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Cost-effectiveness of Initial Treatment Strategies for Localized Prostate Cancer: A Systematic Review

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ABSTRACT IMPACT: We compare the cost-effectiveness of treatments for early prostate cancer, and propose how to maximize the value of care within an increasingly cost-constrained healthcare climate. OBJECTIVES/GOALS: Each year 192,000 men in the United States are diagnosed with prostate cancer. With various treatment options available, there is a growing role for cost-effectiveness analyses which may help maximize the value of care to the patient. In this review we compare the cost-effectiveness of primary treatments for clinically localized prostate cancer. METHODS/STUDY POPULATION: In this systematic review we aim to compare the cost-effectiveness or cost-utility of primary treatment strategies for clinically localized prostate cancer. This review, which adheres to 2009 PRISMA guidelines, included studies of men with clinically localized prostate cancer comparing at least two treatment strategies using the incremental cost-effectiveness ratio (ICER). We included analyses only of the United States healthcare system with at least 10 years of follow-up. These studies were published from 2006 to 2019 and generally included men with low or low to intermediate risk prostate cancer. Most studies reported outcomes for men age 65-70. All studies were prospective simulated trials and used a Markov model to simulate patient outcomes. RESULTS/ANTICIPATED RESULTS: Ten articles were included in the analysis. All studies used a Markov model to simulate a randomized trial. Six studies primarily compared radiation modalities, and four compared observation with immediate treatment. There was substantial heterogeneity in treatment protocols and the patients being simulated. Sensitivity analyses showed these models to be influenced by utility values and length of follow-up. A meta-analysis was not possible as no studies reported the variance of the primary outcome. Heterogeneity in study design limited comparisons of treatments across studies. However, these models were sensitive to patient-specific clinical factors, including life expectancy and the utility during and after each treatment. DISCUSSION/SIGNIFICANCE OF FINDINGS: These studies indicate collectively that the cost-effectiveness of prostate cancer treatment for similarly staged men may be heavily impacted by comorbidities and personal preferences. As the US moves towards value-based care, patient preferences may continue to drive the preferred treatment for newly diagnosed prostate cancer.

64385

Patient Reports of New Diagnosis Compared to Electronic Medical Record Documentation following Emergency Department Visit

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ABSTRACT IMPACT: We conducted a study to understand how a patient's report of a new diagnosis compares with what was documented in the electronic medical record, since it is critical to the diagnostic process that the patient both understands and agrees with a new diagnosis. OBJECTIVES/GOALS: We sought feedback on patient's understanding of their diagnosis and health status follow Emergency Department discharge. We compared patient report of a new diagnosis to documentation in the electronic medical record. METHODS/STUDY POPULATION: To compare patient reported diagnoses to documented diagnoses, we employed a longitudinal cohort study design at 3 of emergency departments in an academic health system in the Mid-Atlantic. Patients consented to complete questionnaires regarding their understanding of their diagnosis and/or follow-up steps and their health status at 2 weeks, 1 month, and 3 months following emergency department discharge. Inclusion criteria: adult ED patients aged 18 and older seen within the last 7 days with one or more of the following common chief complaints: chest pain, upper back pain, abdominal pain, shortness of breath/cough, dizziness, and headache. We compared patient report of a new diagnosis following discharge to documentation in the electronic medical record. RESULTS/ANTICIPATED RESULTS: Of the sample recruited (n=137), the majority were women (66%, n=91), the average age was 42 (SD 16). A third (n=45) were black and 56% (n=76) were white. The majority of participants (84%, n=115) reported that they either understood the diagnosis they received on ED discharge, or were not given a diagnosis but they understood follow-up steps. At two weeks following discharge, 25% of participants (n=36) had a new diagnosis identified after discharge and 33% (n=45) reported that their health status stayed the same or worsened. There was 85% agreement (kappa 0.49) between patient report of a new diagnosis and a new diagnosis identified in the electronic medical record. Only one of the participants who reported a new diagnosis also reported seeking healthcare outside of the health system. DISCUSSION/SIGNIFICANCE OF FINDINGS: Patient report of a new diagnosis following emergency department discharge had moderate agreement with new diagnoses identified in the electronic medical record, and differences in agreement were not explained by outside healthcare visits.

71461

Intimate Partner Violence and HIV Testing among Women in Rural Southwestern Uganda

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ABSTRACT IMPACT: This research shows that physical intimate partner violence was associated with never testing for HIV while verbal intimate partner violence was associated with increased testing for HIV suggesting that HIV testing interventions should consider intimate partner violence prevention. OBJECTIVES/GOALS: HIV incidence is higher among women who experience intimate partner violence (IPV). However, few studies have assessed the association between HIV testing (regardless of the result) and the experience of IPV. Our objective was to assess the relationship between IPV and HIV testing among women from rural southwestern Uganda. METHODS/STUDY POPULATION: We conducted a whole-population, cross-sectional study including women ?18 years of age who

were permanent residents in 8 villages of Rwampara 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.

77099

Implementation of the Capute Scales and Prechtl's General Movement Assessment in Infants with Single Ventricle Physiology

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ABSTRACT IMPACT: Through this research, I will transform the standard of care for infants with single ventricle physiology by incorporating the Capute Scales and General Movement Assessment into day-to-day clinical care for these infants, leading to early detection of neurodevelopmental disabilities and access to proven therapies. OBJECTIVES/GOALS: Our objective was to establish a new protocol to detect and quantify developmental delays in multiple domains in infants with single ventricle physiology, a type of congenital heart disease. This population is at high risk for neurodevelopmental disabilities. METHODS/STUDY POPULATION: We implemented a novel protocol using the Capute Scales and General Movement Assessment to evaluate early language, cognitive, and motor development in infants with single ventricle physiology. The infants were evaluated between 1-5 months of age in the cardiac neurodevelopmental program. We defined our primary outcomes as (1) language and (2) cognitive developmental quotients as per the Capute Scales and (3) results of the General Movement Assessment. We hypothesized that infants with single ventricle physiology would have typical language and cognitive development and normal General Movement Assessment results at their initial evaluation. RESULTS/ANTICIPATED RESULTS: We recruited ten infants with single ventricle physiology. All ten infants had typical language development, and nine of the ten had typical cognitive development, as measured by the Capute Scales. All of the infants had gross motor delay. Due to medical instability, we only evaluated four infants with the General Movement Assessment. All four of the infants had a normal result, suggesting that their central nervous system motor pathways were maturing appropriately. In future studies, we will track the neurodevelopmental outcomes of each participant as they mature. We expect to see a decrease in expressive language development and preserved receptive language and cognitive development. DISCUSSION/SIGNIFICANCE OF FINDINGS: The combination of General Movement Assessment and Capute Scales in the evaluation of infants with single ventricle physiology will provide early identification and intervention for these high-risk children, allowing access to proven treatments and therapies.

83569

Receipt of Pharmacologic Weaning Therapy and Developmental Delay

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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.

90232

Implementing the innovative academic Learning Health System Scholars (aLHSS) Postdoctoral Training Program (TL1) at Wake Forest University Health Sciences (WFUHS)

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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