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Integrating Trauma Screening and Management at HIV Care Initiation: Current practices and future directions

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An abstract of a thesis submitted to the Faculty of the Rollins School of Public Health of Emory University in partial fulfillment of the requirements for the degree of Master of Public Health in Global Health
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Integrating Trauma Screening and Management at HIV Care Initiation:
Current practices and future directions

Julia Rachel Schiff

Introduction: The high prevalence of trauma and its negative effects on health and medical outcomes among HIV-infected populations highlight the need for integration of trauma services into HIV care. This study aims to fill a gap in knowledge regarding current practices of trauma screening and referrals in the context of HIV care initiation in an urban, resource-limited HIV care setting.

Methods: From March 2017-March 2018, as part of a parent study that aimed to understand how to best implement trauma-informed care into HIV services, surveys with providers (n=14), staff (n=17), and patients (n=63), direct observations of the multistep clinic intake process and hospital-to-clinic intake process, and reviews of intake forms in patient charts (n=69) were conducted to explore the extent to which trauma screening and associated referrals routinely occur at care initiation.

Results: Surveys suggested that major center strengths in trauma screening and referral included screening for substance abuse, screening in a private setting, and explaining why questions are being asked; major gaps included asking about previous head trauma, histories of combat violence, and screening for histories of community violence and comprehensive family needs. Direct observations of clinic and hospital-to-clinic intake indicated that while no formal screening for trauma occurs as part of clinic initiation, patients are screened for needs related to effects of trauma including mental health, substance abuse, legal aid, and case management through a standardized intake form; specific trauma screening occurs in case management. Upon chart review, 58/69 patient charts had at least one intake form, 17 had more than one form; 26/58 patients qualified for case management. Of the 26 who qualified, 16 were referred, 1 person declined, and 9 had no documented referral.

Conclusions: This study demonstrates a gap in standardized trauma-specific screening and referral to trauma-specific support services at HIV care initiation. Future efforts should focus on integrating trauma-specific screening and referrals into the HIV care enrollment process and incorporating additional trauma-informed practices, so that this important barrier to retention in care and adherence to antiretroviral therapy can be addressed early on.

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Chapter I: Introduction

Background of Problem

According to Substance Abuse and Mental Health Services Administration, SAMHSA, individual trauma may result from "an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being." Trauma has a significant toll on morbidity and mortality worldwide. According to the Centers for Disease Control, there were greater than 17,000 victims of homicide and more than 44,000 people committed suicide in the US in 2015 alone. Globally, it is estimated that greater than 1,500,000 people die of violence each year (WHO Violence and Injury Prevention, 2018).

In the US, intimate partner violence (IPV), a particularly common form of trauma in which an intimate partner causes harm to the other through the use of physical, emotional, psychological, and/or sexual abuse, is experienced by one quarter of adult women and one seventh of adult men in their lifetime (CDC Violence Prevention Data, 2017). Experience of abuse in childhood is also common, with 683,000 victims of child abuse and neglect reported to child protective services in 2015 alone (CDC Violence Prevention Data, 2017). Violence among youth is also high, with 22.6% of a nationally representative sample reporting being in a physical fight within the last year (CDC Violence Prevention Data, 2017). Other reported

forms of violence and abuse include elder abuse, conflict violence, non-partner sexual violence, and community violence.

HIV-infected populations experience particularly high levels of trauma. Up to 90% of HIV-positive patients reported experiencing trauma in their lifetime (Pence, 2007). An estimated 68-95% of HIV-infected women, 68-77% of HIV-infected men, and 93% of transgender individuals report histories of IPV (Hatcher, 2015; Sales, 2016). It is estimated that 1 in 4 children have experienced childhood abuse and neglect in their lifetime (CDC Violence Prevention Data, 2017). The rates of childhood sexual and physical abuse in the HIV-positive population are 1.5-2 times that of the general population (Brezing, 2015). In a study of experiences in the Southern US about one- third of HIV-positive individuals had experienced sexual abuse by the age of 13 and up to 50 percent had experienced it in adulthood (Whetten, 2006). Other forms of community violence including war and combat greatly impact those with HIV (Vasylyeva, 2018). Additionally, many HIV-infected individuals report difficult life experiences like death of a loved one, homelessness, discrimination (i.e. as a result of being from marginalized communities, stigmatizing HIV risk behaviors), and stigma, which contribute to psychological trauma. These can be compounded by stigma and discrimination associated with being a sexual minority (Wheeten, 2008). Furthermore, the trauma of receiving an HIV diagnosis can result in lasting effects (Fields, 2013).

Problem Statement

Trauma is not only experienced in high numbers in HIV-positive individuals, but also has a large impact on care received and medical health outcomes. The impact on health is significant and leads to decreased adherence to medications, fewer clinic appointments, and a greater proportion of long-term care needs and resources utilized (Brezing, 2015), (Hatcher, 2015). Poor engagement in and adherence to care results in higher HIV viral loads, lower CD4 counts, and greater amounts of medication resistance (Colasanti, 2017). The rates of opportunistic infections and AIDS related morbidity and mortality are also higher (Miller, 1999).

HIV care in the US is largely funded by the Ryan White Program. The Ryan White HIV/AIDS program provides grant funding for comprehensive HIV medical care that "includes primary medical care and essential support services for people living with HIV who are uninsured or underinsured" (HRSA, 2018). Its resources reach over a million HIV-infected individuals a year (HRSA, 2018). Clinics who receive Ryan White funding must meet standards of practice and quality metrics to receive continuing funding. Addressing the impact of trauma barriers can help mitigate some of the challenges with care adherence and HIV/AIDS related morbidity and mortality, and in doing so, help the clinics achieve quality targets. Importantly, screening for forms of domestic violence and mental health sequelae is recommended by Ryan White guidelines for the management of persons infected with HIV (Aberg, 2014).

Ideally, trauma screening in HIV care settings would occur at the time of care initiation and throughout care. According to the HIVMA/IDSA primary care guidelines for the management of persons infected with HIV, "As part of the initial

evaluation and at periodic intervals thereafter, providers should assess the presence of depression, posttraumatic stress disorder, and domestic violence by means of direct questions or validated screening tools. Women with HIV infection have high rates of adult sexual and physical abuse and of childhood sexual abuse. The prevalence of depression among those with HIV infection is twice as high among women, compared with men, and is more prevalent in the setting of violence or victimization" (Aberg, 2014). Thus, screening for trauma is a well-recognized component of bettering the care and decreasing HIV-related morbidity and mortality. During this initiation of care, patients can be properly identified and then linked with the appropriate resources like mental health services and social supports early on. Identifying trauma may decrease the resultant barriers to care in a preventative manner and in the long-term (Brezing, 2015). As the risk of trauma is constant, magnified, and compounded in those who have HIV, continually assessing for trauma as part of retention and ongoing treatment plans is additionally important (Brezing, 2015).

