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Needs Assessment Project: HIV testing and services for Adelante Healthcare

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Abstract

The number of people living with HIV is at an all time high. One million people have HIV in US; the HIV positive population of Arizona makes up 1.2% of these cases. The rate of cases of new HIV infections has been steady for the past decade. Unfortunately, as little as 75% of the HIV positive population knows they are infected. There is a need for continued effort to prevent the spread of HIV and increase testing. Adelante is in a unique position, as a community health center and given its history and relationship with the people of Maricopa County, to combat the spread of HIV. Adelante can begin to approach HIV prevention through provider initiated HIV testing.

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> *"The United States will become a place where new HIV infections are rare and when they do occur, every person, regardless of age, gender, race/ethnicity, sexual orientation, gender identity or socio-economic circumstance, will have unfettered access to high quality, life-extending care, free from stigma and discrimination" –The White house, 2010*

Introduction

As a dual Adult and Women's Health Nurse Practitioner student, I have a special interest in integrating sexual health and primary care. The three primary goals of the National HIV/AIDS Strategy are reducing the incidence of HIV, increasing access to care and optimizing health outcomes, and reducing HIV-related health disparities (The White House, 2010). Given the location, population served and they type of services offered by community health centers, they present as an ideal entity to meet the three National HIV/AIDS Strategy goals by tailoring services to the communities they serve.

Through research prior to coming to Adelante, I noted that Phoenix has a large minority population that is, like many other states, disproportionately affected by HIV. As well, the state of Arizona has a very high teen pregnancy rate, showing adolescents are engaging in risky sexual behavior. Coming into the GE-Primary Care Leadership Program, I knew I wanted to do a community service project that would incorporate STI prevention and reproductive health awareness. I originally thought I would develop a reproducible sexual health promotion workshop for adolescents, utilizing role playing, skill based exercises, and education; possibly creating a workshop, handout or video for the waiting room. In my clinical placement however I did not see many adolescent patients and the topic of HIV did not come up during visits.

As we were introduced to the leadership roles at Adelante Healthcare, I met Beverly Molter, Quality Improvement Director. Beverly expressed a passion for HIV/AIDS prevention, shared personal stories related to the topic of adolescent and elder sexual health, and Adelante's plan to apply for a grant to improve HIV/AIDS services. I talked to her about my interests and asked if there was any way that I could help in the grant process. Beverly had Excel data on Adelante patients that needed to be synthesized, in order to determine the number of individuals tested and how many tested positive; her ultimate goal for this data was to determine how well people were being referred to infectious disease for care.

My community services project details the HIV testing trends throughout Adelante's eight sites, based off of my data analysis. I offer suggestions for improving HIV testing moving forward. My experience with the leadership team of Adelante help me to think of health promotion and disease prevention from a wider lens or rather a higher view point; not just the grassroots patient target approach I had been used to. Below I begin with a brief history of Adelante and health centers to support my theory that they have unique reach into the communities they serve, followed by an exploration of the state of HIV in Arizona and finally I offer a suggested approach for increasing testing.

Adelante Healthcare and Community Health Centers

The concept of community health centers was introduced to the United States in the 1960's with two health centers in Mound Bayou, Mississippi and Boston, Massachusetts, made possible by the combined efforts of the administration of President Johnson and Dr. Jack Geiger after being inspired by his experience with the South African apartheid influenced health care model (Hawkins & Groves, 2011). In 1965, CHCs, created to support the health care needs of the medically underserved, serving 100,000 patients (RCHN Community Health Foundation, 2011).

As CHCs continue to be a combined effort of community resources and federal funding, these efforts have proven to be influential economically, socially and medically. CHC are responsible for the creation of jobs and stimulation of economic growth, decrease in infant deaths, providing quality and cost effective care, reducing health disparities, improving access to care and effectively managing chronic illness (Ravenswood Family Health Center, n.d.)

Community Health Centers have stayed true to their original mission. Currently, ethnic minorities make up two thirds of the population served by CHCs, 70% of CHC patients have an income at or below the federal poverty line, nearly 85% of CHC patients are publicly insured or uninsured (Wilson, 2009). There are currently over 1,200 federally funded Community Health Centers, serving over 20 million people at more than 8,000 sites throughout the US (NACHC, n.d.).

