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An inpatient HIV support nurse to promote engagement in outpatient HIV care

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Approximately 250,000 hospitalizations occur among persons living with HIV (PLWH) each year in the United States (Berry, Fleishman, Moore, & Gebo, 2012; Buchacz et al., 2008; Centers for Disease Control and Prevention, 2010; Yehia et al., 2010). Nearly half of these hospitalizations occur in PLWH who are not engaged in outpatient HIV care (Metsch et al., 2009). Engagement in care is essential for achieving virologic suppression on effective antiretroviral therapy (ART) to restore and preserve health and dramatically reduce the risk of HIV transmission (Cohen et al., 2011, Nakagawa et al., 2012, Walensky et al., 2006). Common barriers to engagement in care include lack of knowledge, disbelief, stigma, and lack of health care coverage (Gilman, Hidalgo, Thomas, Au, & Hargreaves, 2012, Gillman et al., 2013). Dialogue, education, and care coordination can overcome these barriers and help patients link to or re-engage in care. Hospitalizations may be an opportunity to identify PLWH who are not linked to care and promote engagement.

In 2005, a nursing position for HIV care coordination was established on our 19-bed, dedicated HIV-specialty acute care internal medicine unit. The goal of the nurse coordinator was to promote linkage to care and provide specialized care coordination services for PLWH who were hospitalized in our academic hospital in Baltimore, Maryland, which has a high prevalence of HIV. The nurse who started that position in 2005 continued to refine the role during the intervening years. Recognizing the value that the care coordination nurse added for these patients, a new HIV Support Nurse (HSRN) position was created in 2017 to extend care coordination to the rest of our hospital. On any given day, about as many PLWH are hospitalized on the other 42 general and specialty hospital units as on the dedicated HIV unit. A registered nurse with a year of inpatient experience working on a surgical acute care unit began the new HSRN position, following 2 weeks of training, which included didactic sessions on HIV and shadowing the care coordination nurse on the HIV-specialty unit.

The new HSRN was a part-time position that included 4 hours dedicated work time each weekday. The HSRN received automated alerts through our electronic health record (Epic™) whenever PLWH were admitted to the hospital. The HSRN then met with each patient and assessed whether s/he was currently engaged in HIV care. The assessment was made by determining whether the patient had seen an HIV care provider in the previous 3 to 6 months with firm plans to continue follow-up with that provider. For unengaged patients, the HSRN made repeat visits to talk, assess barriers and needs, provide education, and coordinate care. For PLWH who were engaged in care, the HSRN worked with an HIV-specialty pharmacist to review medications for potential errors, including incomplete ART regimens, incorrect ART dosing/frequency, or significant drug-drug interactions with ART and other medications, and provided the primary team with recommendations based on any findings. All other members of the patient's care team remained the same, with the HSRN and pharmacist providing supplemental roles. We describe two patient cases that highlight unmet needs the HSRN addressed in efforts to promote engagement by recently diagnosed PLWH.

Case Reports

Case 1: Uninsured Immigrant With Recent HIV Diagnosis

Patient #1 was a 43-year-old male, uninsured, Spanish-speaking, undocumented immigrant from Central America who presented to a primary care clinic with 4 weeks of progressively worsening visual acuity in both eyes. At this visit, ocular syphilis was suspected, and blood tests were obtained for syphilis and HIV. When both were reported to be positive, he was referred to the emergency department and admitted to a medical acute unit in our hospital. On admission, his CD4+ T-cell count was 84 cells/mm³ and his HIV RNA was 73,100 copies/mL. His right eye and left eye acuity were 20/100 and 20/70, respectively, and he was unable to visualize standard documents well enough to read them. The patient had limited knowledge of HIV, including the impact of ART on life expectancy. Using professional interpreters, the HSRN's initial conversation concerned his understanding of HIV prognosis and ART. The patient was especially distressed about the possibility he had infected partners in his community and of excommunication from his community if his diagnosis became widely known. The HSRN talked through these feelings with the patient, discussed modes of transmission, and offered to help inform his partners. While he declined this service, he was connected to the hospital chaplain, given his deep religious faith, in order to pray and receive spiritual counsel. Finally, the HSRN reviewed common lab tests (CD4+ T-count, HIV RNA level) that the patient would encounter in follow-up visits and discussed the importance of ART adherence.

Because the patient was not able to pay for outpatient medications, the HSRN worked with the unit's social work team to facilitate his enrollment into Maryland's AIDS Drug Assistance Program (ADAP). Each U.S. state has an ADAP (Health Resources and Services Administration, 2017), funded through a combination of federal and state dollars, and established to provide access to antiretroviral drugs, antibiotics, and other medications for uninsured and underinsured PLWH. The unit social worker was able to obtain emergency Maryland ADAP coverage within 24 hours to ensure the patient would be able to pay for prophylactic antibiotics and ART after discharge.

The HSRN confirmed that the patient had an appointment 1 week after discharge to begin seeing an HIV care provider close to his home and confirmed with the clinic that the patient would start ART at that clinic visit. The patient was discharged to a skilled nursing facility to complete another 6 days of intravenous penicillin for syphilis to be followed by his HIV clinic appointment. His vision had improved to 20/70 for his right eye and 20/50 for his left eye at the time of discharge. Eight weeks after his discharge, the HSRN received follow-up from the HIV clinic and confirmed that the patient was engaged in care and started on ART.