In order to assess for trauma and address its impact on the health of HIV-positive individuals a trauma-informed care model is helpful. According to SAMHSA trauma-informed care, (TIC), is "A program, organization, or system that is trauma-informed: 1) Realizes the widespread impact of trauma and understands potential paths for recovery; 2) Recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; 3) Responds by fully integrating knowledge about trauma into policies, procedures, and practices; and 4) Seeks to actively resist re-traumatization." A TIC model in the HIV setting will help recognize

and better address the holistic patient needs related to trauma. Further, identifying these needs and addressing them within HIV care, has potential to lead to better health outcomes. Providers and clinics trained in this practice can help identify resources necessary for patients. A key step for addressing and identifying trauma is at the initiation of care phase. To do this, understanding the HIV care initiation process and whether and how trauma and trauma sequelae are assessed and addressed in the process is a critical first step.

Significance

It is important to screen for trauma and trauma sequelae at care initiation so that barriers to relevant support services can be made early on and help mitigate barriers to care engagement and medication adherence (Brezing, 2015). While there is increasing awareness of the impact of trauma on healthcare outcomes and the specific impact trauma has on individuals who are HIV-positive is being recognized, further investigation into the screening process for trauma in HIV care centers and how that information is utilized is warranted. Given the large impact of trauma on HIV care, there is a need to address trauma and trauma related screening as a component of the HIV initiation of care process.

Importantly, there is a significant paucity of studies that have addressed trauma barriers at the initiation of care phase. There are studies that address the impact of trauma on HIV and medical care as well as some that examine the impact of barriers to care on health outcomes both in and out of the HIV population. Some of the stigma, mental, and emotional sequelae related to trauma have been

examined in relation to barriers to care. To date, no studies have examined trauma screening and referral practices at HIV care initiation. This study helps to fill this gap by examining existing practices related to trauma screening and referral and barriers/facilitators to integrating trauma screening and management at care initiation in a large Ryan White clinic in the Southern US. Research at this HIV treatment center have addressed barriers to retention into care, intimate partner violence, and the parent study for this project is the first to assess trauma-informed care practices and needs in the clinic. The findings of this project have the capacity to inform how to integrate trauma screening into HIV care in this clinic and other Ryan White clinics throughout the US to ultimately improve HIV care outcomes.

Purpose of Study:

This study aims to complete the following aims in a large, urban, Ryan White-funded center in the southern United States:

Aim 1: To better understand the intake and initiation of care process for patients who enroll in care.

Aim 2: To better understand if and how trauma is assessed during the intake process and how referrals are made to appropriate support services to address the identified trauma needs.

Aim 3: To examine, through surveys and chart review, if and how patients are screened for trauma and referred to resources during the initiation of care process

Aim 4: To look at the trauma screening process at the center and its relation to a trauma-informed care approach

Chapter II: Literature Review

The burden of trauma among HIV-infected individuals

Trauma, defined by SAMHSA as "an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being," is highly prevalent worldwide and has a large impact on vulnerable populations. People infected with HIV have been found to experience high rates of various forms of trauma, including childhood abuse, physical and sexual abuse, intimate partner violence (IPV), assault, war, natural disaster, stigma, and discrimination (Sales, 2016), (Wheeten, 2006). Physical, sexual, and childhood abuse are some of the forms of violence that have been found in high prevalence (Wheeten, 2006). In a study on the prevalence and predictors of trauma in the Deep South, about one-third of HIV-positive individuals had experienced sexual abuse by the age of 13 and up to 50 percent had experienced it in adulthood (Whetten, 2006).

Adult sexual abuse and intimate partner violence (IPV) are disproportionally greater in HIV-positive individuals (Hatcher, 2015). It is estimated that 68-95% of HIV-positive women in resource-rich areas experience IPV in their lifetime and that women in resource constrained settings are twice as likely to report violence from a partner as women without HIV (Hatcher, 2015). IPV is estimated to be prevalent in 68-77% of men, and in 93% transgender people (Sales, 2016). It is additionally high in other vulnerable groups including men who have sex with men (MSM) and racial

minorities (Ramachandran, 2010). MSM have been found to have higher rates of trauma and the impact of that trauma on mental health and medical outcomes is great (Kamen, 2012). In addition to threat of violence and sexual abuse, the limitations imposed by a controlling partner lead to decreased ability to negotiate safe sex practices. IPV is a risk factor for increased rates of HIV infection (Hatcher, 2015). Furthermore, HIV diagnosis is often an impetus for violence and women who have HIV are at an increased risk for IPV and sexual violence in their lifetime. Biological and transgender women both have higher rates of trauma and resultant post-traumatic stress disorder (PTSD), HIV high-risk behaviors, and antiretroviral (ARV) failure (Machtinger, 2012).

Many HIV-infected individuals also bring histories of childhood abuse. Experience of abuse in childhood is common, with 683,000 victims of child abuse and neglect reported to child protective services in 2015 alone (CDC Violence Prevention Data, 2017). The rates of childhood sexual and physical abuse in the HIV-positive population are 1.5-2 times that of the general population (Brezing, 2015). A study conducted in a population of trauma-exposed HIV-positive pregnant women, found that 66% of participants reported a history of childhood sexual or physical abuse (Villar-Loubet, 2014). In a study of mostly MSM individuals, it was found that greater than 35% of those who were HIV-positive had a history of childhood abuse, that the history of childhood abuse was associated with increased dissociative symptoms, and more than half met criteria for PTSD (Kamen, 2012). A history of childhood abuse is also associated with high-risk HIV transmission behaviors, like unprotected sexual intercourse (Brezing, 2015).

Other forms of trauma, combat, and community violence are high. According to the Centers for Disease Control, there were greater than 17,000 victims of homicide and more than 44,000 people committed suicide in the US in 2015 alone (CDC Violence Prevention Data, 2017). Globally, it is estimated that greater than 1,500,000 people die of violence each year (WHO Violence and Injury Prevention, 2018). A nationwide sample of US residents, which asked about various forms of trauma, including a life threat, sexual assault or molestation, fire/natural disaster, combat, physical assault, or witnessing a trauma, found that over half of the sample had experienced at least one traumatic event in their lifetime (Norris, 2013). Individuals who have HIV are also susceptible to forms of community violence and war. In a study on the transmission of HIV during wartime, researchers in Ukraine found a demonstrated link between the spread of HIV in internally displaced persons and individuals who frequently travel to war-affected areas (Vasylyeva, 2018).

