were permanent residents in 8 villages of Rwamara District, southwestern Uganda from 2011-2012 who reported having a primary partner in the past 12 months. We surveyed participants to assess their exposure to 12 different forms of verbal, physical, and/or sexual IPV, and whether they had ever been tested for HIV. We used three separate modified Poisson regression models, clustering by village, to estimate the association between each type of IPV and ever testing for HIV, adjusting for categorical age, completion of more than primary education, and any food insecurity measured by the nine-item Household Food Insecurity Access Scale. RESULTS/ANTICIPATED RESULTS: Among 496 women with a primary partner (>95% response rate), 64 (13%) had never tested for HIV, 297 (60%) reported verbal IPV, 81 (16%) reported physical IPV, and 131 (26%) reported sexual IPV. Further, among these women, 208 (42%) were aged <30 years, 378 (76%) had a primary or no education, and 390 (79%) experienced food insecurity. Never having been tested for HIV was positively associated with physical IPV (adjusted risk ratio (ARR): 1.61, 95% confidence interval (CI): 1.02-2.56) and negatively associated with verbal IPV (ARR: 0.67, 95% CI: 0.44-0.99), but not sexual IPV (ARR: 1.05, 95% CI: 0.51-2.12). DISCUSSION/SIGNIFICANCE OF FINDINGS: Among this population of adult women with partners in Uganda, physical IPV was associated with never testing for HIV while verbal IPV was associated with increased testing for HIV. Evidence suggests that HIV testing interventions should consider IPV prevention, and future studies should focus on why certain IPV types impact HIV testing rates.

ABSTRACT IMPACT: This study evaluates the long term effects of pharmacologic weaning therapy for opiate exposed infants. OBJECTIVES/GOALS: Infants born to chronic opioid users often suffer from neonatal abstinence syndrome (NAS), a condition characterized by tremors, diarrhea, hyperirritability and an inconsolable high-pitched cry. Symptoms are treated with pharmacologic weaning therapy, but long-term effects of this treatment have not been established. METHODS/STUDY POPULATION: A sample of infants born between 2011-2017 was obtained from a large metropolitan hospital system. All infants who were exposed to opioids and received a Finnegan score were included in the sample (N=1,807). The analysis utilizes three dependent variables to measure developmental delay: motor delay, language delay or any delay, which includes general/non-specific delay in addition to motor and language delay. The treatment is defined as receipt of pharmacologic therapy with methadone or morphine. Maximum Finnegan score was also included as a continuous measure of the extent of the infant’s withdrawal symptoms. Linear models were utilized to determine a relationship between pharmacologic therapy and developmental delay with Maximum Finnegan score as an interaction term. RESULTS/ANTICIPATED RESULTS: In the linear models examining the main effects of weaning therapy on developmental delay, there was no relationship between pharmacologic therapy and motor delay (p=.260), language delay (p=.542) or any developmental delay (p=.176). When maximum Finnegan score was entered into the model as an interaction term the relationships were not significant. DISCUSSION/SIGNIFICANCE OF FINDINGS: These results suggest that while pharmacologic weaning is an appropriate treatment for withdrawal symptoms in infants, it is not a deterrent against developmental delays associated with NAS. This provides support suggest an increased focus on non-pharmacologic interventions such as breastfeeding as the first line of treatment for NAS infants.

ABSTRACT IMPACT: Learning Health System (LHS) Science that trains postdoctoral scholars from diverse professional backgrounds in methodological and professional skills to implement rigorous research in health care systems and populations, and to disseminate the findings of such research to improve healthcare delivery. OBJECTIVES/GOALS: The WFUHS CTSA developed an innovative learning health system (LHS) research program in collaboration with Wake Forest University Health Sciences (WFUHS) and Wake Forest Clinical and Translational Science Institute to support postdoctoral scholars (LHS) as research leaders to drive population health improvement. The program trains postdoctoral scholars from diverse professional backgrounds in methodological and professional skills to implement rigorous research in health care systems and populations, and to disseminate the findings of such research to improve healthcare delivery.
TL1 in Learning Health System (LHS) Science that trains postdoc-
toral scholars from diverse professional backgrounds in methodo-
logical and professional skills to implement rigorous research in
health care systems and populations, and to disseminate the findings
of such research to improve healthcare delivery

METHODS/STUDY POPULATION: Training is centered around formal LHS science
coursework and mentored research projects that address a pressing
health system issue. Projects are closely guided by a primary mentor
and a multidisciplinary mentoring team. Program mission and com-
petencies were carefully evaluated in a competency-course matrix to
design new courses for the LHS Certificate and MS program in
Translational and Health System Science (THSS). Course domains
include biomedical informatics; improvement and implementation
science; system science and organizational change management;
stakeholder engagement, leadership, and research management;
ethics of health systems research; and health systems research meth-
ods. Scholars set up Individual Development Plans (IDP) and self-
assess 7 domains of LHS core competencies.