In 1979, Maricopa County Organizing Project and Centro Adelante Campesino banded together to support the healthcare needs of the local migrant worker population and formed a part-time clinic staffed by Dr. Robert Tidwell (Dillard, n.d). By 1980, Clinica Adelante, now known as Adelante Healthcare, was established and their first official health center with three providers was opened (Dillard, n.d). Today, Adelante is a board run Federally Qualified Health Center (FQHC), with eight health centers throughout Maricopa County; six primary care centers in Surprise, Wickenburg, Buckeye, Gila Bend, and Mesa, one Dental in Buckeye, and one dedicated Women's Health Center in Avondale. In addition, Adelante services 18,000 clients a month through 11 Women, Infant, Children Program (WIC) sites.

Facts about Adelante (Adelante, 2010)

- 247 Employees *
- 33 Medical Providers *
- 3 Dentists *
- 3 Pharmacists *
- $19 million revenue
- Over 75,000 medical visits a year *

Current Patient profile

- 26,442 Patients served
- 16,378 Female
- 10,064 Male
- 75% below poverty level *
- 4.8% Migrant Farm workers *
- 52% AHCCS (Medicaid)
- 22% Uninsured
- 23% Private

Age

- 1,474 Seniors (65+)
- 15,593 Adults
- 2,252 Adolescents
- 7,123 Infants / Children

Race and Ethnicity

- <1% Asian/Pacific Islander
- 4.6% Black/African American
- 1.3% American Indian/Alaska Native
- 29% White
- 52% Hispanic/Latino
- 12% Unreported Race/Ethnicity

(*Dillard, n.d.)

Adelante is dedicated to providing quality service that is affordable to everyone. Their mission statement explicitly says Adelante "seeks to improve the health of our communities by providing quality, comprehensive, primary health care within each patient's ability to pay" (Adelante Healthcare, 2010). Adelante operates with the theory of sustainable health care in mind and in practice. They have realized their ability to practice sustainable health by determining the proportion of paying patients needed to provide free care for one patient. They strive to attract patients with a choice in healthcare options through quality in order to afford to provide services to all. The organization is looking forward to the future opening of their comprehensive sites in Mesa, Fall of 2012 and Buckeye, Summer of 2013 and relaunching their Mobile Health Program.

The Problem

More than 1 million people are living with HIV in the United States, for the past decade approximately 56, 000 people are infected with HIV annually, but only 75%-79% of the population knows they are infected (NATAP, 2010). The high number of people living with HIV is due largely in part to the number people using highly active antiretroviral therapy decreasing the mortality rate of persons infected with HIV (CDC, 2008). Nationally, the greatest number of HIV cases were credited to men who engage in sexual activity with other men (MSM) (48.1%), other cases can be attributed to sex with IV drug users (27%.6%), injection drug users (18.5%), both intravenous drug use and MSM (5.0%), and other including hemophilia, prenatal transmission, or not defined risk factor (0.8%) (CDC, 2008).

As of 2008, there was an estimated 11,733 people living with HIV in Arizona, making up 1.4% of the United States HIV population (Kaiser Family Foundation, n.d.). In 2010, 629 HIV/AIDS cases were diagnosed in Arizona, among them 87.8% were males; of the 629 total cases 62% were MSM, about 7% reported intravenous drug use, 10% reported heterosexual

sexual contact only and 15% did not have any indicated risk factors (AZDHS, 2010a). According to the Kaiser Family Foundation (n.d.), there was only one diagnoses of HIV among Arizona children in 2010.

HIV disproportionately affects people living in urban areas of Arizona. Nearly 85% of all new cases of HIV infection are in urban populations, where as people living in urban areas account for only 76% of the state population; prevalence of HIV/AIDS is 50-100% higher in Arizona's urban counties than in rural counties (AZDHS, 2010b). The racial/ethnicity break down of the 2010 cases are as follows 49.1% White non-Hispanic, 31.8% Hispanic, 8.9% Black, 6.1% American Indian, 1.7% Asian/Pacific Islander (AZDHS, 2010a). Similar to statistics nationwide, African Americans are severely disproportionately infected with HIV in Arizona (AZDHS, 2010b).

The state of Arizona believes effective prevention methods should be targeted to those that are more at risk of transmitting HIV or those groups most adversely impacted by HIV (AZDHS, 2010b). Groups of special concern include, African Americans, particularly African American women, as the incident rate among this population is 41% higher than all men statewide, and MSM, particularly those who have tested positive for syphilis due to the proven link between increased rate of HIV infection and syphilis and the 500% increase rate of syphilis among MSM statewide (AZDHS, 2010b).