According to SAMHSA's definition of trauma, a circumstance that is emotionally harmful can have lasting effects on individual wellbeing. Stigma can have a great impact on HIV-positive individuals and the many vulnerable groups who are disproportionately affected by HIV (Wheeten, 2008). Misconceptions about individuals who have HIV, including misunderstandings about transmission and safety are high. Additionally, stigma associated with homosexuality is frequently intertwined with HIV status. In a study conducted in New York, greater than forty percent of individuals reported that they faced negative discrimination when they disclosed their HIV status (Wheeten, 2008). This can lead to fear associated with

disclosure and decreased support systems. Stigma in lower income nations is even higher (Wheeten, 2008). Others report fear of discrimination associated with taking ARV medications, which can lead to decreased ARV adherence and medical compliance (Wheeten, 2008). The emotional and psychological burden of being homosexual, African American, and receiving an HIV diagnosis was analyzed for the impact of these traumas on participants' lives and health. It was found that the experience of discrimination-related trauma lead to participation in higher risk sexual behavior and an increased risk of HIV transmission (Fields, 2013). Those who face increased social stigma and are part of lower socioeconomic status groups have experienced a greater burden of trauma and the lasting impact of it on health and social outcomes. Latinos/Hispanics and African Americans, especially women, are disproportionately affected by HIV and trauma (CDC HIV US, 2013; Brezing, 2015).

The high prevalence of the many forms of trauma in the HIV setting, including IPV, childhood abuse, community violence, stigma, and discrimination, demonstrate the existence of a link between trauma and HIV. The next sections will discuss why trauma and HIV are frequently intertwined and importantly, the impact of trauma on health and medical outcomes.

Why are HIV and trauma syndemic?

Several studies have examined why rates of trauma are particularly high in HIV-infected populations. They demonstrate that 1) HIV and trauma share co-determinants, 2) that trauma increases HIV risk, and 3) that HIV increases risk of trauma experience. Rates of trauma in HIV-positive individuals are elevated both

before and after HIV diagnosis as compared to those who don't receive the diagnosis (Wheeten, 2008). Shared risk factors for HIV and trauma compound this likelihood. Social factors including race, poverty level, and gender influence risk. According to Sales *et al.*, "Factors associated with heightened risk for HIV, such as poverty, race/ethnicity, sexual orientation, and gender, may increase the risk of exposure to potentially traumatic events, thereby compounding their HIV risk" (Sales, 2015). Being homeless is a risk factor for decreased access to medical care, lack for basic resources that are important for protection of physical health (i.e. toothbrushes, blankets, gloves) and worse health outcomes (Brezing, 2015). Many of the risk factors that put individuals at risk for homelessness also put them at risk for trauma, and homelessness increases the risk for violence. In a study that looked at homeless women and HIV, those with the most unmet resource need were found to have greater burdens of trauma, decreased medical compliance, and poorer health outcomes (Riley, 2011).

Psychosocial factors that may affect this at risk population including mental illness, trauma, stigma, and lack of trust in the medical system are all associated with poorer health outcomes (Whetten, 2008). Substance abuse, high-risk sexual behaviors, and comorbid mental illness all increase the risk of trauma and HIV (Wheeten, 2008). Individuals who share unprotected needles during drug usage, for example, are at greater threat of HIV transmission and violence occurring during altered mental alertness. Physical and sexual trauma itself can lead to increased risk of HIV and the transmission of other infections. Violent intercourse, which often occurs through IPV and rape leads to a greater risk of HIV transmission due to

decreased protective barriers (Klot, 2012). Abrasions and cuts, which often occur through traumatic sex, will result in the removal of the epithelial layers, allowing greater access for the virus. Furthermore, as the epithelial layer around the anus is thinner, there is an increased risk with anal intercourse and traumatic anal sex for acquisition of HIV (Klot, 2012). Other biological and physical factors that promote increased infectivity from sexual trauma include underdeveloped physical anatomy and decreased estrogen levels. Children and youth can have increased risk of tears, and skin breakdown when faced with violent or non-violent intercourse (Klot, 2012). The risk of skin break down is also similar in postmenopausal women. In areas of conflict, women are at a greater risk for violence both at home and as forms of torture, domination, and ethnic cleansing. These traumatic forms of violence and sexual abuse lead to increased risk of transmission (Klot, 2012).

Furthermore, the diagnosis of HIV itself can be an impetus for violence. The associated fear of disclosure can lead to decreased care initiation and retention into care. For individuals who experience IPV, disclosing HIV status may lead to retaliation, blame, rejection, and increased violence (Schafer, 2012). A controlling partner may come to or hinder medical appointments. As a result, later HIV testing can lead to diagnosis at a later stage of disease (Hatcher, 2015). In a study conducted on HIV-positive patients in an urban clinic in Pittsburgh, Pennsylvania, over a quarter (29%) of participants felt that the IPV they experienced was directly related to their HIV status (Ramachandran, 2010).

The effect of trauma on the health of HIV-positive individuals

Experience of trauma is associated with negative effects on mental health, physical health, and adoption of health behaviors. There are several different theories about the impact of trauma on HIV-positive individuals. The biological response of an HIV-positive individual to the experience of trauma is thought to be mediated by a number of internal and environmental factors (Brezing, 2015). One theory, called McEwen's model of allostatic load, suggests that the physical and psychological stress of trauma on the body leads to changes in the immune system and brain responses (Brezing, 2015). This leads to maladaptive behaviors that have a poor impact on health and progression of HIV disease. An increase in psychosocial stress impairs cognitive function and promotes disease progression (McEwen, 1999). A second model proposed by Schnurr and Green, suggests that trauma and resultant mental health, biologic, attentional, and behavioral effects on an individual have negative impacts on health outcomes (Brezing, 2015). These effects limit the body's ability to adapt, which promotes disease development (Schnurr, 2004). Decreased functioning and poorer coping styles that are a result of trauma lead to greater amounts of disengagement and more progression of HIV illness (Brezing, 2015).

Substantial evidence supports the link between trauma and poor mental health, including post-traumatic stress disorder (PTSD), major depressive disorder (MDD), anxiety, and suicidality. Further, poor mental health directly affects the health of HIV-infected individuals through increased substance abuse, sexual risk taking and disengagement from care. PTSD and MDD can lead to dissociative symptoms during sex resulting in re-victimization and decreased ability to negotiate

safer sex practices (Hansen, 2012). Specific characteristics of childhood sexual abuse have a greater impact on these dissociative symptoms, i.e., greater length of time of abuse, greater number of abuses, and intimate partner rape (Hansen, 2012). Additionally, women who face trauma have an increased burden of mental health consequences, which also leads to engagement in high-risk behaviors, including increased sexual partners, higher levels of unprotected sex, and substance abuse (Seedat, 2012). In a study of the impact on PTSD on women's ability to negotiate safer sexual practices, it was found that PTSD can result in a decreased ability to request for a partner to use a condom, to ask that both partners be tested for HIV before intercourse, and fewer times when alcohol was not consumed before intercourse (Horsey, 2011). In addition to violence, trauma resulting from experience of HIV-related stigma is associated with mental health effects including PTSD and depression, engagement in high-risk sexual behavior, and decreased disclosure to sexual partners (Wheeten, 2008).

