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Mehabuba “Mimi” Rahman Date

“We can’t let her fall through the cracks”: Emergency department patient-centeredness for early pregnancy bleeding during obstetrician shortages

By

Mehabuba Rahman

MPH

Behavioral Sciences and Health Education

_____

Dawn L. Comeau, PhD, MPH

Committee Chair

_____

Kelli S. Hall, PhD, MS

Committee Member

_____

Colleen McBride PhD

Department Chair

“We can’t let her fall through the cracks”: Emergency department patient-centeredness for early pregnancy bleeding during obstetrician shortages

By

Mehabuba “Mimi” Rahman

Bachelor of Science | Health Promotion & Behavior

The University of Georgia

2017

Committee Chair: Dawn L. Comeau, PhD, MPH

An abstract submitted to the Faculty of the Rollins School of Public Health of Emory University in partial fulfillment of the requirements for the degree of Master of Public Health in Behavioral Sciences and Health Education 2020

Abstract

As of 2018, 79 out of 159 counties in Georgia did not have an obstetrician/gynecologist in the county which left many women with early pregnancy bleeding to seek care in emergency departments (ED). Given the sociopolitical context in recent years restricting access to comprehensive reproductive health services, the ED is a promising but understudied context to fill service delivery gaps for women needing pregnancy care The aim of this research is to understand how ED providers develop cost-oriented, patient-centered, post-emergency department (ED) follow-up, referral, and discharge instructions for early pregnancy bleeding in rural Georgia counties.

Guided by the Anderson and Newman Framework of Health Services Utilization framework, this qualitative study utilized semi-structured, in-depth, in-person interviews to understand 32 provider experiences of managing early pregnancy bleeding in the ED. Purposive sampling selected 10 hospitals outside of the metropolitan area of Atlanta with varying levels of access to an OB to illustrate differences in management experiences. Qualitative interview data were coded using both inductive and deductive methods in an iterative fashion and predominant themes were identified.

Four emergent themes from the 32 interviews are presented via the Anderson Behavioral Model of Health Services Use through a patient-centered care model by Meade and Bower which includes four key constructs: 1) environment, 2) population characteristics, 3) health behavior, 4) outcomes. The Meade & Bower model will overlap these factors within its five dimensions of patient centeredness 1) biopsychosocial perspective (including psychological and social domains of patient needs), 2) therapeutic alliance (provider empathy and sensitivity in provider-patient relationship), 3) patient-as-person (understanding how patients experience their illness as individuals), 4) sharing power and responsibility (equal decision making between patient and provider and 5) doctor-as-person (provider awareness of one's influence on their patient). In sum, providers shared mixed experiences serving patients with early pregnancy bleeding; many reported on the lack of cost-efficient resources and Medicaid delays, while many EDs with the least amount of OB resources demonstrated great resourcefulness and support of patients by developing discharge plans based on their patient's characteristics. Future research is needed to provide understanding into the patient perspective on the role of ED settings to meet their pregnancy care needs.

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CHAPTER ONE: INTRODUCTION

Emergency departments (EDs) are frequently the first line of care when experiencing a health care complication because of their 24-hour availability and federal mandate to stabilize patients (Capp et al., 2016; Hsia, MacIsaac, & Baker, 2008). In Georgia, there were approximately 455 emergency room visits in community hospitals per every 1,000 people in 2017 (Kaiser Family Foundation, 2017). Approximately 500,000 patients seek early pregnancy bleeding care in the ED nationwide (Wittels, Pelletier, Brown, & Camargo, 2008). This has led to the ED playing an essential role in health care delivery for reproductive health-related conditions though it is understudied (Cox et al., 2011; Quinley et al., 2018; Wittels et al., 2008). About 15-25% of pregnancies will experience vaginal bleeding in early pregnancy (VBEP) and of these pregnancies, 50% will miscarry (Wittels et al., 2008).

Furthermore, VBEP is the highest cited gynecologic emergency which may call for uterine aspiration (Quinley et al., 2018). Though ED physicians encounter early pregnancy complications and are tasked with stabilization of these cases, uterine aspiration, a common abortion procedure for gestation up to 16 weeks, is excluded in emergency medicine training (Quinley et al., 2018). Thus, this procedure has been reserved for obstetrics and gynecology providers (Quinley et al., 2018). However, OB/GYN providers are not readily accessible due to provider shortage (Doximity, 2018). Some common reasons OBs discontinue practice are unpredictable schedules, political adversity, and low insurance reimbursement rates (Zertuche & Spelke, 2014). It is estimated that 8,800 OB/GYNS will be lost by 2020 and 22,000 by 2050 in the U.S. (Doximity, 2018). Rural areas will be struck the most by these shortages (Doximity, 2018). Of particular interest, about 46% of Georgia's population lives in rural areas and 65% are

female (Trading Economics, 2016). Of these women, 38% (n=736,000) are reproductive-aged 15-44 (Trading Economics, 2016). As of 2018, 79 of its 159 counties do not have an OB/GYN provider, mostly sparse in rural counties (Hart, 2018).

Consequently, patients are going to EDs to receive obstetric care. However, EDs in Georgia may be underequipped to handle pregnancy complications due to the lack of labor and delivery (L&D) units in rural Georgia hospitals (Hart, 2018). Moreover, the closures of L&D units are happening synchronously with rural hospital closures and the obstetric crisis in Georgia (Zertuche, 2015). In sum, Georgia is facing a myriad of health care shortages. Coincidently, Georgia has the highest maternal mortality (Zertuche & Spelke, 2014). Additionally, the United States ranks highly in maternal mortality with comparison to other high and middle-income countries (Creanga et al., 2014).

Moreover, affordable health insurance is key to utilizing health care services. However, the gaps in continuous health insurance may contribute to poorer maternal health care outcomes (Devoe et al., 2007; Searing & Ross, 2019). Specifically, federal health insurance such as pregnancy Medicaid cover about 54% of all deliveries (Kaiser Family Foundation, 2014). In Georgia, this is Right from the Start Medical Assistance Group (RSM). This indicates that a majority of pregnant patients are low-income and do not have health insurance at the time of pregnancy (Kaiser Family Foundation, 2014). To be eligible for traditional Medicaid in Georgia, an individual must be less than 225% of the Federal Poverty Guideline (FPG), a U.S. citizen and either be pregnant, younger than 19 or 65 and older, legally blind, have a disability, or need nursing care (Georgia Department of Community Health, 2019). Barriers to adequate and affordable health insurance in Georgia raise the likelihood for minority populations to be uninsured and overrepresented in publicly funded health systems (Heron, Stettner, & Haley,

2006). Moreover, Georgia is requesting a partial Patient Protection and Affordable Care Act expansion from the federal government (Atlanta Journal Constitution, 2019). With a history of resistance to universal health care and a federal government opposed to Medicaid expansion, reduces the chance of attainment of health insurance for those in lower middle income levels between 100% and 138% of the FPG, commonly referred to as the health insurance gap (Atlanta Journal Constitution, 2019).

As mentioned, pregnant women in Georgia are covered by (RSM) for pregnancy-related services. However, RSM ends 60 days postpartum, leaving a tight window for follow-up care and low continuity (Medicaid and CHIP Payment and Access Commission (MACPAC), 2014). To be eligible for RSM, patients must be below 220% of the FPG limit, a citizen, and pregnant or recently pregnant (Georgia Department of Community Health, 2019). The income to qualify is quite low, meaning a family of four's annual income must be less than $56,652 (Georgia Department of Community Health, 2019). The livable wage in Georgia for a family of four with one full-time, working adult is $53,248 based on the basic needs budget and the tax rate (Massachusetts Institute of Technology, 2018). Basic needs include food, childcare, insurance premiums, health care costs, housing, transportation, and other necessities (Massachusetts Institute of Technology, 2018). Once RSM coverage expires, the "Planning for Healthy Babies" program provides an alternative family planning program for women in Georgia (Wellcare, 2016). Those who are 18-44 years of age, do not have health insurance, are 200% of the FPG, not currently pregnant but able to conceive, and not eligible for Medicaid are eligible (Wellcare, 2016).

Additionally, Medicaid reimbursement is a factor in the hospital closures of these labor and delivery units (Zertuche, 2015). This indicates that hospitals with a majority of patients who

depend on Medicaid are financially vulnerable (Healthcare Management Partners, 2017). The Emergency Medical Labor and Treatment Act of 1986 mandates that all patients who come to the ED must be examined and medically stabilized regardless of ability to pay (Hsia et al., 2008). With the tumultuous insurance environment, this has placed a strain on hospital budgets, and little has been done to examine this issue. The gaps in health insurance and lack in coverage through public health insurance threaten the survival of EDs continuing as safety nets in the U.S. health care system (Hsia et al., 2008).

With OB/GYN shortages on the rise and insurance coverage gaps, rural hospitals are stretched thin to provide quality care to those seeking VBEP. The availability of resources has decreased. This results in EDs becoming more than stabilizers and one-time care; they have become a continuous stop for health care for many patient populations (Morganti et al., 2013). Creating an appropriate discharge plan and follow-up for these patients are crucial. By considering a woman's insurance, clinicians can develop personalized care on whether to seek a Federally Qualified Health Center, the health department, or their OB/GYN. In practice, providers do not identify patient's insurance coverage as an important factor in deciding referral specialists, however, even the best follow-up plan for a patient is less than useful if the patient cannot afford care (Javalgi, Joseph, Gombeski Jr, & Lester, 1993). Based on a study of 456 non-primary providers, which included ED physicians, providers highly ranked (>80%) the type of illness, medical skill of physician, and positive experience in working with the provider when determining referral care (Javalgi et al., 1993). The lowest ranked considerations were locations of physician/hospital, location of patient, and patient's insurance coverage (Javalgi et al., 1993). A case management team of social workers and nurse case managers would be beneficial for all

hospitals to improve discharge planning and patient satisfaction and cost reduction (Bristow & Herrick, 2002).

Qualitative research related to health insurance and its influence for discharge planning and follow up is seldom studied. Health insurance is a major driving factor to health care delivery and access, but it is not given enough weight to maternal health outcomes in the ED. Though there are studies about early pregnancy loss and miscarriage management in the ED and in primary care settings, they are mostly quantitative and cross-sectional in design which does not provide insight into attitudes and practices of providers and patient experiences. Furthermore, understanding how EDs manage patients with VBEP is understudied (Quinley et al., 2018). Additionally, there is scarce research on health disparities in the ED, possibly linked to health insurance status (Heron et al., 2006). A particular vulnerable population is the rural South for a multitude of reasons which may include attitudes to reproductive health, hard-to-reach small, rural hospitals, and busy schedules among ED providers. Overall, there is a dearth of understanding to the broader context of reproductive health policies in recent years that intersect with this topic, which has timely implications for abortion access.

The purpose of this qualitative study is to understand emergency department providers' knowledge and awareness of insurance status for their patients and where women are being referred after they receive care in the ED. In addition, this study will explore whether insurance status affects patient counseling and if insurance status empowers the provider's referral process. The main research question being, "What are ED clinical and administrative staffs' perceptions of and experiences with facilitators, barriers, processes and resources related to discharge planning and follow-up care for women with VBEP seen in the emergency department by ED clinical staff?

THEORETICAL FRAMEWORK

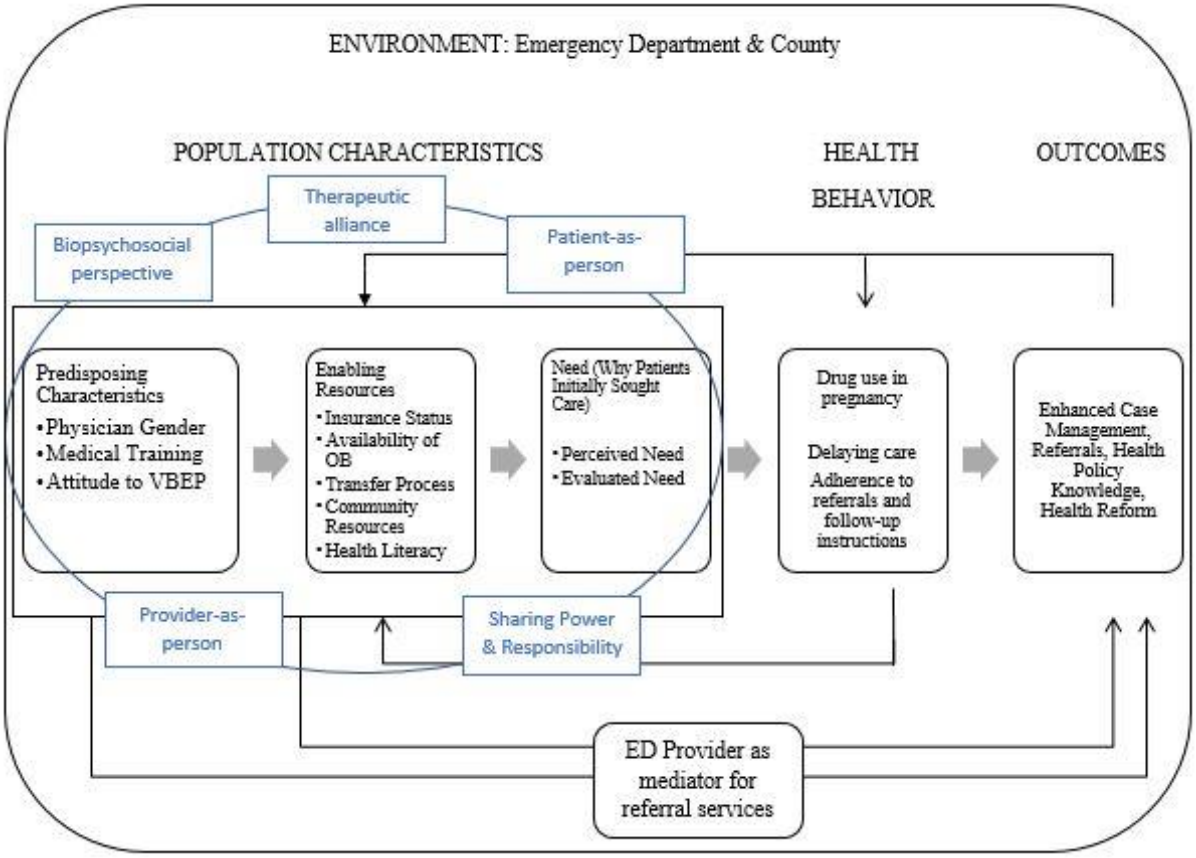

FIGURE 1. ADAPTED BEHAVIORAL MODEL OF HEALTH SERVICE USE & PATIENT-CENTERED CARE MODEL (ANDERSEN, 1995; MEAD & BOWER, 2000)

First, I employed The Anderson and Newman Framework of Health Services Utilization, which assesses conditions of either facilitation or utilization to develop a behavioral model that measures access to medical care (Andersen, 1995; Figure 1). Second, we integrated a patient-centered model to further guide assessment of the quality of the personal, professional, and organizational relationships and provide context to Anderson's framework (Andersen, 1995; Epstein & Street, 2011; Mead & Bower, 2000).