With a decrease in the mortality rate among persons with HIV/AIDS comes an increased number of older people with HIV. In 2005, the proportion of persons over 50 years old living with HIV/AIDS had increased to 24%, from 17% in 2002 (CDC, 2008). In this same year, persons over 50 years old accounted for 15% of newly diagnosed HIV/AIDS cases nationally (CDC, 2008). Similar rates of increased HIV infection among persons over 50 years old can be

observed in Arizona. From 2000 to 2004 the proportion of emerging cases of HIV/AIDS among persons over 50 years old was 11%, compared to 13% of the newly diagnosed cases from 2005-2009 (AZDHS, 2011).

Data Collection

Methods

Data from eight Adelante sites were collected. Three Excel worksheets were compiled from NextGen and Centricity, Adelante's current and former EMR systems respectively. Worksheets detailed individualized patient identifiers, their genders, and 30 diagnostic codes used as it relates to HIV and STI prevention.

A literature review was performed using Google, mrexcel.com, and office.microsoft.com search engines to determine methods for counting how often a value occurred in a specific column, summing the value of a cell across multiple worksheets, and moving or copying worksheets to another workbook. Several sources were found, directions were followed and methods were attempted one by one until desired result was achieved. A separate literature review was done to extract descriptions for ICD9 codes and CPT codes, using Google and icd9cm.chrisendres.com search engines. Specific codes used and their definitions can be found in Table 1.

Values were consolidated from the three Excel Sheets. Data were organized by clinic site and code. Finally findings from each site were combined and the sum represents the data for the organization. All data collected was synthesized (Table 2) but only data related to ICD9 codes specific to HIV are discussed in this document. The results of ICD9 codes discussed are 73.89 (screening for other specified viral diseases), v08 (Asymptomatic HIV status), 042 (HIV disease), and V65.44 (HIV counseling).

Results

A total of 40,286 individualized patients were counted from the 8 sites, Avondale (1564), Buckeye (4876), Gila Bend (1787), Mesa (7167), Phoenix (7040), Sun City West (2436), Surprise (12376), Wickenburg (3040). According to ICD9 code V73.89, among them 1266 were screened for a viral disease, Buckeye (1), Sun City West (1245), Surprise (14). The Sun City West site had the largest percent of persons tested for a viral disease at little over 50%. Sun City West is an OBGYN dedicated site; an explanation for the increased number of person tested at Sun City can be due to the fact that the facility is a dedicated OBGYN clinic. CDC recommends HIV testing is included routinely as a part of prenatal care (Branson, Handsfield, Lampe, et. al, 2006).

Three patients were coded V65.44, as given HIV counseling, Surprise (2) and Buckeye (1), although these sites collectively tested over 800 patients for viral diseases. Three out of the 1266 people tested for a viral disease was given HIV counseling at the time of testing, accounting for 0.2% counseled. The CDC does not recommend required counseling on methods for preventing HIV at the time of testing (Branson, Handsfield, Lampe, et. al, 2006).

Five patients were coded V08, as having asymptomatic HIV infection status; Mesa (4), Surprise (1). Eight people were coded 042 HIV positive; Buckeye (1), Mesa (3), Phoenix (1), Surprise (3). Supposing all of the people tested for a viral disease were tested for HIV, it would mean that 97% of Adelante patients seen were not tested for HIV. Less than 0.01% of people accounted for in this data set are positive for HIV, at the current testing rate of 3%.

Discussion

There have been lots of efforts using primary prevention methods to prevent the incidence of HIV. Targeting HIV negative individuals for prevention methods, including counseling and

testing has not been an effective method of primary prevention (Weinhardt, Carey, Johnson, Bickham, 1999). Granted this is an older source, given the steady rate of 59,000 new infections a year in the US over the past decade, one can deduce that these methods have yielded little effect. Secondary prevention is defined as detection and treatment of illness before symptoms appear, in order to control disease spread and progression (AFMC, n.d.). The use of secondary prevention methods for HIV is relatively new as well as few and far between (Burke et al., 2007).

In an effort to determine the HIV service needs of Adelante data were collected outlining HIV related visit codes, ICD9 and CPT. The results of the analysis of this data set revealed a need for increase HIV testing throughout Adelante Healthcare sites. Two factors play into increasing HIV testing and screening, patient willingness to be tested and provider promotion of testing. Research shows that patients are accepting of testing for HIV (Irwin, Valdiserri, Holmberg, 1996). Efforts for increasing HIV testing should focus on provider initiation. I propose Adelante develop and enforce a policy to ensure increased if not universal screening for HIV.

Increasing HIV testing will contribute to the goals of the US National HIV/AIDS strategy. A meta-analysis of high risk sexual behavior among persons aware and unaware of their HIV status revealed people aware of their positive status decreased their risky sexual behavior (Marks, Crepaz, Senterfitt, Janssen, 2005). As Adelante increases testing, more patients unknowingly living with HIV will be aware of their HIV status and work toward decreasing unknown transmission of HIV. Increase access to care and optimizing health outcomes can begin for those that test positive, as they are referred to infectious disease providers and proper community resources. In combination these effort will work toward reducing HIV-related health disparities.