Individuals who experience trauma are more likely to engage in substance abuse, as substance abuse and other forms of maladaptive coping strategies are often utilized to deal with trauma (Miller, 1999). The sequelae of trauma-associated substance abuse include decreased adherence to medications and initiation of substance abuse at a younger age, which may lead to intermittent care, and HIV related opportunistic infections (Miller, 1999) The usage of substances through injection of needles also carries a greater risk of acquisition of HIV and other infections like Hepatitis C (Brezing, 2015). Sexual and physical abuse is associated

with alcohol abuse, needle sharing, and risky sexual behaviors in both HIV-positive and negative individuals who experience trauma (Wheeten, 2008).

Trauma has also been directly linked to sexual risk-taking. Childhood trauma and abuse are associated with higher risk sexual behaviors leading to a greater risk of acquisition of HIV and other sexually transmitted infections (Sweet, 2012). High-risk behaviors may include unprotected intercourse, increased numbers of sexual partners, and concurrent substance use (Wheeten, 2008). In a study conducted on trauma and adverse experiences in childhood and the relation of those experiences to sexually transmitted infection and sexual health outcomes, the rates of common infections including gonorrhea, chlamydia, and trichomoniasis were monitored (London, 2017). The study, which explored many forms of trauma, found that increasing trauma levels and experiences were strongly linked to sexual risk and infection outcomes (London, 2017). The effects of trauma on sexual risk transcend gender and sexual orientation. For example, MSM with sexual abuse history are more likely to engage in casual, unprotected anal sex, and sexual relations than those without a history of abuse (Kamen 2013).

Trauma also directly affects HIV care engagement and medication adherence. For example, histories of childhood sexual and physical abuse have been associated with decreased antiretroviral (ARV) medication adherence (Brezing, 2015). Trauma and associated PTSD in women have been especially associated with decreased ARV adherence. Machtinger *et al.* demonstrated that the odds of ARV failure in women who have had recent trauma are four times the odds of ARV failure in women who have not experienced trauma (Machtinger, 2012). Additionally, the trauma

associated with experience of stigma directly impacts HIV care. In a study by Soto *et al.*, fear of HIV stigma in a group of HIV-positive MSM was a factor in their attitudes towards HIV and medication adherence (Soto, 2013). Furthermore, fear of taking ARVs in public due to concern for stigma may lead to decreased adherence (Wheeten, 2008). Active threat from an intimate partner can result in decreased engagement in care through several mechanisms. A controlling partner may limit the other individuals' access to resources, i.e., finances for medication and transportation to clinic. Fear of disclosure itself, due to fear of retribution, limits engagement in care and adherence (Hatcher, 2015).

Trauma has also been associated with poor HIV outcomes, in part due to decreased engagement in care and limited ARV adherence. These negative outcomes include increased opportunistic infections, longer and more complicated hospital stays, and overall increased HIV/AIDS related morbidity and mortality. Physical and sexual violence also have an impact on physical health and reproductive health. Some commonly reported physical complaints include, injuries and complications from physical trauma, digestive problems, changes in appetite, chronic pain syndromes, fainting, and headaches (Campbell, 2002). Reproductive health sequelae of trauma and violence include urinary tract infections, sexually transmitted infections, dysmenorrhea, pelvic pain, fibroids, and painful intercourse (Campbell, 2002). A study that examined medical care access in HIV-positive women with histories of sexual and physical abuse, during the two years after their initiation of HIV care, found that they had an over threefold higher number of emergency room visits and hospital admissions as compared to HIV-positive women with no history

of such trauma (Liebshutz, 2000). Intimate partner violence has been linked to more complicated medical problems and has been found to be a predictor for having a CD4 count of less than 200 (cells/mm^3) (Schafer, 2012). Active threat from an intimate partner can result in decreased engagement in care through several mechanisms. A controlling partner may limit his/her partner's access to resources, i.e., finances for medication and transportation to clinic. Fear of disclosure itself, due to fear of retribution, limits engagement in care and adherence (Hatcher, 2015).

Lastly, emerging evidence suggests trauma may have direct biological sequelae on immunity. It is thought that there is an association between trauma/violence and a physiological immune system response in HIV-positive individuals, resulting in an alteration in cortisol response and T-cell activation. In a study on the immune system link between IPV and CD4 response in high-risk HIV-negative women, IPV was found to be associated with higher levels of CD4 activation (Kalokhe, 2016). Another study examining the impact of IPV, non-partner rape, substance abuse, hunger, and depression on CD4 and CD8 T-cell counts in HIV-infected women age 15-26-years-old, found that gender-based emotional abuse is associated with a faster rate of decline in markers of cellular immunity (Jewkes, 2015).

Trauma is both highly prevalent in HIV-infected populations and is associated with poor mental, physical, and behavioral health outcomes. The sequelae have a direct impact on HIV care and outcomes. Given the demonstrated medical impact and magnitude of trauma on HIV-positive populations, there is a

need to integrate trauma care into HIV services and interventions designed to recognize and target trauma are important.

Trauma specific interventions

According to SAMHSA trauma-informed care is “a program, organization, or system that is trauma-informed: 1) Realizes the widespread impact of trauma and understands potential paths for recovery; 2) Recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; 3) Responds by fully integrating knowledge about trauma into policies, procedures, and practices; and 4) Seeks to actively resist re-traumatization." Interventions that focus on multilevel and multiple forms of trauma are needed. Trauma-informed care, is a key approach that incorporates the many associated needs of trauma survivors and addresses the sequelae of trauma. In order to implement a trauma-informed care approach into medical treatment and care, “This trauma-informed approach should incorporate the following: (1) a trauma-sensitive practice environment, (2) identification of trauma and its mediators, (3) education to patients about the relationship between trauma and its negative influence on behavior and health, and (4) provision of appropriate resources and referrals to more specialized treatment when needed (Brezing, 2015).