The Anderson and Newman Framework of Health Services Utilization in Figure 1 assesses conditions of either facilitation or utilization to develop a behavioral model that measures access to medical care (Andersen, 1995). It was initially created in the late 1960s to

understand why families used health services and to define and measure equitable health access points and to develop equitable policies in promoting health care access. Though, this view has changed from a familial to individual perspective because of the diversity in family structure (Andersen, 1995).

Access and use of health care services, such as emergency departments, will be discussed through three population characteristics found in the framework which are predisposing, enabling, and need factors. Predisposing factors are socio-cultural characteristics that exist before the illness persists which may be items such as social structure, health beliefs, and demographics (Andersen, 1995). Social structure is measured by determining the social status of the person, coping strategies, help-seeking behaviors, and the state of health of the physical environment (Andersen, 1995). Health beliefs are attitudes, values, and knowledge about personal health and perception of using health services based on these beliefs (Andersen, 1995). Health beliefs explain the social structure's enabling resources, perceived need of health care, and subsequent use of services (Andersen, 1995). In this study, predisposing factors may be gender, medical training, and attitude to VBEP. Generally, predisposing factors are viewed as characteristics that indicate a higher likelihood of needing health services (Andersen, 1995).

Enabling factors refer to the logistical steps to obtaining health care. For example, in this study enabling factors include the insurance status of patients, availability of labor and delivery units, and the transfer process for hospitals without a labor and delivery unit. In broader terms, this includes having community resources such as health care professionals and facilities that residents are able to get to and understand how to get to the services. In addition, being able to understand how to use the services is also an enabling factor (Andersen, 1995).

A need factor is measured by why the patient sought care initially and, in this case, it is VBEP. Perceived need and evaluated need are elements within this model. Perceived need focuses on help-seeking and following medical advice. In the context of this project, the patient experiences VBEP and seeks care in the ED, because the patient views it as an urgent health care concern. The perceived need is essential to the context of the study because this influences the patient to seek care. Evaluated need is concerned with professional judgment and a person's health status and need for medical care which changes based on recommended practice (Andersen, 1995). This is significant to the study because this connects medical protocol and background of the clinician for follow-up planning.

The Anderson and Newman Framework of Health Services Utilization measures the emergency department system with a focus on the referral process between clinicians. How emergency departments increase access to pregnancy and post-abortion bleeding care indicates that the ED clinician serves as a mediator for referral services. The ED represents the environment. The environment includes physical, political, and economic elements. In addition, personal health practices such as diet and exercise are evaluated based on how they interact with health facilities which influence health outcomes. Potential outcomes include EDs providing enhanced case management and referral care based on the severity of patient's symptoms and insurance. Health outcomes include understanding health policy and reform on health utilization and access. Effective access and efficient access are components to this development. They differ in that effective access is interested in health services and true improvements in the health condition or patient satisfaction whereas efficient access is when the health status or satisfaction improves relative to using health care service use.

Phase Four of this model is best suited for this study as it demonstrates the dynamic relationship of health services' use and health status outcomes. It allows for feedback loops and repeating use of health services. This model improves how health behavior is understood and how to improve health policy to enable health service use and access to care.

Additionally, a patient-centered model will assess the quality of the personal, professional, and organizational relationships and provide context to Anderson's framework (Andersen, 1995; Epstein & Street, 2011; Mead & Bower, 2000). From the Mead and Bower model seen in Figure 1, the five dimensions of patient centeredness are biopsychosocial perspective (including psychological and social domains of patient needs), patient-as-person (understanding how patients experience their illness as individuals), sharing power and responsibility (equal decision making between patient and provider), therapeutic alliance (provider empathy and sensitivity in provider-patient relationship), and doctor-as-person (provider awareness of one's influence on their patient) (Mead & Bower, 2000).

Patient-centered care is commonplace in general medicine but not specialty care, such as emergency medicine and acute care (Mead & Bower, 2000). Emergency departments may benefit from this approach, especially in low resource settings due to OB/GYN shortages. Yet research to date on the potential for patient-centered approaches to care (or lack thereof) and its influence on discharge planning and follow up is limited. The little existing research has utilized are mostly quantitative and cross-sectional designs, which precludes our understanding of ED providers and staff attitudes and practices and their perceptions on the patient experience. Qualitatively, how EDs manage patients with VBEP is understudied (Quinley et al., 2018). This study will explore how emergency providers practice patient-centered care by respecting patient preferences and incorporating patient-provider communication (Epstein & Street, 2011). The

findings from this study will add to health services utilization and patient-centered care literature in hopes to change emergency medicine practice and policy.

CHAPTER TWO: REVIEW OF THE LITERATURE

Current literature highlights an inadequacy to understanding the role of health insurance status in the emergency department and provider perspectives on follow-up care and discharge planning for women with VBEP. VBEP is defined as the first 16 weeks gestation for the purposes of this study. Areas of interest in this review are the Georgia obstetric crisis, access to OB/GYN instruments and medications in the ED, health disparities based on insurance and racial differences, emergency department providers' knowledge and awareness of insurance status for their patients, health care referral tracking, case management, whether health insurance affects patient counseling and how health insurance informs the referral process.

OBSTETRIC CRISIS AND IMPLICATIONS

Reproductive needs for women are at an all-time high. As mentioned, Georgia is experiencing an obstetric care shortage due to the closures of labor and delivery (L&D) units in rural hospitals. Between 1994 and 2018, 37 L&D units closed in majority rural counties (Hart, 2018). Consequently, providers relocated their practices. By 2020, it is estimated that 75% of rural primary care services will not have adequate obstetrics care (Zertuche, 2015). Considering future providers have the potential to fill in the medical gaps, this may not be the case. From a sample of clinical students in GA, approximately 46% pursuing their midwifery certifications (n=28) and approximately 75% of OB/GYN residents (n=80) responded they are

unlikely/extremely unlikely to practice in obstetric rural/shortage areas (Zertuche & Spelke, 2014). With financial incentives such as loan repayment, tax credits, guaranteed salaries, differential pay, support to open private practice, and higher Medicaid reimbursement rates, the rates of likelihood went up significantly as seen in Figure 2 (Zertuche & Spelke, 2014).

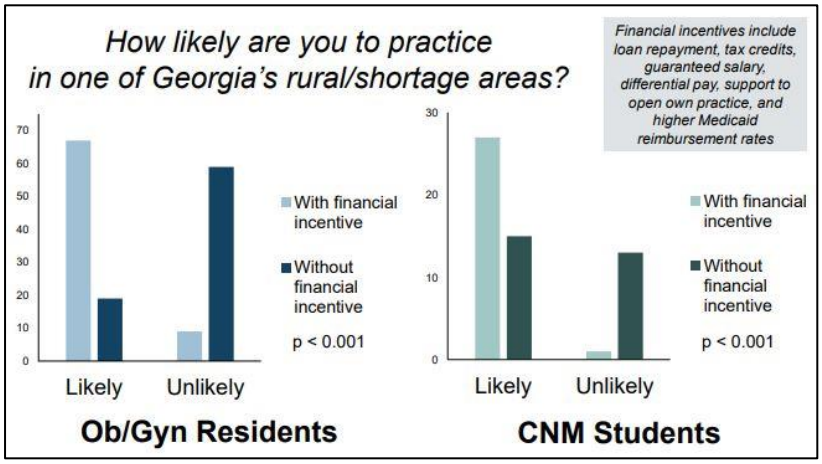

FIGURE 2. FINANCIAL INCENTIVES TO PRACTICE (ZERTUCHE & SPELKE, 2014)

Due to the sparse availability of local physicians in these areas, clinicians in maternity care encounter demanding call schedules and increases in patient load which can lead to being overworked (Zertuche & Spelke, 2014). These circumstances provide little motive for future providers, such as the sample of OB/GYN residents and CNM students, to begin practicing in shortage areas (Zertuche & Spelke, 2014). In addition, a high number of GA patients are on Medicaid (Zertuche & Spelke, 2014). Financially, it is difficult to keep a practice open since Medicaid reimbursement is low and the majority of patients are dependent on Medicaid (Zertuche & Spelke, 2014). Additionally, malpractice insurance is high for maternity care which has resulted in earlier retirement for obstetricians and family practitioners to avoid maternity care altogether (Zertuche & Spelke, 2014).

On the patient side, health care navigation becomes more challenging. From a quantitative study conducted from 1999-2009, about 24% of pregnant women in non-metropolitan Georgia drive more than 45 minutes away to see the only OB provider outside of an ED (Zertuche & Spelke, 2014). This reduces the frequency of prenatal visits and a seven times greater likelihood of pregnancy complications due to psychological stress for a commute of more than one hour (Grzybowski, Stoll, & Kornelsen, 2011). Considering the context of this project being early pregnancy bleeding less than 16 weeks and Georgia experiencing an overall medical shortage, some patients do not know their pregnancy status because of their infrequent visits with health care providers (Hart, 2018). This results in delayed pregnancy care and reduced pregnancy options in the ED, thus more emergent presentation of patient conditions and higher health care costs (Hart, 2018).

Keeping in mind patients not having established care, a common patient barrier, outside of health insurance, is transportation (Grzybowski et al., 2011). Patients may not be able to get to their provider in times of emergency. Consequently, they go to the nearest emergency room or a critical access hospital. From 2002 to 2010, data from the American Hospital Association showed that non-indicated labor inductions increased in rural areas at a much faster rate than in urban areas (Anderson et al., 2019; P. Hung, Casey, Kozhimannil, Karaca-Mandic, & Moscovice, 2018). Patients may elect for a scheduled C-section or a non-indicated induction due to concerns of being in active labor and not being in close proximity to a delivery unit (Anderson et al., 2019; P. Hung et al., 2018)

Though, health insurance offers limited transportation, if the patient is not already actively on health insurance and not aware of this benefit, this benefit becomes a lost opportunity (Santhanam, 2018). In addition, transportation needs to be booked at least three days in advance,

which can be another barrier to seeking care in patient perceived emergency situations if the patient is unable to pay the cost of an ambulance (SoutheastTrans). Moreover, there are countless experiences nationwide of Medicaid transport leaving patients waiting for hours on end to be picked up and oftentimes, not being picked which has left Medicaid transport an unreliable resource (Santhanam, 2018). At times, patients come to the ED specifically to ask for transport to an appropriate facility. Not only are EDs receiving non-emergent patient conditions which skyrocket health costs, but they are expected to fill in as a one-stop shop for the patient gaps in accessing health care.

EARLY PREGNANCY BLEEDING IN EMERGENCY DEPARTMENTS

As mentioned, EDs are key access points to accessing health care. In a cross-sectional study from the National Hospital Ambulatory Medical Care Survey, there were 5.4 million visits for VBEP from 1993-2003 which accounted for 1.6% of all emergency department (ED) visits (Wittels et al., 2008). Some EDs, especially those without a L&D unit, have limited or no access to OB/GYN equipment such as an ultrasound. Ultrasounds rule out ectopic pregnancies, determine gestational age, confirmation of pregnancy, and document fetal heart tones sample (Wittels et al., 2008). However in the Wittels study, only 4 in 10 women received an ultrasound in their national sample (Wittels et al., 2008). Through a survey of 56 Missouri hospitals examining rural and urban EDs, they found that hospital size is significantly associated with ultrasound availability (Mengarelli, Nepusz, & Kondrashova, 2018). In turn, small, rural hospitals use ultrasound technology less than large urban hospitals (Mengarelli et al., 2018). This lack of ultrasound availability may result in women traveling further distances or being

transferred to another hospital when they are bleeding in early pregnancy. They explain small, rural hospitals may not have the funds to purchase an ultrasound machine and hire staff who may interpret the findings (Mengarelli et al., 2018).

In addition, EDs who do not have a practicing OB/GYN are limited to options they are able to provide for their patients experiencing early pregnancy bleeding. For example, ED physicians are not trained in uterine aspiration for miscarriage (Quinley et al., 2018). In the Quinley literature review, they explain that ultrasounds, speculums, cannulas, tenaculum, and misoprostol are common instruments and medications to perform uterine aspirations for patients experiencing a miscarriage who need medical interference, outside of expectant management (Quinley et al., 2018). Attitudes providers hold among those who have experience with uterine evacuations in early pregnancy were positively significantly associated with the safety of treatment and patient preference to uterine evacuations (Dalton et al., 2010). This indicates comfort in providing options to patients is directly associated with experience (Dalton et al., 2010).