There seems to be some form of disconnect between patient and provider initiated HIV testing. A literature review was performed by Burke et al (2007), summarizing barriers to physician testing. This article identified eight major barriers categories lack of time, burden due to consent process, lack of knowledge and training, lack of patient acceptance, counseling requirements, other priorities, and inadequate reimbursement. There may be untapped potential in targeting providers to increase HIV testing and risk screening. Given that 25% of people infected with HIV don't know there status, increasing overall testing would be invaluable.

Including HIV testing promotion into each annual exam as a part of the sexual health history that providers take may streamline the testing process, decreasing the lack of time barrier. For those patients being seen for other visits besides annuals, medical assistance can ask them if they have a new sexual partner during intake and prompt the provider to gauge their interest in HIV testing.

The consent process has been cited as a burden and therefore a barrier to provider initiated HIV testing. In the state of Arizona, consent for HIV testing can be written or oral but it is required, as well the patient is free to decline (NCCC, 2011). Making providers aware of this law and how to document verbal consent may ease this burden.

Adelante should work to ensure providers are up to date on the latest HIV related prevention literature and promote training through local conferences and workshops to decrease the barrier of lack of knowledge and training. Providers should be trained on how to effectively discuss sexual health history, promote safer sex, and discuss the importance of HIV testing with each patient who has been sexually active. This training can also address decrease the lack of patient acceptance. If providers are equip with techniques to promote testing than testing will increase.

Counseling is not recommended by the CDC to be required for HIV testing, providers of Adelante should be aware of this recommendation. Providers should have a list of community, written and electronic resources in which patients can access for their information needs.

HIV testing should be a priority. Providers have stated other priorities as a barrier to HIV testing. Adelante should create a policy related to HIV test in which it explicitly states that testing is a priority. In developing this policy, providers should be trained or informed about the various billing codes related to HIV. Inadequate reimbursement was listed as a barrier for provider testing. As providers began to bill properly for testing and counseling, reimbursement will increase.

Admittedly, there are limitations to the data collected. The precise snapshot of the data in time, demographics of the patients selected, and from what criteria were they isolated is unclear. The age ranges of the patients in the original data set are not accounted for in my analyzed data. In the future synthesized data should include age ranges to provide a better idea of what groups are being offered testing. It is not known whether or not these patients were previously tested for HIV at other visits or even at other facilities, as they may be aware of their HIV status.

Limitations may also be present do to coding discrepancy, providers may not be aware of all of the coding options related to HIV testing, screening and counseling, therefore some procedures performed may not have been billed properly. As well the diagnostic code V73.9 codes for any viral screening, the tests could have been for a variety of viruses including Hepatitis C and HSV. It is also unclear by the data presented how many people coded as HIV positive were coded as tested.

Moving forward to developing a secondary prevention plan, in addition to developing a policy of universal testing, Adelante may benefit from organizing focus groups of providers and

support staff to determine the institutional and personal barriers to promoting HIV testing. Revisiting the sexual health history screen options in NextGen may offer some support to providers when entering patient information, ensuring that access to this information is readily available and visible. Future provider meetings can discuss the limited data gathered here creating an awareness for the need and possibly generate some provider lead solutions.

Lessons Learned

Great benefits are presented when collaborating with leaders; collaboration facilitates problem identification and solution development. If I had not spoken to Beverly about my interests, I would have created a project that I believe would have been helpful for a limited amount of patients. It would not have had the public health benefit I was searching for; that I hope this project will contribute to.

Look to others for a fresh take on an old idea. I talked to my faculty advisor many times about the direction of my project and she was able to offer me focus and advice on best approaches to my grand ideas. I talked with the Chief Medical Informatics Officer, Anthony Dunnigan, about my ambitions related to the topic. I wanted to present the data I had collected, make changes to NextGen, create a provider education workshop, and create a handout for patients on HIV statistics. He told me to “pick one”.

I hope this project helps with grant applications related to HIV services in the future. I hope that this paper presents ideas that are less thought of and less often implemented.

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References

Adelante Healthcare. (2010). Annual Report. Retrieved from http://www.adelantehealthcare.com/_pdf/Adelante-Healthcare-Annual-Report-2010.pdf).