Case #2: Patient With New Diagnosis and Need for Linkage to Care

Patient #2 was a 50-year-old male who presented to the emergency department with generalized body aches and presumptive osteomyelitis due to diabetic foot wounds. Upon admission to a medical acute unit, a routine HIV screening test was reported as positive. His CD4+ T-cell count was 48 cells/mm³ and his HIV RNA level was 1.5 million copies/mL. Initially, the patient was reluctant to talk about his diagnosis and would not discuss plans for

outpatient HIV follow-up or for ART initiation with his hospital care team. After a few days, the HSRN met with the patient in his room, and discussed the new diagnosis. Similar to the first case, the HSRN was able to have multiple hours of conversations during the patient's stay regarding the natural history of HIV, including the importance of HIV RNA and CD4+ T-cell count levels, the risk of transmission to others, treatment with ART, antibiotic prophylaxis for opportunistic infections, and how the local HIV clinic worked. The patient did not initiate conversations, but when asked if he understood, stated, "I don't have questions, but I will listen to you talk about it." The HSRN offered a peer educator to discuss what living with HIV entailed, as well as a book (Galant, 2016) that addressed common questions. While he initially refused these resources, he later agreed and met with the peer educator while in the hospital. Eventually, the patient described feeling ready for treatment and wanted to be connected to the clinic for care.

To facilitate a smooth transition into outpatient care, the HSRN coordinated a warm hand-off to the HIV clinic located on the same hospital campus. The HSRN spoke with the outpatient nurse who was assigned to see the patient for longitudinal care in the clinic and explained the patient's current HIV knowledge and concerns. The HIV clinic nurse then came to visit the patient in his hospital room and explained where the clinic was located and discussed what would happen at the first visit. The HSRN continued to visit the patient daily to check-in, offer information, and provide opportunities for him to ask questions. The patient attended his first appointment 2 days after discharge from the hospital, and was started on ART within 2 weeks, resulting in an undetectable HIV RNA level, a CD4+ T-cell count above 200 cells/mm³, and engagement with homecare services after discharge.

Discussion

While the admitting medical teams focused on these two patients' presenting problems (ocular syphilis and diabetic foot infection), the HSRN was able to play a unique role in promoting engagement in HIV care for these recently diagnosed patients. This role was facilitated by the HSRN's understanding of community and government resources for PLWH, direct connections to HIV clinics in the community, and sufficient time for conversations with patients about HIV natural history and treatment during their inpatient stays.

Being able to have extensive conversations about HIV with an HIV specialist has been shown to improve long-term ART adherence (Brion 2014, Dawson-Rose et al., 2016, Russell, Krantz, & Neville, 2004). The HIV education provided by the HSRN focused on current understanding, fears/anxiety regarding diagnosis, the prognosis for HIV in the current era, and introduction of common terms that would be used during follow-up visits. The conversations were not hindered by time or limited knowledge of HIV management, which are often barriers for primary and specialty care teams. Because the HSRN spent several hours with the patients during their hospital stays, these patients were better able to understand the diagnosis, including the importance of prophylactic antibiotics, ART, and regular clinic visits with an HIV care provider.

The HSRN was familiar with the many unique national and local resources that exist for PLWH, nearly half of whom live at or below the federal poverty level (Blair et al., 2014). The most important source of funding for resources specialized to the needs of PLWH is the Ryan White HIV/AIDS Program (Kaiser Family Foundation, 2013), which (a) funds and helps provide wrap-around services such as transportation, nurse adherence counseling, case management, substance abuse treatment, and assistance with co-pays; and (b) serves as a payer of last resort for outpatient care and medications (by providing the bulk of funding to state ADAPs) for low-income PLWH who have no other health care coverage. Patient #1 had no insurance to pay for ART or prophylactic antibiotics post discharge. In this case, the HSRN worked with the inpatient case management and social work staff to establish urgent (within 24 hours) enrollment in Maryland's ADAP. This proactive approach provided payment for discharge antibiotics and ART at his outside HIV clinic after discharge. In addition to federally funded programs, the HSRN also connects patients to local resources in the community including clinics, support groups, and food and housing programs.

The final element that the HSRN is able to focus on is continuity of care and linkage to care following discharge. Patients leaving the hospital have a high rate of medical continuity errors due to poor communication between the hospital and primary care teams before and after discharge (McLeod, 2013). Lack of time is a key barrier to better communication in this setting (Jones et al., 2015). Inpatient providers have limited time, but the HSRN is able to fill the gap by speaking directly to outpatient clinic personnel about key health care details and treatment plans and by ensuring that post-discharge appointments are available and understood by all parties. For patient #1, the HSRN communicated the follow-up appointment and spoke with the outpatient provider regarding the patient's condition. Patient #2 was not linked to care and needed to identify an HIV care provider. Coordination between the HSRN and HIV clinic nurse allowed for an appointment close to discharge, with a unique, warm handoff that helped the patient develop a connection to his new care team before leaving the care of someone he had grown to trust.

Conclusion

Our hospital has employed an RN specializing in HIV care coordination for more than a decade on our dedicated HIV unit, and has recently created a position to extend this work to PLWH who have been admitted to the 42 other adult units in our hospital. Through dedicated time; expert knowledge of HIV disease, treatment, and health care resources; and by connecting directly to outpatient HIV clinics in the metropolitan area, our HSRN is uniquely poised to help PLWH link to or re-engage in outpatient HIV care and thus realize the personal and public health benefits of comprehensive HIV care.

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