Provider training and lack of multidisciplinary staff available limits patient medical care. Provider attitudes to OB/GYN patients in limited EDs place stress on the medical team which heightens negative perceptions of patients with OB/GYN conditions such as VBEP (Darney, Weaver, VanDerhei, Stevens, & Prager, 2013). From a mixed-methods study in a family medicine residency in Washington, their qualitative data showed that providers felt the balance of technical training to do a manual vacuum aspiration and the emotional labor to provide for the patient difficult compared to other procedures (Darney et al., 2013). Normalizing the procedure is also a challenge faced by these providers because it is not a common procedure, so “every time it’s the first time”, which results in nervousness (Darney et al., 2013). The political battle of

performing abortions versus doing miscarriage management is also a point of contention (Darney et al., 2013). Though this was a study on family practitioners, similar concerns may be seen in the ED staffed with family medicine providers who see patients with VBEP.

VBEP rates significantly increased over this 11-year period and were more likely to be uninsured patients (Wittels et al., 2008). This increase is alarming because ED patients have a higher risk in not following up with a provider post-ED and VBEP conditions require close follow-up to reduce pregnancy complications and repeat visits to the ED (Wittels et al., 2008).

In sum, emergency departments see more cases of obstetric needs. Emergency departments have become major decision makers in health care delivery. Patients who do not have established care and seek care in the ED for non-emergent issues result in overcrowded EDs, longer wait times, delays in treatment, decreased quality assurance, increased patient dissatisfaction, and inefficacious ED process management (Bristow & Herrick, 2002). A mixed-methods study found that ED responsibilities have expanded beyond stabilization because there are no other outpatient options in a timely manner (Morganti et al., 2013). Financial implications of utilizing the ED hospital admission result in a large percentage of hospital revenue, but also 31% of national health care expenditure comes from inpatient care, driving health care costs (Morganti et al., 2013). In 2006 from the Agency for Healthcare Research and Quality survey, preventable hospital admissions cost the U.S. more than $30 billion per year (Morganti et al., 2013). Health insurance can assist in mitigating cost, but health insurance coverage is not available at equitable rates to everyone.

HEALTH INSURANCE AND DISPARITY

According to a quantitative study, health care costs are increasing while reimbursements are decreasing among private, public and no insurance categories (Hsia et al., 2008). As previously mentioned, rural hospitals are experiencing closures due to poor reimbursement and a variety of other factors (Zertuche, 2015). In addition, through quantitative studies, OB care is seen as low profit, low volume which in turn results in low staffing (Hsia et al., 2008; Peiyin Hung, Kozhimannil, Casey, & Moscovice, 2016; Kaufman et al., 2016; Zhao, 2007). In states where Medicaid was expanded, it has changed the way women receive maternity care.

More women received continuous care after pregnancy because they qualified for Medicaid under the expansion guidelines which include income levels below 138% of the Federal Poverty Guideline, which is different from Georgia's traditional Medicaid requirement being below 225% of the FPG (MACPAC, Georgia Department of Community Health, 2019; 2014). Thirty-five states and the District of Columbia raised their eligibility threshold, however, 14 states, including Georgia have not (MACPAC, 2014). In Medicaid expansion states, they experienced 1.6 fewer maternal deaths per 100,000 (Rosenberg, 2019; Searing & Ross, 2019). Additionally, though women of reproductive age have not been examined in its association with Medicaid expansion, racial maternal health disparities persist and Medicaid expansion may play a role in addressing health disparity outcomes (Searing & Ross, 2019).

As mentioned previously, Georgia's pregnancy Medicaid, RSM, is available to low-income, pregnant citizens. Navigating this coverage for patients experiencing VBEP is difficult without a case management team (Bristow & Herrick, 2002). Though there is a paucity of literature on VBEP outcomes based on health insurance in the emergency room, there is data on

trauma hospital admissions and how health insurance impacts health outcomes. A quantitative study on traumatic injury in-hospital mortality linked higher risk in mortality in high poverty neighborhoods and those on public health insurance (Loberg, Hayward, Fessler, & Edhayan, 2018). Moreover, a retrospective cohort study examined data from the national trauma data bank and found similar findings on how health insurance impacted failure to rescue (FTR) patients (Bell & Zarzaur, 2013). Uninsured patients were more likely to experience FTR than publicly or privately insured patients. However, uninsured patients were less likely to experience complications and publicly insured patients were more likely to experience a complication compared to those with private insurance (Bell & Zarzaur, 2013).

Moreover, in Georgia, there were 79 reported maternal deaths in 2013 that were pregnancy-related and -associated. Black Americans accounted for 47% of total maternal deaths, while White Americans accounted for 43% (Georgia Department of Public Health, 2013). Black Americans experienced more pregnancy-related deaths (n=32; 66%), while White Americans experienced more pregnancy-associated, not related deaths (n=47; 60%). Of these deaths, 52% were Medicaid recipients and 18% received private insurance (Georgia Department of Public Health, 2013). One key finding from pregnancy-associated deaths are that they occurred more than 42 days post-partum and pregnancy-related deaths occurred within the first 42 days post-partum (Georgia Department of Public Health, 2013). With a health insurance window of 60 days post-partum with RSM, pregnancy-associated deaths may pose financial risks.

DISCHARGE PLANNING AND FOLLOW-UP

Furthermore, RSM has its own limitations. To reiterate, the 60 day postpartum period limits the ability for a woman to remain on medication or follow through on discharge plans

(Searing & Ross, 2019). Though, ED providers recommend seeing an OB 24-48 hours after they are seen in the ED, the likelihood of following through is low (Wittels et al., 2008). According to a qualitative study, the closures of L&D units and rural hospitals have scattered OBs to practice in metropolitan areas, so there is a lack of providers, time and availability (Altman, Zurynski, Breen, Hoffmann, & Woolfenden, 2018). Rural resources in states without Medicaid expansion were more at risk for financial instability and less likely to have obstetrics (Luthra, 2018). Moreover, the greater distance a woman travels, they have a 3.17 increased rate of adverse perinatal outcomes if the travel is greater than four hours (Grzybowski et al., 2011). One to two hour distance from parturient services are associated with NICU 2 and 3 day admissions which can cost $1,300 to $2,500 per day according to a quantitative study done in British Columbia (Grzybowski et al., 2011). Delay in treatment can also result from ED overcrowding, differential standard in bleeding volume between ED providers and other providers, and waiting for a transfer in rural areas which are limited in EMS services (Bristow & Herrick, 2002; Hart, 2018). Discharge and follow-up planning face great obstacles in connecting women to care postpartum due to a myriad of factors.

In turn, how physicians develop discharge and follow-up plans have allowed them to become gatekeepers in health care delivery (Javalgi et al., 1993). Oftentimes, women cannot go to a specialist provider without a referral from another physician or specialist such as their PCP or OB/GYN (Javalgi et al., 1993). In the Javalgi study on how physicians make referrals, it centers its approach using the Social Exchange theory (Cropanzano & Mitchell, 2005). This theory focuses on whether individual expects an interaction with another to have a positive outcome otherwise the reward exceeds the cost. In a similar vein, physicians will refer their patients if they believe it to be a profitable exchange from the interaction, or the referral in this

case (Javalgi et al., 1993). This profitable exchange may include the best treatment, efficient communication from the referred physician, the return of the patient for continuing care, and patient satisfaction (Javalgi et al., 1993). This also improves the reputation of the physician and notoriety in skill set (Javalgi et al., 1993). This balance can be seen in Figure 3.

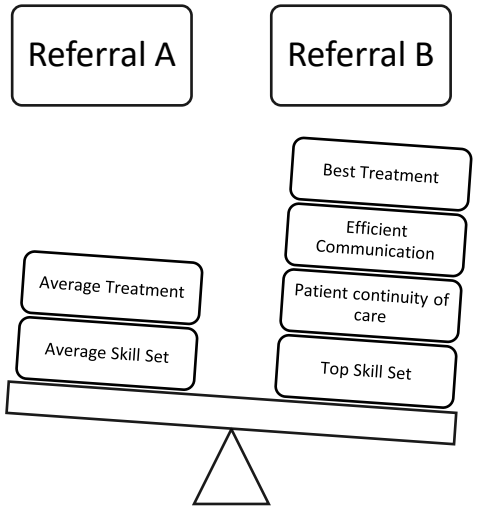

FIGURE 3. APPLIED SOCIAL EXCHANGE THEORY OF PHYSICIANS DECIDING REFERRALS

The Javalgi study identified key criteria that physicians select of importance when deciding referrals outside of their specialty. When examining the factors, as mentioned previously, the type of illness, the medical expertise of the physician, and previous positive experience with the physician were ranked the highest, while patient preference, quickness in seeing the patient, location of the patient, and insurance coverage were not commonly selected as important (Javalgi et al., 1993). From the Javalgi study, 54% of the physicians selected clinical importance factors and 26% selected service factors (Javalgi et al., 1993). Only 6% selected access to services and 4% selected cost of services as important factors when considering referrals (Javalgi et al., 1993).

In thinking about these factors, the Javalgi qualitative study developed a referral map to model effective referrals based on patient and clinician preference (Einbinder, Klein, & Safran,

1997). They base their referral map in multi-attribute value theory, a branch of decision theory (Einbinder et al., 1997). This theory evaluates alternatives to different pathways a patient can receive an ED referral. This is characterized by multiple attributes, otherwise known as reasons, why the ED clinician chooses one alternative over another. How well the alternative, or potential referred provider, satisfies the ED clinician's objectives frames the ED referral pathway (Einbinder et al., 1997).

The main objective is to have the ED clinician choose the best follow-up provider from the available alternatives. This objective has six components which include clinician and patient priorities, or a knowledge management approach which considers reason for referral, physician preference and care philosophy and demographics, communication between specialist and referring clinician and patient and service orientation toward patient, patient access and convenience to referred provider, and minimizing indirect cost to referring clinician and out-of-pocket costs to the patient (Einbinder et al., 1997). This decision-making process is seen in Figure 4. As mentioned, research shows that clinicians do not consider patient-centered priorities

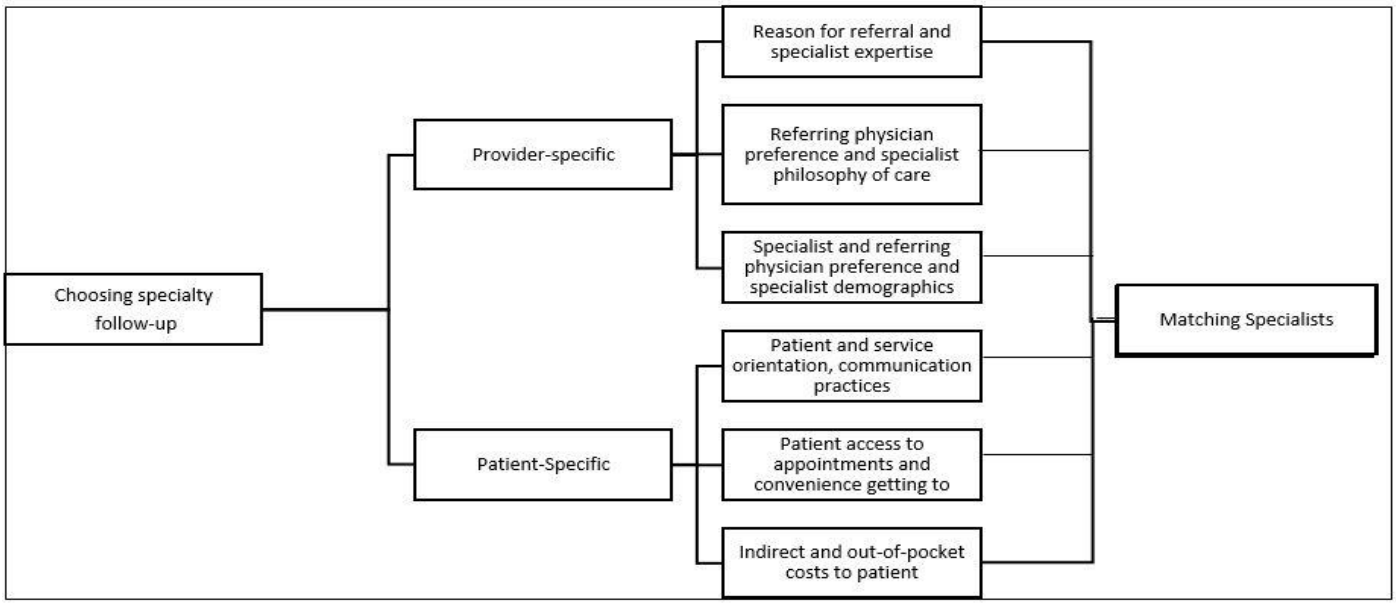

FIGURE 4. APPLICATION OF MULTI-ATTRIBUTE THEORY TO CHOOSING PATIENT FOLLOW-UP

when making a referral. However, through knowledge management is improving, this may have a substantial impact on health care delivery and patient satisfaction.

Furthermore, the main goal of this thesis is to understand emergency department providers' knowledge and awareness of insurance status for their patients and where women are being referred after they receive care in the ED, similar to the knowledge management approach, and fill a gap an important gap in the literature (Einbinder et al., 1997). The Georgia obstetric crisis, access to OB/GYN instruments and medications in the ED, and insurance health disparities may inform the referral process and access to follow-up care. This study will explore whether insurance status affects patient counseling and if insurance status is considered in the ED provider's referral process after the patient is seen in the ED for VBEP. The parent study, Pregnancy-Related Care in Georgia's Emergency Departments (PRECEDE), will provide a foundation for these factors to be explored.