Arizona Department of Health Services (AZDHS). (2010a). Arizona Health Status and Vital Statistics. Retrieved from http://www.azdhs.gov/plan/report/ahs/ahs2010/pdf/text3c.pdf

Arizona Department of Health Services (AZDHS). (2010b). Executive summary: HIV/AIDS Annual Report -State of Arizona. Retrieved from http://www.azdhs.gov/phs/hiv/pdf/2010annReport/2010%20EXECUTIVE%20SUMMARY.pdf

Arizona Department of Health Services (AZDHS). (2011). Arizona Statistics: HIV. Retrieved from http://www.azdhs.gov/phs/hiv/pdf/2011report/2011_STATE_OF_ARIZONA.pdf

Branson, B.M., Handsfield, H.H., Lampe, M.A., Janssen, R.S., Taylor, A.W., Lyss, S.B., Clark, J.E. (2006). Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR, 55(RR14):1-17.*

Burke, R.C., Sepkowitz, K.A., Bernstein, K.T., Karpati, A.M., Myers, J.E., Tsoi, B.W., Begier, E.M. (2007). Why don't physicians test for HIV? A review of the US literature. AIDS 21(12): 1617-1624. doi: 10.1097/QAD.0b013e32823f91ff

CDC. (2008). HIV Prevalence Estimates-United States, 2006. MMWR 57(39):1073-1076. Retrieved form http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5739a2.htm

CDC. (2008). HIV/AIDS among Persons Aged 50 and Older. CDC HIV/AIDS Facts. Retreived from http://www.cdc.gov/hiv/topics/over50/resources/factsheets/pdf/over50.pdf

Dillard, T. What is a community Health Center? Distributed at Adelante Orintation July 2, 2012.

Hawkins, D., Groves, D. (2011). The Future Role of Community Health Centers in a Changing Health Care Landscape http://www.nachc.org/client/documents/The_Future_Role_of_Community_Health_Centers_in_a.11.pdf

Irwin KL, Valdiserri RO, Holmberg SD. The acceptability of voluntary HIV antibody testing in the United States: a decade of lessons learned. AIDS 1996; 10:1707-1717.

Kaiser Family Foundation. (n.d.) State Health facts: Arizona-HIV/AIDS. Retrieved from http://www.statehealthfacts.org. Accessed 8/9/12.

Marks, G., Crepaz, N., Senterfitt, J.W., Janssen, R.S. (2005). Meta-analysis of high-risk sexual behavior in persons aware and unaware they are infected with HIV in the United States: implications for HIV prevention programs. Journal of Acquired Immune Deficiency Syndrome, 39(4):446-53.

National Aids Treatment Advocacy Project (NATAP). (2010). New CDC Report on New HIV Infections- HIV in the United States: An Overview: "The HIV diagnosis rate has remained stable in recent years". Retrieved from http://www.natap.org/2010/newsUpdates/061810_01.htm

National Association of Community Health Centers (NACHC). (n.d.) Retrieved from http://www.nachc.com/press-kit.cfm

National Clinicians Consultation Center (NCCC). (2011). A quick reference guide for clinicians to Arizona HIV testing laws. UCSF. Retrieved from http://www.nccc.ucsf.edu/docs/Arizona.pdf

Ravenswood Family Health Center. (n.d). The Community Health Center Movement http://www.ravenswoodfhc.org/images/pdf/History-of-community-Health-Center-Movement.pdf

RCHN Community Health Foundation. (2011). The community health center story. *Chronicles.* Retrieved from http://www.chcchronicles.org/main.cfm?actionId=globalShowStaticContent&screenKey=cmpTimeline&s=chronicles

Roger Wilson. (2009). Community Health Centers. Optometric Care within the Public Health Community http://webpages.charter.net/oldpostpublishing/oldpostpublishing/Section%203,%20Governmental%20Role%20in%20Health%20Care/Sect%203,%20Community%20Health%20Centers%20by%20Wilson.pdf

The Association of Faculties of Medicine of Canada (AFMC). (n.d.). Chapter 4: Basic Concepts in Prevention, Surveillance, and Health Promotion. AFMC Primer on Population Health. Retrieved from http://phprimer.afmc.ca/Part1-TheoryThinkingAboutHealth/Chapter4BasicConceptsInPreventionSurveillanceAndHealthPromotion/Thestagesofprevention

Weinhardt, L.S., Carey, M.P., Johnson, B.T., Bickham, N.L. (1999). Effects of HIV counseling and testing on sexual risk behavior: a meta-analytic review of published research, 1985-1997. American Journal of Public Health 89(9): 1397-1405

White House. (2020). National HIV/AIDS strategy for the United States. Retrieved from http://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf