obesity epidemic will require concerted interdisciplinary efforts that are sensitive to both individual and social determinants. The Junior Doctors of Health© (JDOH) program involves interprofessional education (IPE) with University students from health science fields (e.g. medicine, pharmacy, dietetics, social work, public health) who deliver an interactive program in teams to at-risk school-aged youth. The purpose of this study was to assess the impact of participation in the JDOH IPE program on University students' beliefs about childhood obesity. **METHODS:** Students (n=52) enrolled in an IPE elective that incorporated the JDOH curriculum at two different universities participated in this study. Surveys assessed beliefs about importance and causes of and responsibility for childhood obesity among student participants before and after their IPE experience. Data were analyzed using paired t-tests. **RESULTS:** Results indicate that at pre-test, students ranked individual-level causes (e.g. fast food and junk food consumption) of and responsibility for (e.g. parents and the child) childhood obesity higher than those classified at the social or environmental level (e.g. crime or lack of places to exercise). Students also ranked childhood obesity as more important relative to other issues (e.g. drug use, violence). At post-test, significant increases were observed in identification of social/environmental level causes of and responsibility for childhood obesity, with ranked importance of childhood obesity significantly dropping to be as equally important to other issues affecting youth. **DISCUSSION:** Through an IPE experience that includes both clinical and community-oriented health professions, future health practitioners gained a greater sensitivity to the complexities of childhood obesity as both a social/environmental and individual level problem.

Overweight and obesity prevention and intervention in school aged children- USDA-NIFA supported programs

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The purpose of this session is to explore the most recent research funded by USDA – NIFA in the AFRI Competitive Grants Program – Childhood Obesity Prevention. Identifying the latest research and interventions from a variety of perspectives is important to gain a better understanding of the link between nutrition, physical activity and childhood obesity prevention. Exploring these programs is also a way to respond to the need for obesity prevention strategies across a variety of contexts, including schools and communities, and is relevant to a wide range of practitioners, researchers and policy makers.

Objectively measured physical activity levels of rural, suburban, and urban youth

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Background: Nationally, youth are not achieving 60 minutes of daily moderate to vigorous physical activity (MVPA). Studies suggest that rural adults are less active than their urban counterparts, although studies of children are equivocal. The goal of the present study is to describe objectively measured MVPA in rural, suburban, and urban youth. Methods: Youth from 20 counties in North Carolina who provided a minimum of four monitored days of PA (via accelerometer) and demographics were included in the analyses (n = 804, 54% female). Two random-effects regression models were estimated separately for boys and girls. The dependent variable was minutes of MVPA/day continuous and binary (≥ 60 min vs. < 60 min MVPA/d). Race, monitor wear time, urbanicity (rural, suburban, urban), and grade were added to the model. Results: For boys, there were no differences in MVPA/d among urbanicity categories. However, 4.2min/d decrease in MVPA occurred with each increase in grade. For girls, rural girls accumulated 9.3min MVPA/d and 8.0 min MVPA/d more than suburban and urban girls, respectively. A decline of 3min MVPA/d was observed with every increase in grade. Rural girls were 4.6 times and 2.8 times more likely to accumulate ≥ 60 min MVPA/d compared to suburban and urban girls, respectively. No interactions across all models were significant for boys or girls. Conclusions: Rural girls displayed the highest levels of MVPA/d compared to their suburban and

urban counterparts. Regardless of setting, youth displayed lower levels of MVPA/d with increasing grade. Future research should consider urbanicity when investigating correlates/determinants of MVPA in youth.

Characteristics of successful partnerships to promote physical activity among youth

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Background: Many community-based projects to promote physical activity in youth involve partnerships between public health organizations and local community stakeholders and the success of community-based projects often hinges upon the strength of the partnerships between these groups. However, little is known about the characteristics of successful partnerships in the context of physical activity promotion. Therefore, the purpose of the current study was to identify characteristics of successful partnerships from the perspective of community partners involved in a mini-grant program to promote physical activity in youth. Methods: Participants in this study were county-level coordinators (n=19) of the 20 North Carolina Eat Smart, Move More Community Grants projects selected for funding between 2010 and 2012. Twenty semi-structured qualitative interviews were conducted with the project coordinators from each of 20 counties. Emergent coding was first conducted, then overarching themes present in the coded data were identified and grouped with similar codes under thematic headings. Each of the 20 partnerships was then classified as either strong, moderate, or weak based on the project coordinators responses about the overall quality of their partnerships.