CHAPTER THREE: STUDENT CONTRIBUTION

OVERVIEW OF PRECEDE

The PRECEDE project explores organizational and individual-level factors related to the provision of early pregnancy bleeding care in emergency department settings across the state. A team of Emory University and University of Alabama researchers developed the PRECEDE project. The principal investigators are Dr. Lisa Haddad from Emory University School of Medicine and Dr. Kari White from University of Alabama at Birmingham School of Public Health. Co-investigators are Dr. Kelli Hall and Dr. Eva Lathrop, with Shelby Rentmeester, MPH as the project director. Mehabuba "Mimi" Rahman serves as the Graduate Research Assistant and joined the project in Fall 2018, year two of project implementation. PRECEDE will serve as the parent study for this thesis project. The original and complementary thesis guiding research question, theoretical approach, and data collection items were developed in tandem prospectively with design of the parent study, as a unique contribution to this program of research.

This qualitative analysis was embedded in a larger parent study of EDs settings across Georgia. The purpose of the parent study was to explore organizational and individual-level factors that are related to the provision and early pregnancy and post-abortion care in EDs across Georgia. The present analysis focuses on population characteristics, VBEP discharge and referral planning, and recommendations for change in practice and policy to improve patient-centered care in ED settings.

During the first semester on this project, Rahman led a comprehensive literature review for the team focused on collating scientific evidence on early pregnancy bleeding in the

emergency department and to identify knowledge gaps that the parent project and complementary thesis would fill. From this search, Rahman identified key topics and dimensions of this body of work (or lack thereof) to inform refinement of research questions and development of an interview guide. This included hospital demographics, patient characteristics, provider protocol, knowledge, attitudes on early pregnancy bleeding, abortion, and barriers to health care. In addition, Rahman assisted the project director in IRB submission on March 18th and the project was approved on May 6,2019 and exempt from further IRB review and approval.

During the second semester, the project director and Rahman developed the Emergency Department Characteristics survey, tested the survey for quality assurance and proper logic branching. In addition, the interview guide was undergoing iterations based on feedback from the PI's and Megan Henn, who is the ED consultant from Grady Memorial Hospital. In addition, the semester geared up for active recruitment in the Summer of 2019, so Rahman began recruitment tracking and organizing individuals to contact for our study. This included calling hospitals for the names of medical directors and internet searchers for media releases on hospital directors. Rahman collected information about their title, phone number, and email address.

At the beginning of Summer 2019, an additional graduate assistant was hired, Victoria Donnelly, MPH (C) to assist in summer recruitment and data collection. Donnelly and Rahman began the summer with recruitment via cold calling, emailing, and sending mailers to hospitals. To initiate recruitment, the research team strategically selected 17 hospitals with emergency departments. These hospitals are spread across the public health districts of Georgia, in areas of varying access to OB services. This initial recruitment list includes both hospitals that have OB services on site and those that do not. Hospitals with OB services were strategically chosen based on the surrounding counties that are at risk or have no OB services.

As of October 2019, Rahman led and conducted 20 semi-structured interviews with the project director. This also includes the logistics of coordinating the interview, the interview location, the follow-up, the consent process, and debriefing after the interview with the director. A draft codebook has been developed based on the interview guide's deductive themes. The codebook included inductive themes as the transcripts are reviewed. Rahman cleaned and de-identified the 20 transcripts upon receipt from the transcription company. During the fall of 2019, the project director Rahman and three other research team members thematically coded 32 transcripts using the parent codebook. From this, the coding teams coded to agreement and will develop a synopsis of 5-7 themes. Once the themes are finalized, Rahman will assist in manuscript writing for publications. The journals of interest for manuscript submission may be *Maternal and Child Health.*

SETTING AND SAMPLING

The hospitals in this study were purposively chosen in areas with high and low OB coverage access based on primary care service area distinctions (PCSA). To understand the health care landscape, PCSA distinctions are defined by the collection of counties in which >30% of county residents receive their primary care which range from adequate, at-risk, deficit to no OB services (Zertuche, 2015). The research team purposively selected hospitals with the emergency departments. Emergency departments were chosen if they had frequent utilization by patients due to its convenience and safety net features. This sampling frame allowed for heterogeneity of hospital distribution across the public health districts of Georgia, in areas of varying access to OB services. Hospitals located in the metropolitan Atlanta area were excluded

because metropolitan Atlanta's is not experiencing OB shortages. Additionally, the varied provider roles demonstrated individual-level insight into the differences and similarities in early pregnancy bleeding management and organizational factors related to the provision of early pregnancy bleeding care. We excluded hospitals without an ED.

In sum, 28 hospitals were invited to participate by phone calls, email, and letters to ED directors. We then purposively selected approximately two to four emergency department clinical staff representing diverse roles from eight to ten different hospitals providing heterogeneity in geographic location, hospital type, ED trauma designation and whether the hospital had a labor and delivery unit . Ten hospitals with 32 providers ultimately participated with institutional support. We obtained approval from the Emory Institutional Review Board (IRB) by a review of all study materials and was determined that although it is human subjects research, it is exempt from further IRB review and approval. We then obtained oral consent from all the interviewees. A Certificate of Confidentiality was obtained to recruit providers to alleviate unease discussing reproductive health issues as ED providers and not OB. Individual responses and hospitals were de-identified.

DATA COLLECTION

In-depth interviews were conducted using a semi-structured interview guide face-to-face, with two available interviewers and one notetaker. Interview guides were developed based on a comprehensive literature review on discharge planning, referral development, patient resources, and health insurance which can be seen in Figure 2. The interview guide was pilot tested with emergency department providers in the metro-Atlanta area to assure appropriateness and

comprehensiveness. Interviewers asked providers about their ED protocol on patient counseling which included discharge planning, referrals and the follow-up process. Through explaining early pregnancy bleeding protocol, providers described how patient characteristics such as patient ability to pay, health insurance or lack of health insurance informed patient counseling for post-ED instructions. One interviewer and notetaker conducted interviews on-site in the emergency departments in conference or break rooms before or after a work shift. Due to the complex scheduling of ED providers, some interviews were conducted in a semi-private setting with some non-participants, such as other medical staff to be present nearby. Interviews were audio-recorded and lasted between 20-45 minutes. Written and verbal consent was obtained. A $50 visa gift card was provided as an incentive upon completion of the interview.

DATA ANALYSIS

A professional transcriptionist transcribed interviews verbatim and reviewed by the research team for accuracy and de-identified prior to data analysis. Research team members imported transcripts into MAXQDA 18 for data management and coding. The iterative thematic analysis process applied both deductive and inductive approaches. Interviews were transcribed verbatim by a professional transcriptionist and reviewed by the research team for accuracy and de-identified prior to data analysis. Transcripts were imported into MAXQDA for data management and coding. From a subset of three initial transcripts, the principal investigator (PI) memoed for common patterns from the data to identify deductive codes and develop emerging inductive codes. An additional research team member, who also conducted interviews, met with the PI and reviewed the memos and preliminary codes to refine the codes and categories for the

codebook. After codes were developed, the researchers defined and developed inclusion and exclusion criteria for each code. Then, the team independently coded a subset of the interviews and compared coding in a subset of transcripts through line-by-line review. Two additional researchers on the larger research team reviewed the codebook and final revisions were made. The PI independently and iteratively coded the remaining transcripts.

Coding matrices were used to compare major themes within the data and identify dimensions and properties within the salient codes. Relationships were explored visually in the data between codes that were seen concurrently via MAXQDA Three major themes were identified to reflect the current state of patient-centered reproductive health care in rural Georgia for women with early pregnancy bleeding.

ETHICAL CONSIDERATIONS

This study is exempt from Institutional Review Board review by Emory University IRB #00109188. This project meets the criteria for exemption under 45 CFR 46.101(d)(2). The core project staff (Project Director, Two Graduate Researcher Assistants) were the only ones who had interview demographic information and all identifiable information from interviews. Information from interviews were de-identified prior to data analysis. Names of providers were not collected during the consent process. Only the project manager and the graduate research assistants had access to the project's emails during recruitment. A Certificate of Confidentiality from the National Institutes of Health #CC-OD-19-309 was also provided to the project in order to protect identifiable, sensitive information from being forcibly released or disclosed.

CHAPTER FOUR: MANUSCRIPT

Journal of interest: Maternal and Child Health

Article

Emergency department patient-centeredness for early pregnancy bleeding during obstetrician shortages

Mehabuba Rahman[a*], Victoria Donnelly[a], Shelby Rentmeester, Kari White[c], Lisa Haddad[d], Dawn Comeau[a,] and Kelli Hall[a,b]

[a] Department of Behavioral Sciences and Health Education, Rollins School of Public Health, Emory University, Atlanta, GA 30322, USA; mimi.rahman@emory.edu; dcomeau@emory.edu; kelli.s.hall@emory.edu

[b] Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, GA 30322, USA

[c] Steve Hicks School of Social Work, The University of Texas at Austin, Austin, Texas 78712

[d] Department of Obstetrics and Gynecology, Division of Family Planning, Emory School of Medicine, Emory University, Atlanta, GA 30322, USA

* Correspondence: mimi.rahman@emory.edu

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Keywords (up to eight; abbreviations discouraged) Early Pregnancy Loss; Emergency Department; Health Insurance; Discharge Planning; Care Referral; Follow-up Appointment; Patient-centered Care

ABSTRACT (up to 300 words)

As of 2018, 79 out of 159 counties in Georgia did not have an obstetrician/gynecologist (OB/GYN) in the county which left many women with vaginal bleeding in early pregnancy (VBEP) to seek care in emergency departments (ED). Given the sociopolitical context in recent years restricting access to comprehensive reproductive health services, the ED is a promising but understudied context to fill service delivery gaps for women needing pregnancy care The aim of this research is to understand how ED providers develop cost-oriented, patient-centered, post-emergency department follow-up, referral, and discharge instructions for VBEP in rural Georgia counties. Guided by the Anderson and Newman Framework of Health Services Utilization, this qualitative study utilized semi-structured, in-depth, in-person interviews to understand 32 providers' experiences of managing VBEP in the ED. Purposive sampling selected 10 hospitals outside of the Atlanta metropolitan area with varying levels of access to an OB to illustrate differences in management experiences. Qualitative interview data were coded using both inductive and deductive methods in an iterative fashion and predominant themes were identified. Four emergent themes from the 32 interviews are presented via the Anderson Behavioral Model of Health Services Use through a patient-centered care model by Meade and Bower which

includes four key constructs: 1) environment, 2) population characteristics, 3) health behavior, 4) outcomes. In sum, providers shared mixed experiences serving patients with VBEP; many reported on the lack of cost-efficient resources and Medicaid delays, while many EDs with the least amount of OB resources demonstrated great resourcefulness and support of patients by developing discharge plans based on their patient's characteristics. Future research is needed to provide understanding into the patient perspective on the role of ED settings to meet their pregnancy care needs. .

INTRODUCTION

In a cross-sectional study from the National Hospital Ambulatory Medical Care Survey, there were 5.4 million visits for vaginal bleeding in early pregnancy (VBEP) from 1993-2003, accounting for 1.6% of all emergency department (ED) visits (Wittels, Pelletier, Brown, & Camargo, 2008). Furthermore, VBEP is the highest cited gynecologic emergency which may call for uterine aspiration (UA); however UA is not taught in emergency medicine training (Quinley et al., 2018). States in the U.S. have varying geographic and medical shortages. Consequently, EDs have become the sole source of primary and specialty care. Many women in Georgia with VBEP seek care in emergency departments (ED) (Hart, 2018). As of 2018, 79 out of 159 counties in Georgia did not have an OB/GYN provider, leaving major gaps in critical healthcare access (Hart, 2018; Zertuche & Spelke, 2014). About 46% of Georgia's population lives in rural areas and 65% are female (Trading Economics, 2016). Of these women, 38% (n=736,000) are reproductive-aged 15-44 (Trading Economics, 2016). From a quantitative study conducted from 1999-2009, about 24% of pregnant women in non-metropolitan Georgia drive more than 45 minutes away to see the only OB provider outside of an ED (Zertuche & Spelke, 2014). This reduces the frequency of prenatal visits and increases pregnancy complications seven times greater due to psychological stress for a commute of more than one hour (Grzybowski, Stoll, & Kornelsen, 2011).

Relying on emergency departments for obstetric care and developing discharge planning and follow-up instructions in environments where there are limited resources decreases continuity of care. How physicians develop discharge and follow-up plans have allowed them to become gatekeepers in health care delivery (Javalgi, Joseph, Gombeski Jr, & Lester, 1993). (Bristow & Herrick, 2002). In practice, ED providers do not identify patient's insurance coverage as an important factor in deciding referral specialists, however, even the best follow-up plan for a patient is less than useful if the patient cannot afford care (Javalgi et al., 1993).

Moreover, Georgia's pregnancy Medicaid program, otherwise known as "Right from the Start" program (RSM), is available, however, this resource has multiple barriers to utilize it efficiently which will be further discussed. This program offers health insurance for individuals who are low-income, pregnant and do not have health insurance. From this, women received access to health care services during pregnancy and 60 days post-partum because they qualified for RSM under this criteria which include income levels below 138% of the Federal Poverty Guideline (MACPAC, Georgia Department of Community Health, 2019; 2014). Georgia's traditional Medicaid requirement includes incomes below 225% of the FPG, since Georgia has not

expanded Medicaid (MACPAC, Georgia Department of Community Health, 2019; 2014). Since RSM expires 60 days post-partum, this leaves a tight window for follow-up care and reduces continuity of care (MACPAC, Georgia Department of Community Health, 2019; 2014). Pregnancy-associated deaths occur more than 42 days post-partum and pregnancy-related deaths occur within the first 42 days post-partum (Georgia Department of Public Health, 2013). In Medicaid expansion states, they experienced 1.6 fewer maternal deaths per 100,000 (Rosenberg, 2019; Searing & Ross, 2019). Therefore, health insurance informs health care utilization and improves maternal health outcomes (Rosenberg, 2019; Searing & Ross, 2019).