RESULTS/ANTICIPATED RESULTS: The first professionally diverse group
of scholars (MD, PhD, DrPH, PharmD) began the program in
Summer 2020; onboarding was conducted virtually. Scholars cur-
cently conduct most of their research and training in a virtual, syn-
chronous format. Each developed a detailed IDP and LHS research
project, which was reviewed by their LHS mentoring teams (includes
a primary mentor, co-mentor, TL1 core faculty mentor, peer mentor,
and health system mentor). Coursework, leading to a 1-year certifi-
cate or 2-year MS degree, was selected based on individual back-
ground and career goals and was begun in August 2020. In
addition to the courses noted above, Scholars are embedded in a
healthcare improvement team. We use the process of a LHS and hold
weekly TL1 leadership meetings to swiftly address challenges and
implement improvements.

DISCUSSION/SIGNIFICANCE OF FINDINGS: We envision that TL1 Scholars will build independent
LHS research programs or lead health system innovation. Program evaluation includes assessments of Scholar fluency in
LHS competencies and attainment of key milestones during and after
training. Annual TL1 faculty retreats will address program fidelity
and implementation of program refinements.

Health Equity & Community Engagement

Medication Use Safety During Care Transitions for Children with Medical Complexity

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ABSTRACT IMPACT: This study will generate preliminary data to
address a critical, care transition-related patient safety gap involving
medication use among children with medical complexity.

OBJECTIVES/GOALS: The objectives of this study are: (1) to under-
stand care transition-related medication safety risks for children with
medical complexity (CMC), and (2) through a participatory, human
centered design (PD) approach, to develop an early prototype inter-
vention to address identified safety risks.

METHODS/STUDY POPULATION: The study population includes children with medi-
cal complexity (CMC), a medically fragile pediatric population with
intensive healthcare needs. CMC rely on multiple and complex
medication regimens and/or medical devices for optimal function-
ing. Parents of CMC report multiple unmet healthcare needs. For
Aim 1, we will conduct observations and interviews with ~15 clini-
cians as well as semi-structured interviews with ~30 family care-
givers during three care transition experiences: from Cardiac ICU
to home, Neonatal ICU to home, and those between primary
care/specialty clinic to home. For Aim 2, we will conduct participa-
tory design sessions with up to 5 participants (separately for clini-
cians and family caregivers) from each of the three care transition
settings to co-design a prototype intervention.

RESULTS/ANTICIPATED RESULTS: The study is currently recruiting family
caregivers of CMC for aim 1 research activities, with interviews
planned to be completed in February/March 2021. Transcribed
interviews will be used to inform development of patient journey
maps. A patient journey map helps to visually depict healthcare ser-
dices through the patient and family lens, and highlights important
‘touch points’ along the patient journey (e.g., decisions, encounters,
constraints, emotional states, etc.) that shape the patient and family
experience. The journey map will distill findings from qualitative
data and generate a concise visual story focused on the medication
use experience of CMC as they transition between the hospital and
their home. Individual journey maps will also be combined to gen-
erate a consolidated journey map.

DISCUSSION/SIGNIFICANCE OF FINDINGS: An in-depth understanding of medication safety
risks unique to the context of CMC care would be essential to develop
interventions that are useful, scalable, and sustainable. This is even
more important because current interventions are primarily adopted
from adult care settings with mixed outcomes.

Facilitating Community/Campus Research Teams and Projects: Community Health Small Grants Program

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ABSTRACT IMPACT: The UTMB Institute for Translational Sciences (ITS) seeks to advance the field of community engagement and facilitate competency in community-engaged and community-
based participatory research as a means of expanding team science to
integrate community involvement and to assist investigators in
building relationships that enable them to contribute to community
initiatives.

OBJECTIVES/GOALS: The UTMB ITS recently imple-
mented a new Community Health Small Grants program to promote and
enhance community-campus partnerships. Our goal is to better
translate science from discovery to clinical practice and public health
through community-engaged research, education, and dissemina-
tion.

METHODS/STUDY POPULATION: Applications were soli-
cited from community and academic research partners. Community partners may include existing collaborative groups, community health centers, health departments, nonprofits, schools, social services agencies, practice-based research networks, or
Community Advisory Boards. Academic partners may include fac-
ulty and/or students. The PI may be a community or academic part-
tner. While this Grants Program will transition to the ITS Pilot
Project Program, it will utilize a separate review process and scoring
rubric focused on immediate and future community benefit, project