While a trauma-informed approach is multifaceted and becoming more widespread, there are other types of interventions that have been conducted in an effort to recognize and assist with the negative consequences. Designed interventions can be specific to a particular group or set of individuals or may be

broader and more layered. For example, one parameter of interventions is the target population, which may focus efforts at individual, community, or mixed populations. Different interventions have been tried at the individual and community level for those who face mental health consequences of experiencing trauma. Group cognitive behavior therapy has been found to be an effective method of therapy for many who experience the mental health consequences of trauma (Seedat, 2012). A significant amount of the trauma interventions have specifically targeted symptoms related to PTSD and dissociative symptoms that occur with mental health diseases. While interventions in mental health have paved a great pathway for dealing with this component of trauma, it does not fully capture the broader trauma needs (Brezing, 2015). Other interventions have been targeted towards a specific gender, age, or are set in a specific global or local environment. In a review conducted on available trauma-specific interventions for HIV-positive individuals, eight interventions were identified (Sales, 2015). Of the interventions analyzed, many were done outside of the US and the majority focused on HIV prevention as opposed to trauma experiences of those already living with HIV. Interventions were targeted to limited populations, i.e. (individual women, men who have sex with both men and women (MSWM) only). Most of the interventions focused on IPV as the main form of trauma, one looked at childhood abuse, and there was only one that focused on various forms of trauma (Sales, 2015). Importantly, comprehensive interventions tailored to the needs of HIV-infected individuals that targeted multiple levels of the socio-ecologic model and address the multiple forms of trauma are lacking.

Interventions designed to address multiple population levels, diverse trauma forms, the diverse spectrum of people who experience trauma, and recognize trauma in an HIV specific setting could help mitigate the effects of trauma on HIV care engagement and HIV outcomes. There is need for care that is designed to deal with the physical and mental sequelae, that provides appropriate resources and referrals, and does so in a way that is sensitive to trauma needs and does not re-traumatize individuals. This is where a trauma-informed care approach is useful and inclusive. In order to make these types of interventions successful, providers need to be educated on the impact of trauma on care and health outcomes, the high prevalence on trauma in HIV-positive patients, and have the tools to respond appropriately (SAMHSA).

Support for trauma-informed HIV care

The HIV Medicine Association of the Infectious Diseases Society of America and the Ryan White Program support the recommendation for trauma screening in HIV care. Much of the resources and care provided to HIV-positive patients are provided through Ryan White funded clinics and programs. Guidelines for these clinics promote screening for violence, trauma, and mental health disorders, and HRSA emphasizes the importance of following primary care guidelines in providing HIV care (HRSA, 2018). According to the HIVMA/IDSA primary care guidelines for the management of persons infected with HIV, “As part of the initial evaluation and at periodic intervals thereafter, providers should assess the presence of depression, posttraumatic stress disorder, and domestic violence by means of direct questions

or validated screening tools. Women with HIV infection have high rates of adult sexual and physical abuse and of childhood sexual abuse. The prevalence of depression among those with HIV infection is twice as high among women, compared with men, and is more prevalent in the setting of violence or victimization" (Aberg, 2014). Thus, screening for trauma is a well-recognized component of bettering the care and decreasing HIV-related morbidity and mortality.

Better health outcomes are both health clinic and personal practitioner goals for many who provide care to HIV-positive patients. In addition to clinics maintaining their Ryan White funding, physicians and providers are further incentivized to screen for trauma by ICD reimbursement codes. While there are a number of codes that help promote trauma screening, a few that are pertinent include: ICD-10-CM Diagnosis Code Z91.410: Personal history of adult physical and sexual abuse, ICD-10-CM Diagnosis Code T74: Adult and child abuse, neglect and other maltreatment confirmed, ICD-10-CM Diagnosis Code T74.11: Adult physical abuse, confirmed, ICD-10-CM Diagnosis Code Z60.5: Target of (perceived) adverse discrimination and persecution, ICD-10-CM Diagnosis Code Z62: Problems related to upbringing a) Z62.81: Personal history of abuse in childhood b) Z62.810: Personal history of physical and sexual abuse in childhood, c) Z62.811 Psychological abuse, d) Z62.812 Neglect, ICD-10-CM Diagnosis Code Z65: Problems related to other psychosocial circumstances a) Z65.4: Victim of crime and terrorism b) Z65.8: Exposure to disaster, war and other hostilities (ICD10Data, 2018).

Trauma-informed HIV care approach suggested by Brezing

In order to appropriately identify trauma and the potential sequelae that affect individuals with HIV, a targeted screening process for the various forms of trauma would be helpful. Recommendations for an ideal screening process for trauma in the HIV care setting have been proposed by Brezing: Once trauma is identified in a patient, providers should screen them for symptoms related to trauma and its sequelae, like PTSD including avoidance, numbness, flashbacks, and dissociative symptoms. Next, referrals to the appropriate resources would ideally be incorporated as part of treatment. Patients should also be screened for trauma related risk factors and comorbidities that increase individual risk for poor ARV compliance and poor medical outcomes. High-risk sexual behaviors, unstable housing, and unsafe IV drug usage are examples of "mediators" of HIV and trauma co-occurrence that providers would also address (Brezing, 2015).

As part of screening and recognition of trauma, patients should be informed about the association between trauma and HIV and be made aware of the potential impact of a history of trauma on medication compliance, medical outcomes, and HIV associated morbidity and mortality. Providing patients with information about how some of their current behaviors and activities may have been influenced by their trauma experiences is key for patients with HIV, whose medical outcomes rely on treatment compliance (Brezing, 2015). Providers should work to identify resources available to patients to help address these needs, including mental health services, social support, family resources, housing, and food.

In those who screen negative for trauma, those involved in providing medical care should continue to educate their patients about the potential ongoing risk of trauma in HIV-positive patients, especially given the overlapping risk factors. A strategy would include reviewing behaviors that put individuals at higher risk for trauma and violence and mitigation of these risk factors should be part of the treatment plan (Brezing, 2015). As the risk of trauma is still present, a negative screen does not mean that trauma will not occur in clinic patients in the future or that an individual choose to disclose to the provider when asked. HIV-negative patients who have been identified as never having experienced trauma and violence should also be educated by their primary care physicians about the increased risk for further violence and the acquisition of HIV and on safer practices that help decrease these risks (Brezing, 2015). While Brezing has put forth several critical recommendations for implementation of trauma-informed HIV care, it should be noted that these recommendations are largely based on expert opinion and have little evidence evaluating their efficacy at present.

HIV care initiation process

HIV care initiation is one of the first critical steps of the HIV care continuum. It encompasses the following steps: receiving a diagnosis, HIV counseling, risk assessment and screening for supportive services, HIV related laboratory tests, linkage to a physician, initiation of ARV therapy, and engagement into care (Mugavero, 2013), (Kutnick, 2017). Additional considerations for care initiation include addressing social needs including food insecurity, housing, and

transportation, HIV education and outreach, and patient navigators and case management to help with care coordination and engagement into care (Mugavero, 2013). Initiation, engagement, and retention into HIV care are crucial to HIV health outcomes and there are many recognized barriers to these steps. According to data from 2011, the CDC estimates that there are 1.2 million people in the US living with HIV and of those 86% received a diagnosis (Kutnick, 2017). In 2014, 38% of individuals with HIV were not engaged in any form of care, 52% were not engaged in continuous care, and 51% had not received viral suppression of their infection (CDC HIV US, 2017). It is estimated that 44% of young people, ages 13-24, the age of most new infections, are unaware of their diagnosis (CDC HIV US, 2017).

Identified barriers to care initiation include: socioeconomic factors, cultural factors, racial disparities, being a member of a vulnerable group, personal and community attitudes, access to screening and treatment facilities, stigma, distrust of the medical system, substance-abuse, mental health illness, and structural barriers (Kutnick, 2017). Dombrokwski noted the following barriers to HIV care initiation, ARV initiation, and continual care: insurance (50%), transportation (26-34%), depression (59%), substance abuse (54%), and perceived lack of need for starting ARVs (Dombrowski, 2015). Although trauma associated with stigma, discrimination, and the HIV diagnosis itself was not directly assessed as a barrier, Dombrokwsi found that 27% of participants were fearful that others would learn of their HIV-positive status and that 18% reported needing to adjust to being HIV-positive (Dombrowski, 2015). Pollini also found the following factors to be associated with decreased initiation of care: younger age, shorter time since

diagnosis, lack of insurance, and not receiving help with making appointments after diagnosis (Pollini, 2011). Lack of insurance is a factor in decreased initiation of care. Medicaid patients were found to initiate ART at a more advanced stage compared to those with commercial insurance, who were self-insured/unknown, or who had Medicare. Medicaid patients had suboptimal access to medical care (Schneider, 2013).

Providers' attitudes, perceptions, and beliefs about perceived barriers to initiation of care for a group of HIV-positive 13-25 year olds patients was examined. Clinicians largely identified that patient factors (finance, drugs, etc.) were greater barriers than clinic factors (location, resources, flow, etc.) (Gagliardo, 2013). Patients further reported emotional factors as barriers to care. In recognizing these barriers, providers can focus efforts on specific issues identified for each patient and create individualized plans for each patient to overcome barriers and reassess patients throughout treatment (Gagliardo, 2013). In a study of pregnant women with HIV in need of care, problems with communication and coordination among healthcare workers and services, stigmatizing healthcare worker attitudes, supply chains, and poor health information systems were common weaknesses of many health systems leading to barriers in care (Colvin, 2014). While many of these examples focus on the US population, similar studies have been done internationally. In a study conducted in sub-Saharan Africa, where it is estimated that only 65% of people eligible to ART were receiving medications in 2012, common barriers to initiation were psychological, economic and health system

related. Extended counseling, peer support, food, and regularly scheduled visits were cited as measures that improved initiation of care (Govindasamy, 2014).

Studies that have focused on trauma-specific barriers to care initiation are limited to assessments of stigma and discrimination. By SAMHSA's definition of trauma, experiences that have a negative and lasting impact, like stigma, may qualify as a form a trauma in many individuals. In the work presented by Pollini *et al.*, emotional and social factors like not knowing someone with HIV, not disclosing HIV status, and not wanting to think about being HIV-positive were all factors in not initiating HIV care (Pollini, 2011). A study of heterosexual Black and Hispanic men from high poverty areas found that fear of stigma and fear of loss of key relationships resulted in delay of care. Acceptance of HIV status is essential to engagement (Kutnick, 2017). Furthermore, structural racism and discrimination have been barriers to initiation of care. In African American/Black and Hispanic individuals living with HIV, aspects of care associated with the long-term effects of racism, like distrust of the medical system, were factors in delayed initiation of care (Freeman, 2017). Studies that addressed the effects of other trauma barriers, like IPV, violence, abuse, etc., on HIV care initiation are lacking.

In the HIV-positive population, interventions related to the initiation of care have been examined. In a large review of 24 published and 15 studies that were ongoing at the time of publication, specific strategies and interventions to increase linkage and retention into ARV and HIV care were investigated (Govindasamy, 2014). The review found that the most effective interventions were patient-centered strategies that coordinate care and minimize repeat visits to clinic.

Providing incentives, peer support, antenatal care integration, and counseling services were found to be some of the most effective interventions. Other valuable interventions included immediate CD4 testing, health system integration, provider counseling, task shifting to other healthcare workers, reminders through SMS and other electronic forms, home visits, and assisted partner notification (Govindasamy, 2014). Specific studies about interventions and strategies related to trauma during HIV care initiation are lacking. Studies are needed to inform how to best assess and address trauma and its associated effects on risk behaviors and physical and mental health outcomes at time of care initiation. Doing so would be a key first step in recognizing trauma and identifying strategies to help minimize the immense impact of trauma on HIV care, treatment, and outcomes.

Site Background

The Southern US is an area of high HIV burden. According to the CDC, the South is the region in the country with the highest number of new HIV diagnoses. In 2015, there were 20,442 new cases in the South, followed by 7,708 in the West, 6502 in the Northeast, and 5,224 in the Midwest (CDC Surveillance, 2017). In 2015, Georgia ranked 5th highest in the county for the number of both adults and adolescents with HIV (Georgia DPH, 2017). Of US metropolitan areas for year-end data from 2015, Atlanta ranked 4th for the number of persons living with HIV diagnoses (CDC Surveillance, 2017). Atlanta ranked 7th among metropolitan areas for the number of persons living with HIV who had ever been classified as having AIDS. There are a number of socioeconomic factors that have contributed to the

epidemic of HIV in the southern US including poverty, income inequality, and decreased access to care (CDC Issue Brief, 2016). These areas also have disproportionately high rates of other health challenges including diabetes, cancer, obesity, infant and general mortality. Cultural factors including racism, homophobia, discomfort with public discussion of sexuality, and stigma also play a role in the Southern epidemic, which can lead to decreased HIV awareness and willingness to seek care (CDC Issue Brief, 2016). Other challenges, including HIV prevention strategies and local legislature play a role in the epidemic (CDC Issue Brief, 2016).

The study was conducted in a comprehensive Ryan White-funded HIV/AIDS treatment facility that is part of a larger hospital system in the Southeastern United States, designated to target one of the highest areas of HIV burden. The center provides primary HIV care to a largely uninsured and underinsured urban population of adults, children, and adolescents. Three-quarters are men (73%), one-quarter women (27%), and <1% are transgender. The majority (83%) are African American, followed by White (10%), and Hispanic (5%). Services at the center include: mental health individual and group therapy, palliative care, dentistry, social services (which assists with linking patients to housing, food, and other resource support), HIV related education and peer support, nutrition, gynecology, neurology, hepatitis C, and other subspecialties. The clinic has many on-site resources including laboratory, radiology, pharmacy, and dentistry. There are 5000-6000 active patients and more than a hundred and eighty staff including peer educators, social workers, nurses, and physicians. Until recently, to qualify to be a patient at the center, adults required an AIDS diagnosis or a CD4 count <200 or other medical challenges like

substance abuse problems, mental health diseases, or other major comorbidity. No eligibility restrictions were in place for children.

Additionally, the center serves as a research clinic, with opportunities for patients to enroll in studies at different phases of their treatment and pre-treatment course. As one of the largest Ryan White funded clinics, research conducted at the center contributes significantly to national guidelines, policies, and practices related to HIV care, treatment, and retention. For example, the center recently conducted a study examining individual and structural factors associated with poor retention and re-engagement into care. Individual barriers identified in the non-retained group included decreased social support, decreased disclosure to family, increased substance abuse (particularly crack cocaine), and a feeling that taking HIV medications reminded them of their diagnosis. Systemic barriers included higher levels of food insecurity, running out of money, decreased housing security, decreased access to a regular stable phone number, homelessness, decreased access to transportation, and a greater number of the un-retained group had been in jail (Colasanti, 2017). Similar to the impact of delayed initiation on health, poor retention was associated with increased utilization of the health system, increased opportunistic infections, disease progression, medication resistance, and poorer health outcomes associated with AIDS (Colasanti, 2017). The conclusion of the study indicated that better screening during the initiation of care for potential barriers would help mitigate the impact of these challenges on healthcare. Of note, the study did look at stigma, but not other forms of trauma.

Another center study looked at linkage to care at the center among patients diagnosed in the associated hospital system. The study found that a good number of patients actually had a previous positive test in the state, leading authors to conclude that patients were either not notified properly or patients did not feel comfortable revealing their diagnosis to the treatment team when seen again (Colasanti, 2016). Another study of inpatient HIV-infected crack cocaine users conducted at the associated hospital (which serves many patients from the center) found high prevalence of IPV and that IPV was associated with high-risk transmission behaviors, poor adherence to care, and STI diagnoses. The study emphasized the need for screening for IPV in this patient population (Kalokhe, 2012). In yet another study based at the Center, reasons for leaving abusive relationships, drug abuse, and transactional sex were evaluated in HIV high-risk populations in Atlanta, GA. It found that children and family are important motivators for stopping those behaviors (David, 2016).

Chapter III: Manuscript

Contribution of the Student

At the start of 2017, I joined the multi-tiered trauma-informed care parent study as a research assistant. From the start of the study, I was involved in all components of the development and implementation of the project, including protocols and tools, questionnaire development, interviews with staff, clinicians, and patients, and analysis and preparations of results. I additionally, spent one month in the clinic, where I independently conducted qualitative assessments of the clinic practices. In the Spring of 2018, I performed an additional chart review of screening documents used at care initiation. I also was responsible for preparing the data and writing the manuscript for publication under the guidance of my committee chairs Ameeta Kalokhe MD, MSc, and Jessica Sales, PhD.

Title Page

Integrating Trauma Screening and Management at HIV Care Initiation:
Current practices and future directions

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Abstract

Introduction: The high prevalence of trauma and its negative effects on health and medical outcomes among HIV-infected populations highlight the need for integration of trauma services into HIV care. This study aims to fill a gap in knowledge regarding current practices of trauma screening and referrals in the context of HIV care initiation in an urban, resource-limited HIV care setting.

Methods: From March 2017-March 2018, as part of a parent study that aimed to understand how to best implement trauma-informed care into HIV services, surveys with providers (n=14), staff (n=17), and patients (n=63), direct observations of the multistep clinic intake process and hospital-to-clinic intake process, and reviews of intake forms in patient charts (n=69) were conducted to explore the extent to which trauma screening and associated referrals routinely occur at care initiation.

Results: Surveys suggested that major center strengths in trauma screening and referral included screening for substance abuse, screening in a private setting, and explaining why questions are being asked; major gaps included asking about previous head trauma, histories of combat violence, and screening for histories of community violence and comprehensive family needs. Direct observations of clinic and hospital-to-clinic intake indicated that while no formal screening for trauma occurs as part of clinic initiation, patients are screened for needs related to effects of trauma including mental health, substance abuse, legal aid, and case management through a standardized intake form; specific trauma screening occurs in case management. Upon chart review, 58/69 patient charts had at least one intake form, 17 had more than one form; 26/58 patients qualified for case management. Of the 26 who qualified, 16 were referred, 1 person declined, and 9 had no documented referral.

Conclusions: This study demonstrates a gap in standardized trauma-specific screening and referral to trauma-specific support services at HIV care initiation. Future efforts should focus on integrating trauma-specific screening and referrals into the HIV care enrollment process and incorporating additional trauma-informed practices, so that this important barrier to retention in care and adherence to antiretroviral therapy can be addressed early on.

Keywords:

HIV
Trauma
Trauma-informed care
Barriers to initiation
Screening

Introduction

According to Substance Abuse and Mental Health Services Administration, SAMHSA, individual trauma may result from "an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being." Trauma has a significant toll on morbidity and mortality worldwide. According to the Centers for Disease Control, there were greater than 17,000 victims of homicide and more than 44,000 people committed suicide in the US in 2015 alone. Globally, it is estimated that greater than 1,500,000 people die of violence each year (WHO Violence and Injury Prevention, 2018).

In the US, intimate partner violence (IPV), a particularly common form of trauma in which an intimate partner causes harm to the other through the use of physical, emotional, psychological, and/or sexual abuse, is experienced by one quarter of adult women and one seventh of adult men in their lifetime (CDC Violence Prevention Data, 2017). Experience of abuse in childhood is also common, with 683,000 victims of child abuse and neglect reported to child protective services in 2015 alone (CDC Violence Prevention Data, 2017). Violence among youth is also high, with 22.6% of a nationally representative sample reporting being in a physical fight within the last year (CDC Violence Prevention Data, 2017). Other reported forms of violence and abuse include elder abuse, conflict violence, non-partner sexual violence, and community violence.

HIV-infected populations experience particularly high levels of trauma. Up to 90% of HIV-positive patients reported experiencing trauma in their lifetime (Pence, 2007). An estimated 68-95% of HIV-infected women, 68-77% of HIV-infected men, and 93% of transgender individuals report histories of IPV (Hatcher, 2015), (Sales, 2016). It is estimated that 1 in 4 children have experienced childhood abuse and neglect in their lifetime (CDC Violence Prevention Data, 2017). The rates of childhood sexual and physical abuse in the HIV-positive population are 1.5-2 times that of the general population (Brezing, 2015). In a study of experiences in the Southern US about one- third of HIV-positive individuals had experienced sexual abuse by the age of 13 and up to 50 percent had experienced it in adulthood (Whetten, 2006). Other forms of community violence including war and combat greatly impact those with HIV (Vasylyeva, 2018). Many HIV-infected individuals report difficult life experiences like death of a loved one, homelessness, discrimination (i.e. as a result of being from marginalized communities, stigmatizing HIV risk behaviors), and stigma, which contribute to psychological trauma. These cab be compounded by stigma and discrimination associated with being a sexual minority (Wheeten, 2008). Furthermore, the trauma of receiving an HIV diagnosis can result in lasting effects (Fields, 2013).