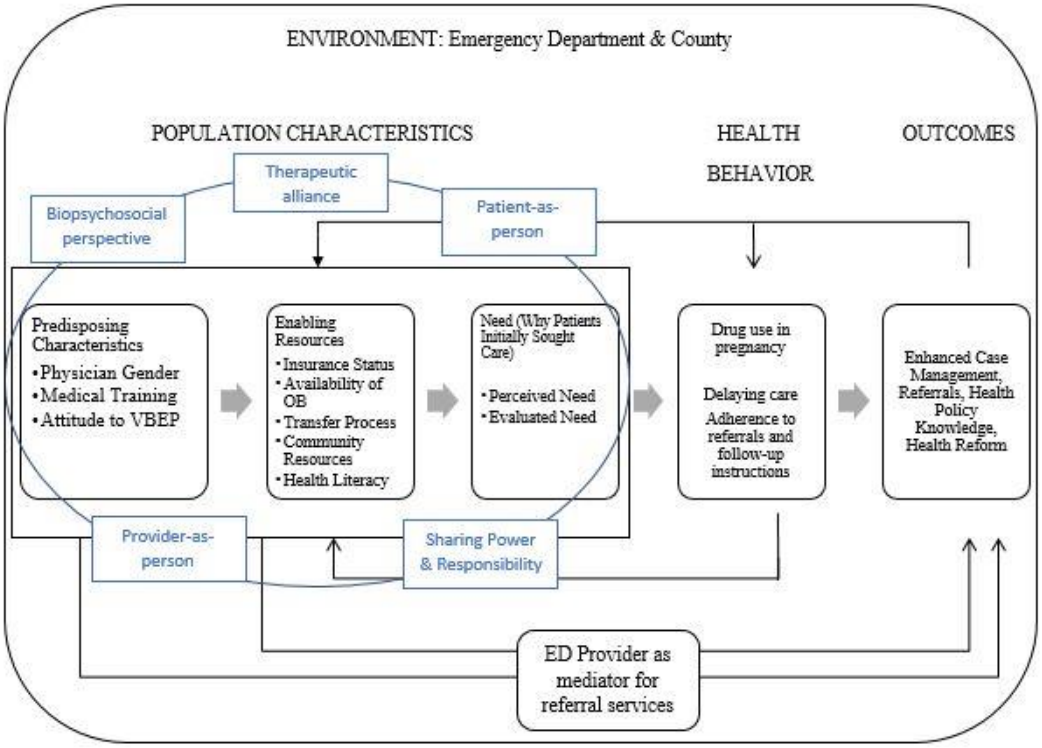
Patient-centered care is commonplace in general medicine but not specialty care, such as emergency medicine and acute care (Mead & Bower, 2000). Emergency departments may benefit from this approach, especially in low resource settings due to OB/GYN shortages. Yet research to date on the potential for patient-centered approaches to care (or lack thereof) and its influence on discharge planning and follow up is limited. The little existing research has utilized are mostly quantitative and cross-sectional designs, which precludes our understanding of ED providers and staff attitudes and practices and their perceptions on the patient experience. Qualitatively, how EDs manage patients with VBEP is understudied (Quinley et al., 2018). This study will explore how emergency providers practice patient-centered care by respecting patient preferences and incorporating patient-provider communication (Epstein & Street, 2011). The findings from this study will add to health services utilization and patient-centered care literature in hopes to change emergency medicine practice and policy.

MATERIALS AND METHODS

THEORETICAL FRAMEWORK

First, we employed The Anderson and Newman Framework of Health Services Utilization, which assesses conditions of either facilitation or utilization to develop a behavioral model that measures access to medical care (Andersen, 1995; Figure 1). Second, we integrated a patient-centered model to further guide assessment of the quality of the personal, professional, and organizational relationships and provide context to Anderson's framework (Andersen, 1995; Epstein & Street, 2011; Mead & Bower, 2000). From the adapted Anderson and Newman Framework of Health Services Utilization and Mead and Bower's patient-centered care model seen in Figure 1, the five dimensions of patient centeredness 1) biopsychosocial perspective (including psychological and social domains of patient needs), 2) patient-as-person (understanding how patients experience their illness as individuals), 3) sharing power and responsibility (equal decision making between patient and provider), 4) therapeutic alliance (provider empathy and sensitivity in provider-patient relationship), and 5) doctor-as-person (provider awareness of one's influence on their patient) will analyze population characteristics within the Health Services Utilization model as providers create discharge plans and referral plans (Andersen, 1995; Mead & Bower, 2000).

Figure 1. Adapted from Behavioral Model of Health Service Use (Andersen, 1995) and Meade and Bower's Patient-Centered Care Model (Meade and Bower,1999).



DESIGN OVERVIEW

This qualitative analysis was embedded in a larger parent study of EDs settings across Georgia. The purpose of the parent study was to explore organizational and individual-level factors that are related to the provision and early pregnancy and post-abortion care in EDs across Georgia. The present analysis focuses on population characteristics, VBEP discharge and referral planning, and recommendations for change in practice and policy to improve patient-centered care in ED settings.

SETTING AND SAMPLING

The hospitals in this study were purposively chosen in areas with high and low OB coverage access based on primary care service area distinctions (PCSA). To understand the health care landscape, PCSA distinctions are defined by the collection of counties in which >30% of county residents receive their primary care which range from adequate, at-risk, deficit to no OB services (Zertuche, 2015). The research team purposively selected hospitals with the emergency departments. This sampling frame allowed for heterogeneity of hospital distribution across the public health districts of Georgia, in areas of varying access to OB services. Hospitals located in the metropolitan Atlanta area were excluded because of the adequate, available OB services. Additionally, the varied clinical provider roles demonstrated individual-level insight into the

differences and similarities in VBEP management and organizational factors related to the provision of VBEP care. We excluded hospitals without an ED.

In sum, 28 hospitals were invited to participate by phone calls, email, and letters to ED directors. We then purposively selected approximately two to four emergency department clinical staff representing diverse roles from eight to ten different hospitals providing heterogeneity in geographic location, hospital type, ED trauma designation and whether the hospital had a labor and delivery unit . Ten hospitals with 32 providers ultimately participated with institutional support. We obtained approval from the Emory Institutional Review Board (IRB) by a review of all study materials and was determined that although it is human subjects research, it is exempt from further IRB review and approval. We then obtained oral consent from all the interviewees.

Data Collection

In-depth interviews were conducted using a semi-structured interview guide face-to-face, with two available interviewers and one notetaker. Interview guides were developed based on a comprehensive literature review on discharge planning, referral development, patient resources, and health insurance which can be seen in Figure 2. The interview guide was pilot tested with emergency department providers in the metro-Atlanta area to assure appropriateness and comprehensiveness. Interviewers asked providers about their ED protocol on patient counseling which included discharge planning, referrals and the follow-up process. Through explaining VBEP protocol, providers described how patient characteristics such as patient ability to pay, health insurance or lack of health insurance informed patient counseling for post-ED instructions. Research team members conducted interviews on-site in the a private, or semi-private, office setting in the emergency departments. Interviews were audio-recorded and lasted between 20-45 minutes. A $50 gift card was provided upon completion of the interview. Interviews were transcribed verbatim, and de-identified prior to coding.

Figure 2. Interview Guide

Theoretical Construct	Main Question	Probes/Follow-ups
Predisposing Characteristics	What is the process of discharge planning and follow-up for a patient who has experienced early pregnancy bleeding?	Probe: What do you consider in discharge plans and follow-up? Follow up: Do you create follow-up care for patients that is beyond 60 days? Probe: Do all patients receive follow-up?

		Probe: What kinds of patients receive follow-up?
Enabling Resources Environment	What kind of programs and resources to healthcare access are available from the hospital? For example, these may include indigent care, sliding scale programs, medical discount cards, transportation, Medicaid enrollment, and case management services.	Follow up: What kind of resources to healthcare access are available from the county or community that the hospital connects to patients? For example, this may include free clinics, community discount cards for health insurance or medication, sliding scale clinics, and social services. Probe: Are there any additional resources or programs for women who are pregnant or in need of family planning that you connect to patients? ["Right from the Start" Program, Pregnancy Medicaid, Planning for Healthy Babies (State Medicaid for Family Planning for nonpregnant women), etc.] Follow up: What resources are still in need for these patients to access healthcare? Follow up: Do you know the health insurance status of your patients?
Need Health Behavior	What are some reasons your patients seek care in the ED rather than their primary care provider or OB/GYN? (Ex: Distance, convenience, quality of care, cost)	Probe: Are there other options for outpatient care? Probe: Do patients cite insurance as a reason to why they come to ED? If yes: How frequently do you serve patients who cite insurance as a reason to why they come to the ED?

Outcome	What is the process of discharge planning and follow-up for a patient who has experienced VBEP?	Follow up: Do you know the health insurance status of your patients? If yes, how does this influence the development of discharge planning and referrals? Follow up: If pregnancy Medicaid covers a patient, how does eligibility affect follow-up planning? If no: If a patient willingly discloses their insurance status to you, how does that impact your approach or referrals? Follow up: If a patient is covered by pregnancy Medicaid, how does eligibility affect follow-up planning?

Data Analysis

A professional transcriptionist transcribed interviews verbatim and reviewed by the research team for accuracy and de-identified prior to data analysis. Research team members imported transcripts into MAXQDA 18 for data management and coding. The iterative thematic analysis process applied both deductive and inductive approaches. From a subset of three initial transcripts, the research team member memoed for common patterns from the data to identify deductive codes and develop emerging inductive codes. An additional research team member, who conducted interviews, met with the PI and reviewed the memos and preliminary codes to refine the codes and categories for the codebook. After codes were developed, the researchers defined and developed inclusion and exclusion criteria for each code. Then, the team independently coded a subset of the interviews and compared coding in a subset of transcripts through line-by-line review. Two additional researchers on the larger research team reviewed the codebook and final revisions were made. The research team member independently and iteratively coded the remaining transcripts.

Coding matrices compared major themes within the data and identify dimensions and properties within the salient codes. Three major themes reflected the current state of patient-centered reproductive health care in rural Georgia for women with VBEP guided by the frameworks

Findings about provider perceptions and experiences related to discharge planning, referrals and follow-up planning were organized through Anderson and Newman Framework of Health Services Utilization: population characteristics, health behavior, outcomes, and environment. Within population characteristics of the Health Services Utilization framework, patient-centered care context through Meade and Bower's model examined individual and interpersonal patient-provider level interactions using biopsychosocial perspective, therapeutic alliance, sharing power and responsibility, patient-as-person, and provider-as-person (originally doctor-as-person).

Ethical Considerations

This study is exempt from Institutional Review Board review by Emory University IRB under 45 CFR 46.101(d)(2). All participants provided verbal consent before participating in the interviews.

RESULTS

Table 1 presents sample characteristics of the 10 participating hospitals. In total, research team members interviewed 32 emergency department providers in diverse clinical roles (medical doctors, physician assistants, nurse practitioners, and registered nurses) from 10 hospitals in rural Georgia from June to October 2019. Findings were similar across VBEP discharge planning and referral development and varied based on access to obstetric services.

Table 1. Respondent and hospital profile.

	Number of providers (N = 32)		Number of hospitals in Public Health District (N = 10)	PCSA*	Number of hospitals based on PCSA (N = 10)
Emergency Physician	9	North	5	No OB	3
Registered Nurse	9	South	2	At risk	3
Physician Assistant	7	East	1	Adequate	4
Nurse Practitioner	3	Coastal	2		
ED Educator	3				
Admin	1				

*Primary Care Service Area

PREDISPOSING CHARACTERISTICS

The first domain of Meade and Bower's patient-centered care approach appears as sharing power and responsibility when discussing predisposing factors within the Health Services Model, which are demographic, social structural, and health belief factors that affect how discharge plans, referrals, and follow-up are made (Andersen, 1995). Sharing power and responsibility is an egalitarian approach to doctor-patient relationships influenced by medical training and attitudes towards patients with vaginal bleeding in early pregnancy.

All the providers in the sample developed discharge instructions based on the patient diagnosis. This includes information about the expected amount of bleeding and cramping, conditions that warrant a return, and following up with an OB. This was a common pattern among the ED providers. The patient-centered care approach involves patients input when developing discharge planning and transfer process. Some providers connected patients to sliding scale clinics, such as health departments, or free resident clinics at their hospitals when patients reveal their lack of insurance status or delay in pregnancy Medicaid enrollment.

A common pattern for hospitals without OBs included asking patients which hospital they would like to be transferred to or using their personal vehicle. Within this transfer process, providers mentioned when patients use their personal vehicle during a transfer it is a barrier in the transfer process because the patient may experience a medical emergency en route to the transfer hospital but patients opt in for their personal vehicle to reduce the costs of their medical bills. From the provider perspective, if the patient were transferred via ambulance, a medical emergency can be managed. Though using personal vehicles may be against medical advice, allowing patients to choose is patient-centered.

The second domain of Meade and Bower's patient-centered care model is therapeutic alliance which describes the emotional `context' in discharge planning, referrals, and follow-up. (Mead & Bower, 2000). Providers consider a patient's ability to pay, emotional state, pregnancy education, and first-time pregnancy anxiety. Several providers discussed how they incorporate "compassion", "empathy", and "reassurance" in their referrals. Providers stated they make referrals to behavioral counselors for their patients. One provider mentioned the amount of information provided may differ based on whether a male or female provider is developing the discharge plans.

