targeted educational and operational solutions to improve EMS care for PEH.

9 Follow Up Resources Provided in Early Pregnancy: Analysis of Discharge Instructions for First Trimester Pregnant Patients Seen in an Academic Emergency Department

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Background: 1The emergency department (ED) is well positioned to connect patients in early pregnancy to care, but does it consistently do so? EDs serve patients who may otherwise not have healthcare access, and at times may identify new pregnancies. Due to the current landscape of reproductive services in the U.S., provision of complete and accurate discharge information is critical. This novel study aimed to explore the content of ED discharge instructions for comprehensive pregnancy options.

Methods: We retrospectively reviewed Electronic Medical Records (EMR) of patients ≥18 years old who presented to the pediatric or adult ED of an urban academic medical center between January 1, 2022 and October 31, 2024. Automated data query identified pregnant patients by presenting complaint, positive urine/serum human chorionic gonadotropin or ICD-10 code; an analyst extracted select fields including visit details and full-text discharge instructions for review. A priori, we defined components of comprehensive discharge instructions and coded visits as having prenatal care follow-up resources, family planning follow-up resources, both types of resources, or neither. Discharge instructions were independently coded by two team members, with disagreements resolved through a third rater and team discussion. Summary statistics were calculated; we also explored differences in provision of discharge instructions across patient demographic groups using chi square tests.

Results: Of 756 pregnancy visits initially identified, 321 were excluded due to gestation >14 weeks, nonviable pregnancy (miscarriage, ectopic), elective abortion, and elopement; 82 for unclear trimester; 50 for pregnancy of unknown location; and 5 for age <18 at time of visit. After these exclusions, 298 discharge instructions made up the final dataset, of which 39 (13.1%) contained prenatal care resources, 12 (4.03%) contained family planning resources, 1 (0.34%) contained both, and 246 (82.6%) contained neither. There were no statistically significant differences in provision of discharge instructions by race, ethnicity, preferred language, or rurality of home address.

Conclusion: In this exploratory study, most ED discharge instructions lacked specific and inclusive follow-up options for early pregnancy. Given barriers to care across the U.S., pregnant patients may benefit from locally-appropriate linkages to timely care from the ED.

10 Meta-Analysis of Different Antibiotic Efficacies in the Case of Complicated Urinary Tract Infections

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Background: To evaluate and compare the efficacies of different antibiotics in treating and eradicating bacteria in cases of complicated urinary tract infections, including pyelonephritis.

Methods: The search terms “complicated UTI AND antibiotic” were applied to the PubMed and Google Scholar databases to evaluate publications assessing or comparing different antibiotics in treatment of a complicated urinary tract infection (cUTI). Search results from the two databases yielded 211 initial results. Inclusion criteria included mention of cUTIs treated with an antibiotic, included healthcare outcomes, patients over the age of 18, and publication of study within the last ten years. Exclusion criteria included lack of mention of cUTI, unclear or not present health outcome, or incomplete treatment duration of the antibiotic treatment. Final evaluation of the 211 initial search results yielded 13 publications used in this study, with 169 being eliminated based on relevance/exclusion criteria, and 29 being eliminated due to duplication in databases. From eligible studies, a comprehensive look at different antibiotics in the treatment of complicated urinary tract infections was conducted to look at clinical success, measured with a fixed effect.

Results: Ertapenem was mentioned in three studies, with varying success rates of 389/440, 392/419, and 116/143. The clinical success rates were 90.92%, with a 95% CI: 85.4-95.9%. Meropenem was mentioned in one study with a success rate of 116/143, or 81.1% with a 95% CI: 74.7-87.5%. Meropenem+ Vaborbactam was mentioned in one study, with a success rate of 189/192, or 98.4% with a 95% CI: 96.7-99.9%. Cefepime + Tanoribactam was mentioned in one study, with a success rate 251/293, or 85.7% with a 95% CI: 81.7-89.7%. Piperacillin+Tazobactam was included in 3 studies, with success rates of 296/333, 171/182, and 163/178 for a success rate of 90.91 with a 95% CI: 87.5-97.5%. Tebipenem was included in one study with a success rate of 418/449, or 93.1% with a 95% CI: 90.8-95.4%. Sulopenem was included in one study with a success rate of 397/444, or 89.4% with a 95% CI: 86.6-92.3%. Levofloxacin was included in one study with a success rate of 20/30, or 66.7% with a 95% CI: 49.8-83.5%. Ceftriaxone was included in one study with a success rate of 16/29, or 55.2% with a 95% CI: 37.1-73.3%.