Results: Three overarching and five sub-themes emerged that characterize partnership relationships, including: continuity (history with partner, and willingness to engage in future partnership), connectedness, and capacity (interest, enthusiasm, and engagement and clarity of roles and responsibilities).

Conclusion: The insights of community partners working towards fostering community changes for improved physical activity are vital to identify promising characterizations of stronger vs. weaker partnerships that contribute to program success.

Chronic disease

Chronic obstructive pulmonary disease prevalence and health-related quality of life in Carolinas

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COPD is the 3rd leading causes of mortality in the United States. Despite the prevalence of well-established risk factors for COPD, reliable state-specific COPD prevalence estimates across population subgroups and state-level information on the impact of COPD on health-related quality of life (HRQOL) are sparse. To fill this gap, we investigated how COPD affects different population subgroups and examined associations between COPD and four core measures of HRQOL using BRFSS. COPD prevalence rates were age-standardized to the 2000 standard US population; except those associated with specific age-groups. Multivariate logistic regression models were used to estimate odds ratios (OR's) and 95% confidence intervals (95% CI) for HRQOL, adjusting for race, age, gender, education, income, smoking status, and health insurance coverage. The overall age-adjusted prevalence of self-reported COPD among in Carolinas in 2011 was around 7%. As expected, prevalence of self-reported COPD increased with age. Females had higher prevalence of self-reported COPD than males. Self-reported COPD prevalence was highest among current smokers, while former smokers also had higher prevalence of self-reported COPD than non-smokers. Prevalence of self-reported COPD decreased markedly at higher levels of education and income. However, self-reported COPD prevalence did not differ by race and health insurance coverage. Compared to community-dwelling adults without COPD, those with COPD were more likely to report fair/poor general health status or more physically unhealthy days or more mentally unhealthy days, and more days of activity limitation. COPD is a highly prevalent disease in Carolinas, and associated with poorer HRQOL.

Cardiorespiratory fitness and the risk of all-cause, cardiovascular disease and cancer mortality in men with a chronic joint or bone condition

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Background: The association between Cardiorespiratory Fitness (CRF) and mortality in men with joint or bone diseases is under studied. We aimed to investigate the association between CRF and risk of mortality in men with a joint or bone disease in the Aerobics Center Longitudinal Study.

Methods: Participants were 12,744 men (mean \pm SD age 47 ± 9.34 yr) who reported having at least one joint or bone condition (joint pain, low back pain, stiff joint, arthritis, and gout) at

baseline, and completed a maximal treadmill exercise test during an examination at the Cooper Clinic, Dallas, TX between 1987 and 2003. CRF was quantified as maximal treadmill exercise test duration and was grouped for analysis as low, moderate, and high. Using Cox regression analyses, we computed hazard ratios and 95% confidence intervals. Results: A total of 259 deaths occurred during an average 16 years follow-up. After adjusting for age, examination year, smoking, drinking, body mass index, hypertension, diabetes, hypercholesterolemia, and physically inactive; hazard ratios (95% confidence intervals) across ascending categories of CRF were 1.00 (referent), 0.46 (0.31-0.61), 0.34 (0.22-0.53) for all-cause mortality (trend $P < 0.000$); 1.00 (referent), 0.50 (0.23-1.10), 0.30 (0.13-0.74) for cardiovascular disease mortality (CVD) (trend $P < 0.010$); and 1.00 (referent), 0.39 (0.20-0.75), 0.40 (0.20-0.79) for cancer mortality (trend $P = 0.067$) respectively.

Discussion: Moderate levels of CRF were significantly associated with lower risk of all-cause and cancer mortality in men with a prevalent joint or bone condition. However, it seems that high CRF level is needed to reduce the risk of CVD mortality.

Affiliates presentations on other topics

Racial and rural differences in cervical cancer prevention and control practices

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Objective: Access to preventive services contributes to differences in cervical cancer screening, treatment, and survival. We examined access to advanced cervical cancer prevention technologies, including liquid-based Pap test cytology, HPV vaccination, and DNA testing among rural versus urban women.

Methods: We conducted a cross-sectional study of 2006 - 2008 visit-level data from National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS). Data were linked to the 2009 Area Resource File (ARF) based on provider and patient/visit location. Patient/visit and provider location were linked using FIPS codes. To examine the likelihood of liquid-based Pap tests, the study population was limited to visits by female white and African American patients (9 – 70 years of age) with record of a Pap test. To examine the likelihood of HPV DNA testing, the study population was limited to visits for preventive screening or routine general exams.