Table 3. Participant Quotes Within the Predisposing Construct.

Theme	Exemplary Quotes	OB/No OB services	Provider
Sharing power & responsibility	"…But, for pregnancy that needs immediate evacuation, so we will notify the receiving hospital, the condition, the stability, the findings, mostly from	No OB	Emergency physician

	ultrasound, and then whether the patient wants to be transferred by ambulance or by POV. Some patients, they just want to go POV depending on the status of the patient, whether they're stable or unstable. If it is a really unstable patient, then we call the helicopter, and we do the transfer, but there's a specific protocol of doing so..."		Emergency physician
	"I would say that the same people who somewhat fall into that weird gap of people who have insurance, but don't have a lot of money, are the people who voice pretty quickly, 'I'm not sure I wanna go by ambulance. I don't wanna pay that cost.' And then I am obviously faced with things there. In a lot of cases, it depends significantly on the patient. I mean, if you've got a baby and you're popping out, that's probably not – you don't get the thumbs up. 'You can go with your husband to the hospital.' You could stay here, or if you're far enough, you know, if we can wait long enough, then you can go to where you need to deliver, but sometimes that is not an option for people."	No OB	
Therapeutic Alliance	"We do discharge instructions, which go into depth and explain the emotions and the signs and symptoms and everything that kind of come along with it. Because it's a very trying and emotionally miserable time for people, and painful and scary. So the discharge instructions are great. And the nurses go over that with them, too. Depending on which provider you have is probably the	OB	Emergency physician

amount of depth you go into it, just to kind of explain everything. Even the guys try to be – they're all sensitive. We have a sensitive group of people. But I think they probably don't go into as much detail as the girls do…"	Emergency physician
Interviewer: Is anything different about the process for evaluating and providing care for a patient who's experiencing miscarriage with heavy bleeding versus just early pregnancy bleeding?	
	OB
ED: I think there's probably a lot more compassion and empathy from the staff, but I can't think of a whole lot else. I mean, we all try to make sure that everyone is safe.	

Enabling resources

Enabling resources include personal and community resources for healthcare service utilization (Andersen, 1995). A holistic approach to developing discharge planning and referrals include the biopsychosocial perspective which combine biological, psychological and social determinants of health (Mead & Bower, 2000). The results focus on the social determinants of health which include the ability to pay for medical services, insurance status, perceived health literacy of patient, and patient transportation which are determinants that are influenced by personal and community resources.

Some providers describe connecting their patients to financial support services, such as indigent care, available in their hospital. Indigent care in Georgia is a federal and state-funded hospital program that allows adults without insurance to seek discounted or no-cost medical care in hospital systems. All the providers indicated that more than half of their patients who come in

with VBEP do not have insurance and therefore qualify for indigent care. Some providers mention their patients will share whether insurance is a barrier to continue managing their health care.

Two providers, one who mentioned patients disclose their insurance status to them, discussed that their hospital case management services will assist indigent populations who need financial support and transportation. The provider connects the patients to resources such as hospital registration, case management services for Medicaid enrollment, or refer the patients to the health department.

As mentioned, seeing a provider outside of the ED without insurance is difficult. To offset this burden, pregnant patients may enroll into Georgia's Medicaid program, "Ready from the Start". Several providers stated that their patients use the ED for a pregnancy confirmation in order to establish Medicaid from the health department. Additionally, an MD from a hospital with OB stated, "If they don't have insurance and they are experiencing difficulties, I usually call the OB/GYN office myself." Two of the providers discussed insurance and patient understanding of what a pregnancy entails to impact whether they make an appointment for the patient. This can be seen in the following quote from a PA from a hospital with OB, "Sometimes I will make an appointment if I feel like the patient is very lowly educated and can't do that…" This dimension is seen concurrently with the previously mentioned element of patient condition and existing OB. Only a few providers stated that they make appointments for patients who have an existing OB without mentioning other dimensions. One provider described "the beginning of pregnancy [as] often the most difficult" for patients because getting the initial appointment to an OB/GYN is challenging, particularly for patients who do not have insurance. However, most providers shared that they "don't care" and "don't know" about how insurance operates within their hospital.

Navigation of insurance benefits is especially crucial because more than half of the providers stated that transportation, a general insurance benefit, is the most critical issue for their patients. Providers shared that transportation is a limitation mostly due to patients having 1) no vehicle, 2) an unreliable vehicle to drive long distances to the nearest hospital and/or 3) fear to drive because of their VBEP. Nearly a third of providers stated patients come to the ED because there is a delay in the activation of their pregnancy Medicaid. One provider shared that their patients come to the ED for additional ultrasounds because pregnancy Medicaid limits the number of ultrasounds a patient may receive.

Table 4. Participant Quotes Within the Enabling Construct.

Theme	Exemplary Quotes	OB/No OB services	Provider
Biopsychological perspective	"…our system has indigent care that is covered immediately as soon as you say, "I don't have	No OB	Emergency physician

insurance, and here's this. I don't make a ton of money."	ED PA
"Sometimes I will make an appointment if I feel like the patient is very lowly educated and can't do that."	ED RN OB
"So if they voice concerns about their ability to do follow-up, if there are transportation concerns or things like that we typically would get a case manager involved to handle those geographical issues or whatnot. If it's a payment issue, the physician who's on call is required under EMTALA to see that patient the first visit after the emergency visit. So that's typically not a problem. The case manager also helps them with questions that they have about Medicaid and those kinds of things."	OB

Need

From the Health Services Utilization framework, perceived and evaluated need describes how patients view their symptomology and how providers view patient symptomology, respectively. Meade and Bower's model dissects patient-centered care into two domains: patient-as-person and provider-as-person. Patient-as-person is concerned with how patients understand and experience VBEP which loosely aligns with perceived need. Provider-as-person, adapted from doctor-as-person, focuses on how providers respond to their patient's concerns which loosely fits with evaluated need.

When providers describe the development of discharge plans, several providers indicated first-time pregnant patients are more likely to come into the ED for VBEP and not have an established OB. Some providers recognize that their patients fear, anxiety, and nervousness bring them to seek care in the ED which shows how patients experience VBEP which is viewing patients-as-people in the context of Meade and Bower's patient-centered care model and perceived need and also the biopsychosocial perspective.

Providers who recognized their patient's first-time pregnancy anxiety also discussed following up more closely and making appointments for these specific patient populations. providers who work in "small" and "local" hospitals describe a closeness to their patients and having more "insight" to their patient needs which illustrates the providers-as-people and the biopsychosocial perspective domains of patient-centered care.

However, there were providers who shared "frustration" or "agitation" of patients who came to the ED to seek VBEP care when bleeding was not seen as an "emergency" by providers. Providers who worked in hospitals without an OB often shared the sentiment of "don't come to the ED".

The overall sentiment also resulted in providers requesting for better resource navigation and awareness such as referral management, patient advocates, and better patient education on what pregnancy entails and when to use the emergency department to reduce crowding in the ED. Additionally, providers requested more specialty trainings in OB in order to improve OB coverage and better relationships with OBs to improve the referral network.

Table 5. Participant Quotes Within the Need Construct.

Theme	Exemplary Quotes	OB/No OB services	Provider
Patient-as-person	"A lot of times they're comfortable here, they're safe here, because this is their local hospital and it's what they know, so they come here."	No OB	Emergency physician
	"I just think it's kind of our responsibility if you're seeing somebody for the first time. You shouldn't be sitting at home going, "Hey, peace be with you. You've got a baby. Go for it."	No OB	Emergency physician
	I mean they're just not prepared. We overestimate how many people understand the necessity for prenatals, or iron, or things like that, particularly in early pregnancy, just because they're not medical, and they don't understand that. I mean I'm not saying that not everybody understands, but there's just a huge gap between what clinicians believe that people understand in the public, and what the public actually understands."		
Provider-as-person	"So first time pregnancy, I see follow up a little bit better with some women. And the reason I say this is because this is a small community. I see most of	No OB	Emergency physician

these people again during their pregnancy. It's the only reason I have any insight into that."	No OB	ED PA
"If you come here, all it's going to do is delay your care. We don't mind you coming here, if feel you need to come here and you don't have transportation, by all means come here we'll take care of it. And that's what we tell them every time they come, so. And it's frustrating for us, but you know, we're here to take care of patients, so that's what we do, so."		

Health Behavior

The *Health Behavior* domain within the Health Services model illustrates personal health practices and the use of health services by patients. Some providers describe several patients finding out their pregnancy status in the ED because they do not have health insurance and do not seek routine care. This delay in care results in some providers prescribing prenatal medications and referrals to OB. For providers with OBs in the hospital, their referral process is direct. However, providers without an OB in-hospital, the referral process is an open referral to any OB clinic that patients can access. However, many providers describe the challenges getting into an OB office due to several weeks wait, limited hours, and delay in insurance coverage which interferes with patient's ability to follow through with discharge instructions, as perceived by providers. In response, a small percentage of providers note they will directly call OB offices for highly critical patients to schedule appointments due to these challenges, but it is not common practice.

A highly described patient behavior among this patient community was drug misuse which several providers viewed as independent of their patient's pregnancy. Though, the focus of the study was not drug misuse during pregnancy, providers also developed referrals and discharge instructions based on drug use history these health practices.

Outcomes

Health outcomes from the Health Service Use model includes perceived health status, evaluated health status, and consumer satisfaction. This domain of the model does not align comprehensively with the outcomes as described by Andersen due to the gap in patient input (Andersen, 1995).

Additionally, several providers viewed their patients' use of health services in the ED as misguided. Providers described their patients lack pregnancy education warranted more non-emergent conditions in the ED, "evaluated health status", rather than critical or emergent conditions, which was met with frustration from providers and less tailored discharge instructions.

Case management was mentioned by three of the providers to assist patients with health care navigation such as Medicaid enrollment and transportation. Though, a majority of the providers do not work in hospitals with case management, most providers suggested more community education on how to navigate the health care system which may be fulfilled with case management. Having case management is crucial in rural Georgia, where resources are sparse. All the providers stated patients are seeking care in the ED because there are limited resources in the area and if there are resources, patients are not aware of them.

Environment

The environment domain of the Health Utilization Framework described how the physical environment and health care system impact the patient's ability to seek care when access to OB/GYN services are limited. Research team members ask about referral networks and available resources in the area to explore this context. The network of providers includes hospitals that receive transfer patients from hospitals without OB and clinics and hospitals that patients follow up without direct hospital referrals. The data shows that patients follow up at family medicine and primary care practitioners. Crisis Pregnancy Centers (CPC), also known as pregnancy resource centers, were common resources cited by providers that patients utilize for OB services. Several providers were either unaware of the CPC designation or indifferent because of limited OB resources. Similarly, most providers shared their local OBs do not offer pregnancy termination services. Providers disclosed their local OB as part of their referral network while other providers referred out to their affiliate hospitals. Several providers disclosed that patients utilize the health department for "primary mother stuff, so they do pregnancy tests, and they'll give you prenatals, and they also, outside of obstetrics type things, do birth control and things like that" as stated by a PA from a hospital with OB services.

For providers that worked in hospitals without OB, they shared their transfer process. However, there was variation with what an easy and difficult transfer would be for a hospital. The variation occurred based on whether the patient was in stable condition for transfer, the ability of the receiving hospital to take specific OB conditions, and whether the receiving hospital was an affiliate hospital.

Providers stated transfer times range from 45 minutes to two hours based on emergency transportation availability, but generally hospitals are required to take critical patients because of EMTALA laws. Several providers stated not having adequate "trucks" (EMS) available at night delay transport time to the nearest hospital, often out of county.

Additionally, several providers cited EMTALA, as a means to remain impartial to the patient's ability to pay when providing treatment and developing follow-up plans post-ED. Some providers utilized EMTALA's mandate to book appointments for patients at least once after a visit to the ED, without paying in full. Yet, as a provider stated, if patients call for an appointment, the likelihood that they would receive an appointment without payment up front is slim.

Table 6. Participant Quotes from the Health Utilization Framework.

Theme	Exemplary Quotes	OB/No OB services	Provider
Health Behavior	"And we refer them, but whether they follow up is another story. And I noticed that if drugs are involved then lots of times they're not gonna follow up. And they go long periods of time without – I mean they go almost to the end with no prenatal care.	No OB	ED RN
			ED PA
	"With our population specific, we have a lot of government insurances and a lot of patients who don't have insurance at all. So early pregnancy education is lacking. And so, they don't have a place to go to initially because they don't have insurance. So they usually have to wait until they are qualified for emergency Medicaid to go to their actual first OB appointment. So before they even get there, we see a lot of them for probably non-urgent things until they can actually get access to them."	OB	
Outcomes	"And a lot of the women, especially the younger girls who are uneducated about the services, and that don't have transportation they don't get the early checkups that they need. So, we try to educate them on the importance of that."	No OB	ED RN
	"...somebody from the public health department or somebody to come around and say "Hey, these are some resources in your area." Just to keep everybody aware of what's available…Especially in the smaller hospitals where you don't have all those resources."	No OB	ED PA

Environment	“I don't always talk to the doctor, but I will talk to the front office staff and say here's the patient's name, here's what I've got going on with her, can you please give me an appointment. And they say, well, she's going to have to have a hundred dollars up front. And I say, well, we can't do that. As first line of care, you guys have to see these patients for us at least once (due to EMTALA). And she's going to go through the right channels of getting everything, but she's going to need follow up. We can't let her fall through the cracks. And they do it. You just have to call and make it happen. If they [patients] call themselves, it won't happen.”	OB	Emergency Physician
	“We're an hour and 30 minutes from everything in the state, so if you wanna go to [City C], you wanna go to [City D], you wanna go to [City E], you wanna go to [City A], we can pretty much get you there. I have zero problems about talking to any of those. I have a massive list of hospitals, so as long as you didn't fly from Timbuktu, I'm probably gonna talk to whomever did your surgery or procedure first, and then they can have kind of first right of refusal. If they're saying, "No, get them elsewhere quickly," that's fine. I can do that. I mean in most of those cases, if it's [City D], [City C], [City E], or [City A], there's no reason for me to have to direct them elsewhere, because even if they were septic and needed first available hospital, it takes about the same amount of time to get to all of them.”	No OB	Emergency Physician

DISCUSSION

Due to multidimensional roles, emergency medicine may benefit from implementing patient-centered care.Within the context of an obstetric desert, these ED providers are operating under difficult circumstances which make patient-centered care much more challenging because ED

services provide acute care services. Utilizing health insurance requires an understanding of insurance benefits which can be aided by case management services as described by providers in the sample. Patient-centered care is multi-faceted and provider-specific based on what warrants making appointments for patients (criticality, emotional state, OB establishment) and how discharge instructions are communicated. Balancing patient and provider priorities such as emergency medical transport versus personal vehicle was a common example when patients were involved in decision-making. Yet little research to date has informed widespread implementation of patient-centered approaches to care in ED settings.

