The Priority of Administering HIV Postexposure Prophylaxis in Cases of Sexual Assault in an Emergency Department

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Contribution to Emergency Nursing Practice

- The only method of preventing the human immunodeficiency virus (HIV) in sexually assaulted patients is the prompt administration of nonoccupational postexposure prophylaxis.
- Implementing a simulation course and checklist for emergency nurses improved the timeliness of administering nonoccupational postexposure prophylaxis.
- Data demonstrate that, with simulation, emergency nurses are better prepared to address the needs of sexually assaulted patients.

Abstract

Introduction: Contracting the human immunodeficiency virus (HIV) is a genuine concern for sexually assaulted patients. Emergency departments are a place where sexually assaulted patients seek care, including treatment to prevent HIV. Prompt administration of nonoccupational postexposure prophylaxis is essential because of the time-sensitive nature of the medications. Quality improvement measures at an urban hospital revealed delays in administration of postexposure prophylaxis to these patients.

Methods: A forensic simulation course and checklist was developed for emergency departments to improve care for sexually assaulted patients. Data used for analysis included time of administration of nonoccupational postexposure medication and length of stay before and after intervention with the simulation course and checklist. Points of measurement included student *t*-test to assess any significant differences and regression analysis to determine associations.

Results: When comparing differences between time of nonoccupational postexposure before and after intervention, there was a trend toward improving the time of administration, but it was not found to be significant. Before intervention, an association was found with sexually assaulted patients' lengths of stay and the time that nonoccupational postexposure medication was administered, with a regression equation of R^2, 0.76. After intervention, this association was absent, with an R^2 of 0.017.

Discussion: Implementing a simulation course and checklist for emergency nurses in caring for sexually assaulted patients helps to improve the timeliness of administration of nonoccupational postexposure medications and resolve the association between the length of stay and time of administration of medication.

Key words: Forensic nursing; Simulation training; Sexual assault; Emergency service; Emergency nursing

Sexual assault (SA) is a major public health issue in the United States. SA is defined as "any type of sexual contact or behavior that occurs without the explicit consent of the recipient" including such acts as forced sexual intercourse, forcible sodomy, child molestation, incest, fondling, and attempted rape.[1] Persons who have

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been sexually assaulted can have significant health consequences after assault, including the risk of contracting HIV, a life-threatening infection. The only way survivors of SA can prevent the acquisition of HIV is prompt initiation of nonoccupational postexposure prophylaxis (n-PEP). N-PEP is time sensitive and is most effective if the first dose is taken within 2 hours of exposure.[2] Emergency departments are often places where sexually assaulted people seek care and receive n-PEP. The latest data from the Centers for Disease Control and Prevention reported that 72,762 survivors of SA 16 years of age or older sought treatment in emergency departments in the United States in 2014.[3] Unfortunately, there are noted gaps in health care services for survivors of SA, including medications and health care services being omitted or delayed.[4–6] These omissions and delays can lead to adverse health consequences such as unwanted pregnancies and sexually transmitted infections (STIs) and extended length of stay (LOS) in emergency departments.

Local Problem

At an urban level 1 academic trauma center in Boston, Massachusetts, the emergency department has approximately 70,000 emergency patient visits annually. Approximately 0.1% (60 to 70 yearly visits) represents patients seeking health care after SA. In 2011, the quality control chart reviewed demonstrated repeated gaps in the quality of health care delivery for sexually assaulted patients including delays in administration of n-PEP and extended LOS. The average time of administration of n-PEP for survivors of SA was 4 hours and 46 minutes, and the average LOS was 5 hours and 55 minutes.

In Massachusetts, there is a statewide funded Sexual Assault Nurse Examiner (SANE) program that consists of an on-call SANE who responds to designated emergency departments throughout the state.[7] When a SA patient presents to an emergency department he or she is triaged immediately into a private room, and SA policy procedures are initiated. The policy requires that only ED nurses, physicians, and physician assistants who have undergone the hospital training can care for these patients. It is encouraged that health care providers coordinate their care so patients do not have to repeat the details of the SA. Patients are then seen by the emergency team, and it is determined whether they are medically cleared and accept the forensic evaluation and evidence collection by the SANE. If they are medically cleared, the SANE is paged, and, if available, the SANE responds to the page and gives an approximate time of arrival. The on-call SANE provides only the forensic evaluation and collection of evidence, and the ED nurse provides other nursing-related care such as the administration of medications, collection of urine and laboratory specimens, and the coordination of other health care disciplines such as social work and other necessary resources. If the SANE does not call back or is not able to respond to the hospital within 1 hour, the protocol requires the ED nurse to provide the typical nursing care in addition to forensic evaluation and collection of evidence.

Despite specific protocol details, there were several unnecessary time point delays for the administration of medication. For example, nurses were not administering medications until after the patient was evaluated by the SANE, even if there was no oral assault or need to collect oral evidence. Other example of delays would occur when there was no SANE available and instead of the ED nurse beginning the forensic process, there would be delays of hours until a SANE was available.

Relevant Literature

HIV is a serious concern and consequence of SA, and the only method for preventing the transmission of HIV among survivors of SA is the prompt initiation and completion of a course of n-PEP.[2,8,9] Postexposure prophylaxis has demonstrated effectiveness in preventing the acquisition of HIV in other patient populations including health care workers who have sustained needle-stick injuries and with vertical transmission of the virus from HIV-positive mothers to their newborn infants; in addition, the protocol has been shown to lower rates of HIV conversion among persons with consensual sexual exposures.[10] Prompt initiation is recommended because of the time sensitivity of n-PEP; the sooner the medication is administered, the more efficacious it is in preventing the acquisition of HIV.[8,9] Despite recommendations for n-PEP, not all sexually assaulted patients receive medication, leaving them at risk for acquiring HIV. Over the years, research has demonstrated wide differences in emergency health care services for patients who have been sexually assaulted, including health care providers omitting n-PEP altogether.[5,11,12]

Purpose

The purpose of the quality improvement project was to improve health care delivery to survivors of SA, with a focus on addressing the critical time-sensitive administration of n-PEP. The rationale for this focus was multifactorial. Foremost, potential exposure to—and risk of acquiring—HIV is a life-threatening concern for survivors of SA. SA protocols address the need to treat life-threatening issues