Discussion: Meropenem+ Vaborbactam was associated with the highest rates of clinical success, followed by

Tebipenem and then Ertapenem. With complicated urinary tract infections having high rates of sepsis, prolonged hospitalization, and kidney damage, it is important to choose an initial antibiotic that has statistically high clinical success rates.

11 A Reliable β-hCG Threshold to Identify Fetal Non-Viability in the Absence of Sonographic Cardiac Activity Does Not Exist

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Background: Women frequently present to the Emergency Department in early pregnancy seeking prognostic guidance. Serum beta-human chorionic gonadotropin (β-hCG) levels are widely used in conjunction with transvaginal ultrasound (TVUS) to assess early pregnancy viability. Previous studies have proposed various β-hCG thresholds for the reliable detection of fetal cardiac activity (FCA), ranging from approximately 6,600 to 47,000 mIU/mL. Despite technological advances in ultrasound, no definitive or updated β-hCG cutoff has subsequently been established. To determine whether a β-hCG level exists, above which fetal cardiac activity should be visualized on ultrasound in viable early pregnancies.

Methods: Retrospective chart review was conducted using the Kaiser Permanente (KP) electronic health record (Epic). The study population included all patients presenting to two KP community Emergency Departments between January 1 and December 31, 2023 with a documented β-hCG level, a radiologic interpretation of a first trimester pelvic ultrasound, and documented pregnancy outcome in the Obstetrical History section (N=579). β-hCG level at the time of ultrasound and the presence or absence of FCA was recorded and data analyzed.

Results: Among viable pregnancies, FCA was not uniformly visualized at any specific β-hCG level. In cases where FCA was absent, but the pregnancy was ultimately viable, β-hCG values ranged from 41 to 173,776 mIU/mL. These findings indicate substantial overlap and variability, challenging the utility of a strict β-hCG threshold for predicting FCA visualization.

Conclusion: These findings indicate that there is no reliable β-hCG threshold at which fetal cardiac activity can reliably be seen in the first trimester of viable pregnancies. In comparison to previous literature, this study showed a much wider variation in β-hCG levels at which FCA may not be seen in an ultimately viable pregnancy. This variability persists even with more modern imaging and a larger patient cohort. This study showed a significantly higher upper level of β-hCG at which FCA was not yet noted on TVUS in an ultimately viable pregnancy. Results indicate that clinicians should be cautious in providing prognostic guidance to patients based solely on β-hCG levels and sonographic findings from a single ED encounter. Further research may be warranted to develop more nuanced, evidence-based guidelines.

12 Perceived Barriers to Emergency Physicians' Adoption of Point-of-Care Ultrasound: A Survey Analysis

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Background: Point-of-care ultrasound (POCUS) has become a core competency in emergency medicine, but despite widespread training and robust evidence supporting its efficacy, substantial variability exists in the extent of its integration as a clinical and diagnostic tool. This study attempts to identify POCUS implementation barriers through the real-world experiences of formally trained emergency physicians to identify practical solutions for improving institutional integration.

Methods: An anonymous electronic survey was distributed nationally to emergency physicians at institutions with EM ultrasound fellowships. The survey assessed the frequency and utility of POCUS use, perceived implementation barriers, and perceived peer proficiency across clinical applications.

Results: Among 278 participants, 75.6% practiced in academic emergency departments, 42.4% completed formal ultrasound fellowship training, and 54.3% reported using POCUS frequently or almost every time in the past year. Consultant skepticism of POCUS validity despite relevant POCUS findings emerged as the highest-scored barrier, followed by time constraints. Confidence in peer proficiency varied by application, with high trust in cardiac POCUS and procedural guidance compared to much lower confidence levels for bowel, hepatobiliary, and testicular modalities. Regarding diagnostic accuracy, 61.7% of respondents believed there was no difference in the performance of goal-directed ultrasounds between emergency physicians and ultrasound technicians. This belief was significantly associated with ultrasound fellowship completion, academic practice, and frequent POCUS use.

Conclusion: POCUS implementation strategies should address both internal barriers of peer confidence through standardized training, and external barriers of consultant acceptance through interdisciplinary education and formal protocol integration. Amidst a boarding crisis and radiology shortage, supporting the integration of POCUS imaging can ease departmental strain and improve diagnostic efficiency.