In our study in hospitals across rural Georgia, some ED providers shared their perspectives and experiences in providing care to pregnant patients, drawing from patient-centered care training rooted in Mead and Bower's domains (biopsychosocial perspective; therapeutic alliance; sharing power and responsibility; patient-as-person, and doctor-as-person). With the high population of uninsured patients coming to the ED, these providers are often stepping into a primary care role as a first responder and are required by EMTALA to provide care (Cox et al., 2011; Quinley et al., 2018; Wittels et al., 2008).

There are a variety of patient-centered care definitions which commonly include decision-making, values-based care, and provider-patient communication (Epstein & Street, 2011; Fix et al., 2018; Lateef, 2011; Pham et al., 2011). Sharing power and involving patients report positive associations with health outcomes and empower patients over their health (Mead & Bower, 2000). However, health service utilization and patient-centered care is more commonly described in the literature when discussing medical homes and older adult populations, not for reproductive-aged women. There is movement to implement patient-centered care in emergency medicine to reduce overcrowding which is mentioned by providers in this sample as well (Lateef, 2011; Pham et al., 2011).

Some limitations of the study include the small participant sample which limits generalizability. Smaller, rural hospitals may explain this therefore affecting the type of sampling. Additionally, as mentioned, providers shared hesitancy to contribute to the project because of the fear in misrepresenting their place of employment. Also, due to the convenience and snowball sampling, the Medical Directors and ED managers selected providers. This leaves potential for bias in recruitment and responses from those who have a vested interest in reproductive health which was later disclosed post audio-recording. However, qualitative studies generally succeed with rich, in-depth descriptions and this selection of providers resulted in knowledgeable interviews and more content for analysis. An additional limitation included asking, "Does your approach change if the patient does not have insurance question?". Instead the question may have received more content if it specified whether the referral and discharge planning changed based on insurance. Lastly, a strength of the study is its approach to overlap health utilization with patient-centered care in ED settings by targeting both why patients are utilizing the ED and how EDs are responding to patient utilization in order to reveal gaps in access and practice.

The study applied qualitative methodology in ED settings which traditionally takes a quantitative approach. Overlapping the Behavioral Model of Health Services and Patient-Centered Care allows for a unique analysis to change the context of emergency medicine and VBEP

management. Understanding how patient population characteristics empower post-ED care is critical to ameliorate gaps in the health care continuum. All in all, rural hospitals are closing exponentially in Georgia and OB/GYN clinics are following suite. Patient-centered care is losing traction but is monumental to improve women's health outcomes. For future research, receiving patient insight into how these changes impact them will disclose what the implications are from the changing dynamics of obstetric care within the rural Georgia health care systems.

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DISCLOSURE STATEMENT

The authors declare no conflict of interest.

CHAPTER FIVE: PUBLIC HEALTH IMPLICATIONS

DISCUSSION

Though patient-centered care is not a novel concept, it is also not common practice in emergency medicine due to its acute nature. However, several providers in this sample displayed patient-centered care training rooted in Mead and Bower's domains (biopsychosocial perspective; therapeutic alliance; sharing power and responsibility; patient-as-person, and doctor-as-person) when describing population characteristics within the Behavioral Model of Health Service Use.

As mentioned, there is an OB/GYN shortage in the U.S., with concentrated shortages in rural areas (Doximity, 2018). In Georgia, specifically, 79 of its 159 counties do not have an OB/GYN provider (Hart, 2018). Within the context of an obstetric desert, these ED providers are operating under difficult circumstances which makes patient-centered care much more challenging to weave into the ED especially for populations with no insurance. With the high population of uninsured patients coming to the ED, these providers are often stepping into a primary care role as a first responder and are required by EMTALA to provide care (Cox et al., 2011; Quinley et al., 2018; Wittels et al., 2008). About 20.2% of women aged 18-44 are not covered by public or private insurance which is almost twice the rate of the U.S. uninsured rate (12.4%) for this population (American's Health Rankings', 2019). Utilizing health insurance requires an understanding of insurance benefits which can be aided by case management services as described by providers in the sample which is supported by previous literature (Bristow & Herrick, 2002). Patient-centered care is multi-faceted and provider-specific based on what warrants making appointments for patients (criticality, emotional state, OB establishment) and

how discharge instructions are communicated. Criticality includes diagnosis and the severity of symptoms, as seen in the literature (Javalgi et al., 1993). A common example of balancing patient and provider priorities included deciding between emergency medical transport versus personal vehicle. When making transfers to another hospital, providers mentioned hospital affiliation and established working relationships with providers as a routine decision-making factor which is also supported by the literature (Javalgi et al., 1993). Though the Javalgi study indicated locations of physician/hospital, location of patient, and patient's insurance coverage as lesser ranked referral factors, more providers in settings with no OB considered these population characteristics in conjunction with perceived education and income level over providers with OB in-hospital. This may be explained by the increased provider resourcefulness in low resource settings and patient's frequent interaction with providers who work in smaller community hospitals, such as critical access hospitals. Working in these settings illustrated higher saturation of patient-centered care themes.

Moreover, there are a variety of patient-centered care definitions which include decision-making, values-based care, and provider-patient communication (Epstein & Street, 2011; Fix et al., 2018; Lateef, 2011; Pham et al., 2011). Sharing power and involving patients report positive associations with health outcomes and empower patients over their health (Mead & Bower, 2000). However, health service utilization and patient-centered care appear in the literature on the topic of medical homes and older adult populations, not for reproductive-aged women. There is movement to implement patient-centered care in emergency medicine to reduce overcrowding which is mentioned by providers in this sample as well (Lateef, 2011; Pham et al., 2011).

Overcrowding in hospitals from this sample, as explained by the providers in this sample, are due to overutilization of the ED for non-emergent issues, similar to the literature (Bristow &

Herrick, 2002). This concern is heightened due to the lack of OBs in the area which is projected to become worse in 2020 (Zertuche, 2015). Providers mentioned transportation barriers quite frequently in this sample to why patients utilize the ED and other studies cite similar findings (Grzybowski et al., 2011; Santhanam, 2018).

Strengths and Weaknesses

Some limitations of the study include the small participant sample which limits generalizability. This may be explained by smaller, rural hospitals which affected the type of sampling. However, representing rural Georgia is a strength due the data's ability to highlight the needs of under resourced areas in hopes to garner more attention to Georgia's high maternal mortality rate and recommendations to potential solutions in practice. Additionally, as mentioned, providers shared hesitancy to contribute to the project because of the fear in misrepresenting their place of employment. However, this fear was pacified with the Certificate of Confidentiality. Also, due to the convenience and snowball sampling, the Medical Directors and ED managers selected providers. This leaves potential for bias in recruitment and responses from those who have a vested interest in reproductive health which was later disclosed post audio-recording. However, qualitative studies generally succeed with rich, in-depth descriptions and this selection of providers resulted in knowledgeable interviews and more content for analysis. An additional limitation included asking, "Does your approach change if the patient does not have insurance question?". Instead the question may have received more content if it specified whether the referral and discharge planning changed based on insurance. The biopsychosocial perspective in Meade and Bower's model received limited information on the biological and psychological processes in patient centeredness. This calls for future research to explain how biology, psychology and social conditions impact health service. Lastly, a strength

of the study is its approach to overlap health utilization with patient-centered care in ED settings which targets both why patients are utilizing the ED and how EDs are responding to patient utilization in order to reveal gaps in access and practice.

Future Directions

Implications for Clinical Practice

Due to changing roles among ED providers, emergency medicine may benefit from implementing patient-centered care. Understandably, the issue of patient-centered care is not unique and solely in the hands of ED providers. Patient-centered care is a systemic challenge which providers play into. As seen in the data, patient-centered care is multi-faceted and provider-specific based on what warrants making an appointment for a patient and what and how discharge instructions are communicated. Within the context of an obstetric desert, these ED providers are operating under difficult circumstances which makes patient-centered care to be much more challenging to weave into the ED especially for populations with no insurance.

Implications for Health Care Landscape

Furthermore, population characteristics, such as transportation, in reference to the Behavioral Model of Health Service Use and Mead and Bower's Patient-Centered Care Model, highlight the access issues related to early pregnancy bleeding in rural Georgia counties (Andersen, 1995; Mead & Bower, 2000). Insurance status, though, not as salient an issue in this sample upon exploration, still reveals access to health issues because there were women with VBEP presenting to the ED without health insurance in this sample.

Since health insurance may impact decision-making, discharge planning and follow-up is generally not informed by health insurance based on the ED providers input. However, ED patient populations are notorious for not following up on post-ED instructions and referrals

(Wittels et al., 2008). ED providers are subject to EMTALA for in-ED care, however post-ED care may benefit from developing referrals based on insurance status in order to be patient-centered (Mead & Bower, 2000). A common reason for utilization of the ED also included ultrasound usage. One provider from this sample highlighted that pregnancy Medicaid only covers a limited quantity of ultrasounds which entices patients to come to the ED for more ultrasounds. Some hospitals mentioned they did not disclose the gender of the pregnancy in efforts to decrease ED overutilization. Exploring how insurance benefits such as transportation and ultrasound limitation may further explain the context of how health insurance may be restructured.

Lastly, critical access hospitals were illustrating patient-centered approaches in stark comparison to more well-resourced larger hospitals but due to the small sample size, there was not enough content to explore its implications, but is encouraged to explore for future studies.

CONCLUSIONS

This study applied qualitative methodology in ED settings which traditionally takes a quantitative approach. Overlapping the Behavioral Model of Health Services and Patient-Centered Care allows for a unique analysis to change the context of emergency medicine and early pregnancy bleeding management. Understanding how patient population characteristics empower post-ED care is critical to ameliorate gaps in the health care continuum. All in all, rural hospitals are closing exponentially in Georgia and OB/GYN clinics are following suite. Patient-centered care is losing traction but is monumental to improve women's health outcomes. For future research, receiving patient insight into how these changes impact them will disclose what the implications are from the changing dynamics of obstetric care within the rural Georgia health care systems.

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APPENDICES

APPENDIX A. INTERVIEW GUIDE

Main Question	*Probes/Follow-ups*
What kind of programs and resources to healthcare access are available from the hospital? For example, these may include indigent care, sliding scale programs, medical discount cards, transportation, Medicaid enrollment, and case management services.	*Follow up: What kind of resources to healthcare access are available from the county or community that the hospital connects to patients? For example, this may include free clinics, community discount cards for health insurance or medication, sliding scale clinics, and social services.* *Probe: Are there any additional resources or programs for women who are pregnant or in need of family planning that you connect to patients? ["Right from the Start" Program, Pregnancy Medicaid, Planning for Healthy Babies (State Medicaid for Family Planning for nonpregnant women), etc.]* *Follow up: What resources are still in need for these patients to access healthcare?*
What are some reasons your patients seek care in the ED rather than their primary care provider or OB/GYN? (Ex: Distance, convenience, quality of care, cost)	*Probe: Are there other options for outpatient care?* *Probe: Do patients cite insurance as a reason to why they come to ED?* *If yes: How frequently do you serve patients who cite insurance as a reason to why they come to the ED?*
What is the process of discharge planning and follow-up for a patient who has experienced early pregnancy bleeding?	*Probe: What do you consider in discharge plans and follow-up?* *Follow up: Do you create follow-up care for patients that is beyond 60 days?* *Follow up: Do you know the health insurance status of your patients?* *If yes, how does this influence the development of discharge planning and referrals?*

	Follow up: If a patient is covered by pregnancy Medicaid, how does eligibility affect follow-up planning? *If no: If a patient willingly discloses their insurance status to you, how does that impact your approach or referrals?* *Follow up: If a patient is covered by pregnancy Medicaid, how does eligibility affect follow-up planning?* *Follow up: Do you follow up with these patients after their discharge?* *Probe: Do all patients receive follow-up?* *Probe: What kinds of patients receive follow-up?*

APPENDIX B. RECRUITMENT SCRIPT

Hello [insert name],

My name is [insert name] and I am contacting you on behalf of Dr. Lisa Haddad, the Principal Investigator for Pregnancy Related Care in Georgia's Emergency Departments (PRECEDE), a research project in partnership with the Departments of Emergency Medicine and Obstetrics-Gynecology at Emory University. We are researching the provision of care for early pregnancy bleeding in emergency departments across Georgia.

I am reaching out to you today to ask [Hospital Name]'s emergency department to participate in this study, and to obtain your support for recruiting and engaging staff in your emergency department.

