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A Model of Comprehensive HIV Care: Christiana Care HIV Program

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Delaware is the second smallest state in the US in terms of geographic size, yet continues to rank amongst the top ten states nationwide for rates of HIV infection and other sexually transmitted infections (STIs). As of January 31, 2016, the Delaware Division of Public Health (DDPH) reported that a total of 3,462 individuals are living with HIV/AIDS in Delaware. African Americans are disproportionately affected by HIV/AIDS in Delaware. In spite of comprising 22% of the state's population, African Americans represented 65% of all statewide HIV cases in 2015. One in every 264 Delawareans is known to be infected with HIV with individuals between the ages of 20 and 39 accounting for over 50% of HIV infections statewide.[1] Other sexually transmitted infections, namely syphilis, genital and extra-genital gonorrhea and chlamydia, are increasingly pervasive throughout the state. In 2013, Delaware ranked 6th amongst all 50 states for rates of both gonorrheal and chlamydial infections and 12th for rates of primary and secondary syphilis.[2]

Initially conceived in October of 1989, The Christiana Care Health System (CCHS) HIV Program today serves as the major provider of HIV medical services throughout the state of Delaware. Since the inception of the HIV program, we have grown to include clinical sites in each of the three counties of Delaware. These sites are integrated into those communities with the highest rates of HIV infection, and represent collaborations with the DDPH, Beautiful Gate Outreach Center - a Wilmington-based community program serving those with HIV/AIDS within the Bethel AME Church; Brandywine Counseling and Community Services – a non- for-profit community-based organization serving individuals and families affected by addiction, mental health issues and HIV/AIDS; and Westside Health - a federally qualified health center with multiple statewide locations. These partnerships allow us to conduct outreach, provide direct linkage into care, and ultimately to form meaningful, longitudinal relationships with some of the hardest to reach populations of people living with HIV/AIDS.

The HIV Program provides comprehensive medical care to a diverse patient population that is largely medically underserved and marginalized. In 2015 alone, the combined sites of the HIV Program provided medical care and services to 1,667 unique individuals living with HIV/AIDS (see Table 1). Over a third of our patients have annual incomes that fall below the federal poverty level while 40% are enrolled in Delaware Medicaid. People of color comprise 71% of our patient population, 6% are Hispanic, and exceeding national statistics, 34% of our patients are female. One in every five patients has a history of injection drug use, 40% of active patients have concomitant mental health diagnoses, and we estimate that 25% of patients have a current alcohol or substance use disorder.

Table 1. HIV Program Demographic Composition

HIV Program Demographic Composition	
Males 66%	Females 34%
African American 65%	Hispanic 6%

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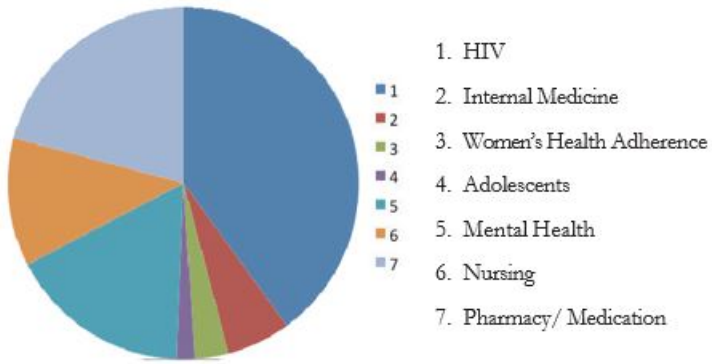
White 30%	MSM 34%
IDU 20%	Heterosexual 60%
AIDS Defined 63%	

Often, the HIV Program serves as the only point of contact between patients and the medical system. In a recent patient satisfaction survey, 76% of respondents indicated that our program was their sole source of medical care. As such, the HIV Program actively addresses many primary care issues, ranging from age-appropriate cancer screenings to immunizations to healthy lifestyle evaluation and monitoring to screening for substance abuse and mental health issues. The HIV Program acts as a holistic medical model of care and provides a wide array of services including HIV specialty care, obstetric and gynecologic specialty care, evaluation and treatment of viral hepatitides, renal disease, sexually transmitted infections, mental healthcare, adherence assessment and monitoring, comprehensive psychosocial assessments, substance abuse referrals, office-based opioid treatment with Suboxone, and rapid on-site HIV testing (see Figure 1). With the benefit of access to a full array of diagnostic and imaging services, our largest site in downtown Wilmington is able to serve as a "one- stop shop" for our patients' medical and psychological needs.

Figure 1. HIV Program Medical Services



The HIV Program is comprised of a multi-disciplinary team which, in addition to our physician staff, includes pharmacists, nurse practitioners, primary care nurses, licensed clinical social workers (LCSW's), medical social workers, phlebotomists, and clerical support staff. Each individual has a unique and essential role to play in supporting the development of comprehensive, individualized care plans for each of our patients.

Primary care nurses hold an absolutely pivotal role in the HIV Program, functioning as patient navigators, coordinating patient follow-up and referral care, addressing patient questions, and serving as one of many important sources of patient counseling and education. Nurses actively engage in ensuring that standards of medical care and monitoring are met with every patient encounter working in close collaboration with physicians during and after each patient encounter.

Pharmacists are responsible for overseeing a Medication Adherence Program (MAP), which was developed in response to the challenges of initiating and maintaining patients on medication. Patients are referred to the MAP when antiretroviral therapy (ART) is initiated, changed, or at any time when the staff identifies a problem with adherence. The pharmacy team evaluates medication readiness and addresses potential barriers to adherence prior to the initiation of

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therapy. The pharmacist works with each patient to develop a mutually acceptable, individualized treatment plan and assists in ongoing monitoring of adherence, efficacy, side effects and drug- drug interactions. Along with other team members, the pharmacists are trained in principles of the chronic care model and assist patients by incorporating self- management goals into this process.

