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A Social Emergency Medicine Approach to the Implementation of Sexual and Reproductive Health Interventions in the Emergency Department

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As emergency physicians, we have all experienced the moment when we look at the patient board and the chief complaint "pregnancy test" pops up. The first thing we think to ourselves is, "Would have been cheaper to pick one up at the store." Upon chart review we see that this 19-year-old female, Jenny, has been in our ED 3 times in the past 2 years with the same request. Twice she was diagnosed with a sexually transmitted infection (STI), and this time her pregnancy test is positive. You personally saw her during one of the visits and referred her to OB/GYN (she was not able to make the visit). She is devastated by the pregnancy diagnosis, and you are left wondering what could have been done differently.

Unintended pregnancy, HIV and STIs, key indicators for Healthy People 2020[1], cause significant morbidity, place an enormous financial burden on the U.S. health care system[2,3], and are entirely preventable. These sexual and reproductive health (SRH) outcomes are also an area of stark health inequities based upon race, ethnicity and poverty[4]. African American women are 3-4 times more likely to die during pregnancy or childbirth, Latinas are two times more likely to have an unintended pregnancy[5], and both groups have higher rates of STIs and HIV[6].

Social Emergency Medicine (SEM) is an emerging approach to ED care that addresses not just the medical illness, but the social determinants driving the medical illness. SEM has been defined as:

> "…recogniz[ing] the unique position of the ED in the community and within the health care system. EDs have become not only the health care system's, but society's safety net for social and medical services. SEM uses the perspective of the ED to investigate societal patterns of health inequity, to identify social needs contributing to disease, with the goal of identifying and developing solutions to decrease health disparities for vulnerable populations[7]."

In SEM, ED physicians develop systematic interventions that address the social determinants underlying health and illness, measure their effects, develop interdisciplinary collaborations, and advocate for policies that address underlying social determinants[8].

Like many of the chief complaints that we find ourselves dealing with in the ED, the social determinants of health play a significant role in SRH outcomes and inequities. These include racism, lack of access, poverty, incarceration, and lack of education. Experiences outside of the ED have taught us that until these social determinants are addressed, SRH outcomes are unlikely to change[9]. For Jenny, her outcomes may have been different had she had access to customized contraceptive and STI counseling rooted in her own behaviors, contexts and preferences, such as the Clinical Decision Support (CDS) intervention implemented in the article by Miller, et. al. While there is a plethora of evidence-based SRH interventions developed outside of the ED, there are only a handful of studies that are ED based. The limited ED studies often address only a single aspect of SRH, and do not take a comprehensive or coordinated approach.

The article, *Development of a Novel Computerized Clinical Decision* Supp*ort (CDS) System to Improve Adolescent Sexual Health Care Provision*, is one of the first ED based SRH interventions to begin to highlight key elements of a SEM approach. The authors took a collaborative approach to the development of their CDS system by including experts in health services research, epidemiology, adolescent sexual health, psychology, evidenced-based medicine, and emergency medicine. This allowed them to approach SRH from multiple perspectives in the ED, and to provide the adolescents with appointments to access appropriate continuity of care once they left the ED. Furthermore, the authors addressed two of the social determinants of SRH: lack of access and lack of education. By implementing the CDS system in the ED and addressing the patients highest SRH needs during their ED visit this intervention meets the patients where they are. Furthermore, if the patient has a need that cannot be addressed during their initial visit, the CDS system could be customized to provide local referral information for those services, thus, improving access to care. The CDS system addresses lack of education by providing the adolescents with information on various SRH topics written in a way they could understand, and by providing an opportunity for their questions to be answered.

Another strength of this intervention is their use of an implementation sciences approach[10]. The CDS is not a completely new intervention – instead the authors integrated a series of evidence-based approaches that have been shown to improve individual outcomes in adolescent SRH and implemented this comprehensive and coordinated CDS approach in the ED setting. The authors adapted this evidence-informed intervention into real-life ED settings, and an important component of the implementation was identifying and addressing barriers such as lack of time, resources, and provider knowledge. The CDS system prioritized the SRH needs of the patient and tailored the intervention to address those needs, reducing time and costs, and improving adolescent and ED staff acceptability and uptake. The CDS driven recommendations reduce provider time and makes the intervention less dependent upon an individual provider's knowledge or attitudes towards adolescent SHR in ED settings.

While an important contribution to the literature, the article also highlights how far we need to go to have a true social emergency medicine focused approach to SRH. While utilization and acceptability are important first steps, we next will need information on adolescent SRH outcomes. Second, the CDS had not been implemented into the electronic health record (HER), one of the most important tools in the ED for prioritizing and initiating interventions (e.g., ordering STI treatment, printing EC prescriptions, scheduling appointments). Third, expanding on the interventions that could be provided at the initial ED visit would allow us to identify teachable moments and avoid missed opportunities. In particular, it has been shown that initiating contraception at the first visit significantly improves uptake[11]. Therefore, providing opportunities to initiate contraception in the ED if it is identified as one of the top priorities for a patient could be an important component of these interventions. Additional potential interventions include initiation of Pre-Exposure Prophylaxis (PrEP) and Post-Exposure Prophylaxis (PEP), and partner treatment for STIs. Fourth, like most ED based SRH interventions, the authors focused on the SRH needs of adolescents. However, adults, up

to the age of 44 in some areas of SRH, have high rates of unmet SRH needs, vast inequities, and limited access to SRH services[1]. Future interventions should be expanded to include the adult population. Finally, there are many additional social determinants of SRH that need to be addressed for these interventions to be effective and sustainable. Future research and implementation strategies should focus on understanding and addressing these social determinants of health.

We recognize that there are real barriers to the delivery of SRH interventions in the ED. However, through a social emergency medicine approach – i.e. developing collaborative, comprehensive interventions that address not only the individual but also the social determinants of health -- we can prevent repeat visits and unintended outcomes, like Jenny's. It may not be the job we signed up for, but it is still our job. What we do matters.

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