We would like to conduct in-person interviews with 2-4 clinical staff in [Hospital Name]'s emergency department to learn more about provision of care for early pregnancy bleeding. Interviews will last about 30 minutes and participants will receive a $50 gift card for their time

and effort. Interviews are completely voluntary and any information we report on will not identify the participants or the hospital.

Additionally, we also ask one administrator or emergency department manager to complete a short online survey about the characteristics of [Hospital Name]'s emergency department and the patients that you serve. The survey takes about 10 minutes to complete and participants will receive a $20 gift card for their time and effort. Again, the survey is completely voluntary and any information we report on will not identify the participant or the hospital.

Do you have any questions about the study that I can answer for you at this time?

APPENDIX C. CONSENT INFORMATION

Emory University
Information About the Study

Title: Pregnancy Related Care in Georgia's Emergency Departments (PRECEDE)

Principal Investigator: Lisa Haddad, MD, MS, MPH, Department of Obstetrics and Gynecology

Introduction

You are being asked to participate in a research study. This form is designed to tell you everything you need to think about before you decide to consent (agree) to be in the study or not to be in the study. **It is entirely your choice. If you decide to take part, you can change your mind later on and withdraw from the research study.**

Before making your decision:

- Please carefully read this form or have it read to you
- Please listen to the study staff explain the study to you
- Please ask questions about anything that is not clear

You can take a copy of this information sheet, to keep. Feel free to take your time thinking about whether you would like to participate. By deciding to consent, you will not give up any legal rights.

Study Overview

The purpose of this study is to explore the organizational and individual-level factors associated to the provision of early pregnancy loss care in emergency departments across Georgia. This evaluation will include multiple emergency department clinical staff from each hospital (i.e. doctors, etc.) and will help to identify areas of success and gaps to be addressed in regards to women's healthcare in Georgia.

Procedures

We will conduct an interview about your experiences serving patients experiencing early pregnancy bleeding and loss in your hospital, which includes questions about early pregnancy bleeding experiences in your emergency department, attitudes towards providing early pregnancy loss care, and changes in provision of this care over time. Interviews will be conducted by study staff members, last approximately 30 minutes, and will be audio-recorded with your permission. Once the interviews have been transcribed, the audio recordings will be destroyed. All study participants' interviews will be de-identified prior to data analysis.

Potential Risks

The risks to you, the participant, are minimal. However, because you will be participating in a qualitative interview, you may risk loss of privacy or a breach of confidentiality.

Benefits

This study is not designed to benefit you directly. Your participation in this research study may benefit other people in the future by helping us strengthen knowledge of regarding the facilitators and barriers to providing care for patients experiencing early pregnancy bleeding and loss and the implications for the health and well-being of young women across Georgia.

Compensation

You will get a $50 gift card for completing an interview.

Confidentiality

Certain offices and people other than the researchers may look at study records. Government agencies and Emory employees overseeing proper study conduct may look at your study records. These offices include the Office for Human Research Protections, the Emory Institutional Review Board, and/or the Emory Office of Research Compliance. Study funders may also look at your study records. Emory will keep any research records we create private to the extent we are required to do so by law. A study number rather than your name will be used on study records wherever possible. Your name and other facts that might point to you will not appear when we present this study or publish its results. All data will be stored on Emory's secure research drive. All data will be de-identified and will be accessible only to members of the evaluation team.

We will do everything we can to keep others from learning about your participation in the research. To further help protect your privacy, the investigators have obtained a Confidentiality Certificate.

Certificate of Confidentiality

The National Institutes of Health has given this study a Certificate of Confidentiality. The Certificate of Confidentiality helps us to keep others from learning that you participated in this study. Emory would rely on it to not give out study information that identifies you. For example, if Emory received a subpoena for study records that identify you, we would say no. The Certificate gives Emory legal backup to say no.

The Certificate of Confidentiality does not stop you or someone else, like a member of your family, from giving out information about your participation in this study. For example, if you let your insurance company know that you are in this study, and you agree to give the insurance company research information, then the investigator cannot use the Certificate to withhold this information. This means you and your family also need to protect your own privacy.

The Certificate does not stop Emory from making the following disclosures about you:

- Giving state public health officials information about certain infectious diseases
- Giving law officials information about abuse of a child, elderly person, or disabled person
- Giving out information to prevent harm to you or others
- Giving the study sponsor or funders information about the study, including information for an audit or evaluation

Voluntary Participation and Withdrawal from the Study

You have the right to leave this study at any time without penalty. You may refuse to do any procedures you do not feel comfortable with, or answer any questions that you do not wish to answer.

Contact Information

Contact Dr. Lisa Haddad: 404-778-1385 or by email at lisa.haddad@emory.edu

- if you have any questions about this study or your part in it, or
- if you have questions, concerns or complaints about the research.

Contact the Emory Institutional Review Board at 404-712-0720 or 877-503-9797 or irb@emory.edu:

- if you have questions about your rights as a research participant, or
- if you have questions, concerns, or complaints about the research.

You may also let the IRB know about your experience as a research participant through our Research Participant Survey at http://www.surveymonkey.com/s/6ZDMW75.

APPENDIX D. CODEBOOK

1 Type of Referrals
1.1 Activated Referral
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1.1.2 Transfer
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2.2 Patient Responsibility
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6 Available resources for health care access outside hospital
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7 Reasons for coming into ED
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8.5 Resource Awareness/Navigation
8.6 "better 'in' with an OB group"

1 Type of Referrals

Definition: The action of scheduling/transferring post-ED care

1.1 Activated Referral

Actively making appointments for patients

1.1.1 Consult with OB in-hospital post-ED

Definition: OB takes over patient case and patient no longer seen in the ER

Inclusion: Decision to admit, discharge, follow-up with patient is the OB's responsibility , generally in hospitals with an OB

Exclusion: consulting with OB but patient remains in the ER

Example: "I think if they come in hemodynamically unstable and then they become stable, they usually admit them to labor and delivery for evaluation. So I feel like once we turn them over to OB our role is to kinda step out and let them take over."

Close, but no: "I would go and speak with my supervising physician and they would consult OB on-call."

1.1.2 Transfer

Definition: A transfer to an outside hospital

Inclusion: Logistic in making transfer, i.e. trucks, EMS

Exclusion: Attitudes encountered in transfer

Examples: "Providers get on the phone for a doc-to-doc transfer to another hospital if a patient comes in with early pregnancy bleeding"

1.2 Open referrals

Definition: Telling patients to making their appointment to navigate their referral

Inclusion: "I(Provider) tell them to make an appointment with their OB/GYN"

Exclusion: "I (Provider) call the OB and make an appointment"

2 Follow-up

Definition: Delegation of responsibility for post-ED care

Example: Calling patients back to check on their post-ED status

2.1 Hospital active follow-up

Definition: Hospital staff members calling patients back post-ED to check on their health status and following up on whether referrals were completed

Inclusion: Case management team, nurses, registration, social workers

Exclusion: Patient calls for follow-up

Example: "We have a case management team to call patients back after their visit".

2.2 Patient Responsibility

Definition: Patients are responsible for post-ED health care navigation to follow-up with care

Exclusion: Hospital actively calling back

Example: "I tell my patients to come back if they need to but I don't personally call them back."

3 Discharge planning

Definition: The process of telling patients what to do when they leave the ED and what the providers consider in their referrals

Inclusion: decisions about admitting patients to hospital can go here

3.1 Physician communication

Definition: Information about the diagnosis, expected course of illness, self-care, use of medications, time specificed for follow-up, symptoms that would prompt return to the ED

Exclusion: patient access & cost

Example: "As far as what medicines they can't take, not to be taking Motrin. Like precaution stuff. So, if they begin bleeding or soaking through more than one pad an hour we would want them to come back. Those type things."

3.2 Patient involvement in discharge planning/transfers out

Definition: Any time in the process of discharge planning where patient input is received to develop referrals and follow-up

Exclusion: Cost-oriented

Inclusion: Patient decides how to approach referrals and follow-up planning, assessing whether patient understands discharge planning (patient comprehension check), patient discussion personalizes discharge planning, patient location is considered

Example:

"The patient will let us know if they have an OB that we can refer to."

"...we [patient and provider] can make a treatment plan together."

"We ask the patient, "Where would you like to go?"

"I will say a good number of those visits are those patients will let us know who will be that OB/GYN or which office..."

"referrals to where our closest OB is"

"I generally, for their closure, make sure that they know that they do need that repeat beta hCG just to kind of let them know, but that that would be anticipated to go down because of the process of it."

3.3 Cost-Oriented

Definition: Consideration of patient cost when developing post-ED plans

Inclusion: Insurance

Exclusion: Technical/Clinical Skill-oriented

Example: "Some patients do not have insurance so I will try to connect them to our health department."

3.4 Insurance not considered

Definition: Components of discharge planning that are not considered in post-ED care

Inclusion: Clinician and patient-centered components

Exclusion: Factors that are considered in planning discharge, not treatment during the ED visit

Example: "Do you consider insurance when you're developing discharge plans? No."

4 EMTALA

Definition: Any discussion about EMTALA as a policy in the ED

Inclusion: attitudes, implications, use of EMTALA

Examples: "It's under EMTALA regulations that they provide at least that first follow-up visit for that patient since they presented in an emergency condition."

5 Available resources for health care access inside hospital

Definition: Available resources for access to OB care inside the hospital where interview takes place

5.1 Not provided in-hospital

Definition: Any resources that are directly stated from the providers that are not available from within the hospital

Inclusion: Cost, indigent care, discounted medications

Exclusion: Clinician-centered resources (i.e. Ultrasound, Mife/Miso)

Example: "...we don't have an OB/GYN service in this hospital."

5.2 Indigent Care

Definition: Discussion about indigent care and payment assistance programs

Inclusion: Payment plans, low-income programs, discounted medications, low-income in-hospital clinics, case managers

Example: "We do have resources for indigent care. Everybody that presents is presented with the opportunity to apply for that care and they're given the appropriate information that they can apply for it if they need to. "

5.3 Provider Availability

Definition: OB Providers that are available or not available from the hospital; For no OB hospitals, a directory list will be coded under this.

Example: "We just give them a list of doctors. But we're told that [Hospital C]. sees patient on a sliding scale. So, they don't have insurance."

6 Available resources for health care access outside hospital

Definition: Available resources for access to OB care outside the hospital where interview takes place

6.1 Discounted Medication

Definition: Discussion of pharmacies that offer discounted medication outside the hospital

Exclusion: Within hospital discounted medication

Example: "We have a pharmacy down the street that has affordable medications for patients so I provide prescriptions there."

6.2 Network of providers

Definition: Providers define working relationships with outside clinicians or offices that see OB patients

Inclusion: Health dept, sliding scale clinics, FQHCs, Title X, CPCs, etc.
Exclusion: Within hospital referrals

Example: "I believe the vast majority of pregnant females goes to – there's an outpatient, I believe it's [CPC] here for outpatient OB/GYN."

6.2.1 Transfer City/Hospital/County

Definition: Having a working relationship with a transfer city/hospital entity

Includes: Specifics to ease of transfer city/hospital, why this city/hospital would not be transferred to

Excludes: Vague transfer process

Examples: I transfer to [City A] because they take all of my patients since they are a trauma I center.

Close but no: Transfers include a doc to doc.

6.2.2 Sliding Scale (FQHC/Health Dept)

Definition: Provider that is either health department, FQHC

6.2.3 Non-OB/GYN specific

Definitions: Providers that may also take OB/GYN patients but are outside of the OB specialty

Includes: Family medicine, Primary care providers

6.2.4 OB/GYN (CPC, Local, Title X)

Definition: Providers that specifically provide OB-related services for OB/GYN patients exclusively

6.2.5 Sliding Scale (Health dept/FQHC)

Definition: Provider that is either health department, FQHC

6.3 Services not provided

Definition: Any direct conversation about services not offered/provided at the outside clinics that providers are aware of

Example: "We don't have ...nor do I think there's an OB/GYN in town."

7 Reasons for coming into ED

Definition: Provider discloses why patients come to the ED, rather than going elsewhere

Exclusion: Quant, clinical symptomology

Inclusion: first-time pregnancy

7.1 Location/Transportation

Lack of patient transportation can go here

7.2 Cost/insurance

Definitions: Patients come to the ED for cost-related, insurance reasons

Exclusion: Enrollment into Medicaid

Example: "They don't have insurance. They don't have the money to see a provider."

7.3 Enrollment into preg Medicaid (Ready from the Start)

Definitions: Patients come to the ED because pregnancy Medicaid has not come into effect

Example: "Cause I think a lot of times they don't seek care because they don't have insurance so they're waiting to come to us to get their confirmation so they can get their Medicaid."

8 Recommendations

Definition: Provider recommendation to improve patient access to affordable, continuous care and identification of needs

Inclusion: Need for case management, providers, education on health care navigation, resources for the patient

Example: "I think probably just more education and to know that they have resources available. 'Cause I think a lot of times they don't seek care because they don't have insurance so they're waiting to come to us to get their confirmation so they can get their Medicaid."

8.1 Provider Specialty/Coverage

Definition: Recommendations to increase provider specialty (OB/GYN) and coverage

Include: Need for OB/GYN, need for additional OB/GYN, Include other types of providers

8.2 Provider trainings

Definition: Need for existing providers to be trained in OB-specific care

8.3 Patient services

Definition: Need for additional services/departments that patients can utilize

Example: Behavioral counseling

8.4 Pregnancy education

Definition: Providing education on what a pregnancy entails for patients

Includes: Info for first-time pregnant patients

8.5 Resource Awareness/Navigation

Definition: Raising awareness of resources in the area and navigating resources available

Includes: Insurance, providers, homeless shelters, free clinics, transportation, referrals

8.6 "better 'in' with an OB group"