The HIV Program LCSW's provide essential integrated mental health services. Patients who are identified as potentially having a co-occurring mental health diagnosis are referred to the LCSW's for further evaluation, coordination of care with a local psychiatrist, and ongoing counseling. An innovative aspect of our mental health program is the use of telepsychiatry to provide support and services to HIV Program patients who access care in our Smyrna and Georgetown satellite sites.

The HIV Program social workers are responsible for conducting a comprehensive baseline psychosocial and financial evaluation on every new patient. Assessments include obtainment of extensive demographic information such as immigration and housing status, language preference, education and health literacy, support systems, criminal justice issues, access to transportation, as well as determination of insurance status and/or eligibility for Ryan White services, mental health and substance abuse issues, and identification of barriers to retention in care. The social workers, much like our nurses and pharmacists, provide counseling and education related to HIV infection, secondary prevention, and available support services.

The Patient Advisory Committee of the HIV Program offers valuable and insightful input into program development. In response to feedback from the Patient Advisory Committee, new patients are scheduled into separate "New Patient" sessions that provide additional time for baseline mental health and psychosocial assessments, complete history and physical exam, medication readiness assessment, and financial evaluation. New patients typically first meet with a primary care nurse and a clinic-based social worker. During this visit, baseline assessments enable social work to help patients enroll in appropriate health care insurance. It is also during this first encounter that baseline laboratory work is collected – including screening for sexually transmitted infections such as syphilis, hepatitis A, B, C, and gonorrhea and chlamydia.

Standards of care for all program sites are established and updated on a regular basis in accordance with the most current Centers for Disease Control and Prevention (CDC), Health Resources and Services Administration (HRSA), and Department of Health and Human Services (HHS) guidelines. All components of HIV management are provided on-site or via referral. Patients are scheduled for follow-up visits based upon disease and psychosocial status in keeping with HIV Program standards of care. Care plans are individualized based upon these criteria and are established in collaboration with each patient. HIV Program sites are evaluated on a regular basis for adherence to standards of care as part of our comprehensive performance improvement activities.

The HIV Program standards of care include frequent evaluation for sexually transmitted infections (STIs) in keeping with above guidelines and in response to the increased incidence of syphilis within the Delaware and tri-state region. Clinical sites perform sexually transmitted infection testing as often as every 3 months for those at highest risk of STI acquisition. Syphilis testing is performed at least annually.

All women are tested for gonorrhea, chlamydia, and trichomonas during routine pelvic examinations while asymptomatic male patients are tested for gonorrhea and chlamydia

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annually. Patients undergo targeted extragenital gonorrhea and chlamydia testing based upon their individual histories. At-risk patients, including those on dialysis, men who have sex with men and persons who use intravenous drugs, are screened for hepatitis C at least annually. All patients receive targeted risk reduction counseling at every clinic visit.

HIV Program staff conducts patient rounds following each clinic session. Patient charts, along with all associated laboratory, imaging, and procedural results, are reviewed during rounds. In this manner, abnormal results requiring intervention are identified and addressed quickly. Nurse practitioners, pharmacists, primary care nurses and medical social workers all participate in patient rounds, allowing the staff to address patient related problems in a uniform and holistic fashion. Physicians are present during every chart review to provide staff with education, real-time feedback, and additional insight into specific scenarios. This direct physician involvement provides excellent opportunities for the exchange of information and, in an informal fashion, ongoing staff education.

The HIV Program provides comprehensive, individualized client-centered education to all active patients. Patients are encouraged to actively participate in treatment decisions, and to involve family members and others who comprise their support system. All patients receive ongoing education on HIV transmission, HIV symptom management, medication adherence and side effect management, available community services and clinical trial information.

As a Ryan White grantee, the HIV Program has a mature and robust performance improvement program and monitors performance in 25 clinical indicators. For instance, adherence to clinical visits is 85%. 94% of active patients are on ART with 84% of these patients with undetectable HIV RNA levels. Overall retention in care is 97%, which compares well to a national rate of 51% according to the HIV Treatment Cascade.[3]

The HIV Program continues to mature, expand, and transform in accordance with the times and often rapid-fire medical advances within the world of HIV and infectious diseases. Within the HIV Program, increasing focus is being placed upon rapid linkage to HIV specialty care from the time of HIV diagnosis and HIV treatment as prevention [of HIV transmission]. As part of our mission to prevent incident HIV infections, all sites of the HIV Program now offer evaluation and management of individuals for pre- exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP). The HIV Program and several key community organizations are partnering to expand programmatic ability to manage patients on PrEP or PEP AND to train interested, front-line primary care providers to have the skill set necessary to provide this care within their own clinical practices. Similarly, with new advances in hepatitis C therapeutics, including the development of highly efficacious direct acting antiretrovirals (DAAs), we have expanded our clinical services to be able to evaluate, treat and manage those with hepatitis C who are not also infected with HIV.

As medical science rapidly advances and the reality of HIV and other infectious diseases remain looming, the HIV Program aims to provide the most up-to-date, evidence-based, comprehensive care to our patients. We strive to not only be a comprehensive medical program but to be identified by those we serve as a true medical and patient home. Through our evolving multi-disciplinary, corroborative team approach, patient-centered care, and esprit-de-corps, the HIV Program upholds the highest standards of care for patients and staff alike, and ensures that our patients return time and time again.

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