To examine cervical cancer screening practices, patients were categorized by Pap test cytology (liquid-based, conventional, unspecified) and an HPV DNA test during their visit (yes/no).

Race/ethnicity was classified as white or black. Location was examined based on patient county of residence and physician practice site.

SAS-callable SUDAAN was used to account for complex sampling required weighted analysis. Descriptive statistics and bivariate comparisons were computed using chi square tests.

Results: No significant differences were observed for Pap test cytology by patient residence (urban versus rural; $p=0.21$) or for receipt of liquid Pap testing between white and African-American women residing in urban or rural counties ($p=0.35$).

A significantly higher proportion of women living in rural counties (69.6%) received liquid-based Pap testing in hospital outpatient settings than women in urban counties (39%; $p=0.02$). A significantly higher proportion of women residing in urban counties received HPV DNA testing versus women residing in rural counties (10% versus 3.3%, respectively). Report of HPV vaccination was too low during the study period to permit stable estimates for rural women, so no rural-urban comparisons can be offered. Differences in provider reimbursement were noted with higher proportions of publicly insured patients in rural practices than urban practices ($p<0.01$).

Conclusions: Women residing in rural counties did not differ from urban in conventional or liquid-based Pap test cytology; however, rural women were less likely to receive HPV DNA testing with no racial differences detected. More research is needed to determine if observed differences are the result of provider or patient barriers and acceptability.

Comprehensive cervical cancer prevention and control: Progress and remaining challenges in statewide efforts in South Carolina

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Purpose: Cervical cancer (CxCa) incidence and mortality in South Carolina (SC) have decreased from 3rd and 8th, respectively, to 14th in both as a result of statewide efforts to focus on CxCa prevention and control as a priority since virtually all cases are preventable through screening, follow-up care/early intervention, and/or HPV vaccination.

Methods: A systematic examination of CxCa prevention and control activities and outcomes resulted in identification of a need to convene stakeholders through statewide meetings and conferences in SC (A Call to Action; Moving to Action). Working with the faith-based and larger community, survivors, organizations, professionals, and other stakeholders, these statewide initiatives resulted in localized action plans. Local plans have been supplemented with billboards, small media campaigns, and educational programs. Recent declines in CxCa screening and HPV vaccination has raised concerns and underscored the need for further action. Cervical Cancer-Free South Carolina, part of Cervical Cancer-Free America, is in initial stages of reconvening stakeholders to promote action.

Results: The active involvement of diverse partners has proven essential in the past and contributed to decreases in CxCa incidence and mortality. This same approach will be used to address emergent declines and support current HPV vaccine policy under consideration in SC. Conclusions: Recognizing a decline in CxCa prevention and control behaviors in SC, reconvening stakeholders to ensure incidence and mortality do not increase is a priority. The Cervical Cancer-Free South Carolina movement represents an opportunity to develop and implement statewide strategies to address declines in behaviors connected to incidence and mortality.

Cervical cancer prevention knowledge and screening behaviors among medically underserved women living with HIV

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Background: Cervical cancer mortality rates are highest among Black females, a vulnerable group also disproportionately affected by HIV/AIDS. HIV infection exacerbates cancer-related health disparities because a weakened immune system increases cervical cancer risk. This study examined cervical cancer prevention knowledge and screening behaviors. Preferences for a future cervical cancer prevention program were also assessed.

Methods: We recruited 145 HIV-positive women (90% Black) from urban and rural Ryan White-funded clinics and community-based AIDS-service organizations located in the southeastern United States. This two-phased, explanatory design, mixed-methods study examined cervical cancer prevention knowledge and screening behaviors using an interviewer-administered online survey. Follow-up interviews and focus group discussions were conducted to clarify and expand needs assessment data from the survey.

Results: Only about half (48%) knew that HIV infection increased cervical cancer risk.

Knowledge about HPV infection acquisition (28%), prevention (46%), and link to cervical cancer (48%) were also low. Only 58% reported having a Pap test within the past year. Traditional (individual/group sessions) and mHealth (text message, email, social media) delivery formats were recommended for a future cervical cancer prevention education program.

Conclusions: Cervical cancer is preventable when precancerous lesions are detected and treated early in the disease process. Health system failures along the cancer care/control continuum exacerbate cervical cancer health disparities. Cancer prevention and control efforts

are needed to improve cervical health outcomes among HIV-positive women. Peer networks may be the best approach to using cost-effective mHealth tools to disseminate cancer prevention health information.

What keeps me out of care? Perspectives of PLWHA in rural South Carolina

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Background: Nationally, approximately 77% of those who know their positive HIV status are linked to care within 3 months and only 51% are retained in care. Studies in South Carolina indicated that 48% entered care within 3 months of the diagnosis and only 35% remained in care after 3 years. Early initiation of care and continued engagement in care optimize HIV treatment success for individuals and can decrease transmission of HIV to others by significantly lowering the viral load. Given this, identifying barriers to seeking and maintaining care is critical. This study investigated personal, organizational, and environmental factors that inhibit care initiation and care continuity among persons living with HIV/AIDS (PLWHA) residing in a rural, predominantly minority county in South Carolina. Methods: As part of an NIH-funded study, interviews with PLWHA not in care for at least 6 months were conducted by a trained interviewer who is a trusted local resident living with HIV. Interviews were audio-recorded and transcribed verbatim. NVivo 9 software was used to analyze the data to identify major themes. Results: Multiple barriers to initiating and continuing care were identified. Regarding the health care system, organization environment and culture, staffing policies, availability of infectious disease doctor, and patient-provider interactions were some of the important themes that emerged from the interviews. Interview participants suggested changes in the health care delivery system that would facilitate their continuation in care. Conclusion: Findings identify potential points of interventions to improve rates of initiation of and retention in care among PLWHA.

Potential challenges with using mhealth interventions among medically underserved middle-aged women living with HIV

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Background: Increasing numbers of consumers are using mobile technologies while others struggle to keep basic mobile phone services connected from month-to-month. We examined mobile phone ownership among HIV-positive women. Use and interest in mHealth intervention strategies (i.e., text, email, social media) were also explored.

Methods: Our study focused on cervical cancer prevention knowledge and screening behaviors among 145 urban and rural medically underserved HIV-positive women (90% black, mean age 45.2±10.7 years) recruited from Ryan White-funded clinics and community-based AIDS-service organizations in the southeastern United States. We also examined mobile phone ownership, email and social media use via self-administered, paper-and-pencil questionnaires. Follow-up focus group discussions explored interest in mHealth intervention strategies (i.e., text, email, social media).

Results: Most (75%) owned a mobile phone (45.5±10.5 years), of which 66% used only mobile phones (44.9±10.5 years) and 54% had pre-paid plans (46.1±10.3 years). Only 32% used email (42.0±11.7 years) and 26% used social media (42.5±10.9 years). Facebook (41.9±10.5 years) was used by 97% of social media users. Although our focus group data showed mixed receptivity to mHealth intervention strategies, age-appropriateness and trusted source of information were key themes that emerged.

Conclusions: mHealth interventions have been used successfully in HIV/AIDS prevention efforts. With the continued graying of the HIV epidemic, it will become increasingly important to reach an aging population with cost-effective mHealth interventions. Mixed receptivity among our study population of largely middle-aged HIV-positive women suggests more formative research is needed to inform the development of culturally-appropriate mHealth interventions strategies for this vulnerable group.

Healthcare provider sharing/explaining and HIV-positive women's understanding of cancer health information about abnormal pap test results

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Although immunosuppression increases HIV-positive women's risk for developing cervical cancer, the link between HIV infection, HPV infection and cervical cancer is not well understood among this high cancer risk group of women. This study examined healthcare providers' sharing/explaining of cancer health information with/to HIV-positive women. We also examined HIV-positive women's understanding of cancer health information shared/explained. We recruited 145 urban and rural dwelling HIV-positive women (90% Black). Cervical cancer prevention knowledge and screening behaviors were assessed using an interviewer-administered online survey. Those who had an abnormal Pap test result were asked if their healthcare provider gave them information to read about/explained what an abnormal Pap test result meant (Yes/No). We also assessed HIV-positive women's understanding of the information explained (A lot/Some/A little/Not at all). Bivariate associations between understanding cancer health information and sociodemographic characteristics (including health literacy) were examined. Most (69%) had an abnormal Pap test (100/145), and 69% received cancer health information which the majority (87%) read. What an abnormal Pap test result meant was explained to 76% of which more than half (58%) reported that they understood the information "a lot." Among those who only understood the information "some" or "a little," 38% had at least some college ($p=0.029$) and almost half (47%) had high health literacy ($p=0.005$). Improving health literacy is one our nation's health goals. But even some HIV-positive women with high health literacy may still have difficulty understanding cancer health information. Our findings underscore the need for effective cancer health communication and education strategies.