Trauma, is not only experienced in high numbers in HIV-positive individuals, it also has a large impact on care received and medical health outcomes. The impact on health is significant and leads to decreased adherence to medications, fewer clinic appointments, and a greater proportion of long-term care needs and resources utilized (Brezing, 2015), (Hatcher, 2015). Poor engagement in and adherence to care

results in higher HIV viral loads, lower CD4 counts, and greater amounts of medication resistance (Colasanti, 2017). The rates of opportunistic infections and AIDS related morbidity and mortality are also higher (Miller, 1999).

HIV care in the US is largely funded by the Ryan White Program. The Ryan White HIV/AIDS program provides grant funding for comprehensive HIV medical care that "includes primary medical care and essential support services for people living with HIV who are uninsured or underinsured" (HRSA, 2018). Its resources reach over a million HIV-infected individuals a year (HRSA, 2018). Clinics who receive Ryan White funding must meet standards of practice and quality metrics to receive continuing funding. Addressing the impact of trauma barriers can help mitigate some of the challenges with care adherence and HIV/AIDS related morbidity and mortality, and in doing so, help the clinics achieve the quality targets. Importantly, screening for forms of domestic violence and mental health sequelae is recommended by Ryan White guidelines for the management of persons infected with HIV (Aberg, 2014).

Ideally, trauma screening in HIV care settings would occur at the time of care initiation and throughout care. According to the HIVMA/IDSA primary care guidelines for the management of persons infected with HIV, "As part of the initial evaluation and at periodic intervals thereafter, providers should assess the presence of depression, posttraumatic stress disorder, and domestic violence by means of direct questions or validated screening tools. Women with HIV infection have high rates of adult sexual and physical abuse and of childhood sexual abuse. The prevalence of depression among those with HIV infection is twice as high among

women, compared with men, and is more prevalent in the setting of violence or victimization (Aberg, 2014). Thus, screening for trauma is a well-recognized component of bettering the care and decreasing HIV-related morbidity and mortality. During this initiation of care, patients can be properly identified and then linked with the appropriate resources like mental health services and social supports early on. Identifying trauma may decrease the resultant barriers to care in a preventative manner and in the long-term (Brezing, 2015). As the risk of trauma is constant, magnified, and compounded in those who have HIV, continually assessing for trauma as part of retention and ongoing treatment plans is additionally important (Brezing, 2015).

In order to assess for trauma and address its impact on the health of HIV-positive individuals a trauma-informed care model is helpful. According to SAMHSA trauma-informed care, (TIC), is “A program, organization, or system that is trauma-informed: 1) Realizes the widespread impact of trauma and understands potential paths for recovery; 2) Recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; 3) Responds by fully integrating knowledge about trauma into policies, procedures, and practices; and 4) Seeks to actively resist re-traumatization." A TIC model in the HIV setting will help recognize and better address the holistic patient needs related to trauma. When these needs are identified and are incorporated into care, it will ideally lead to better health outcomes. Providers and clinics trained in this practice can help identify resources necessary for patients. A key step for addressing and identifying trauma is at the initiation of care phase. To do this, understanding the HIV care initiation process

and whether and how trauma and trauma sequelae are assessed and addressed in the process is a critical first step.

It is important to screen for trauma and trauma sequelae at care initiation so that barriers to relevant support services can be made early on and help mitigate barriers to care engagement and medication adherence (Brezing, 2015). While there is increasing awareness of the impact of trauma on healthcare outcomes and the specific impact trauma has on individuals who are HIV-positive is being recognized, further investigation into the screening process for trauma in HIV care centers and how that information is utilized is warranted. Given the large impact of trauma on HIV care, there is a need to address trauma and trauma related screening as a component of the HIV initiation of care process.

Importantly, there is a significant paucity of studies that have addressed trauma barriers at the initiation of care phase. There are studies that address the impact of trauma on HIV and medical care as well as some that examine the impact of barriers to care on health outcomes both in and out of the HIV population. Some of the stigma, mental, and emotional sequelae related to trauma have been examined in relation to barriers to care. To date, no studies have examined trauma screening and referral practices at HIV care initiation. This study helps to fill this gap by examining existing practices related to trauma screening and referral and barriers/facilitators to integrating trauma screening and management at care initiation in a large Ryan White clinic in the Southern US. Research at this HIV treatment center have addressed barriers to retention into care, intimate partner violence, and the parent study for this project is the first to assess trauma-informed

care practices and needs in the clinic. The findings of this project have the capacity to inform how to integrate trauma screening into HIV care in this clinic and other Ryan White clinics throughout the US and improve HIV care outcomes.

This study aims to complete the following aims in a large, urban, Ryan White-funded center in the southern United States:

Aim 1: To better understand the intake and initiation of care process for patients who enroll in care.

Aim 2: To better understand if and how trauma is assessed during the intake process and how referrals are made to appropriate support services to address the identified trauma needs.

Aim 3: To examine, through surveys and chart review, if and how patients are screened for trauma and referred to resources during the initiation of care process

Aim 4: To look at the trauma screening process at the center and its relation to a trauma-informed care approach.

Methods:

Parent Study Overview

The parent study for this project involves a larger, multi-tiered, needs assessment that aimed to investigate the trauma-informed care (TIC) practices at an HIV treatment center (funded through Emory CFAR R03 Grant (PIs Sales/Kalokhe)). The clinic is one of the largest Ryan White funded clinics in the southeast United States and serves over 5600 mostly uninsured, underserved, patients in an urban

setting. A mixed-methods approach was utilized that included quantitative surveys and qualitative interviews of staff, patients, providers, administrators and community-based organizations that could provide support for trauma survivors. Staff, providers, and patients were provided with a TIC assessment online surveys and also invited to participate in in-depth interviews. Administrators and community-based organizations were invited to participate in interviews alone. A purposive sample of the over 180 employees and patients were included. Data was collected between March 2017 and March 2018. The aims of the parent study were as follows:

Aim 1: To conduct a comprehensive, multi-level TIC needs assessment examining barriers and strategies to the adoption of TIC at the HIV Clinic.

Aim 2: To analyze the needs assessment results and utilize the findings to inform the development of specific strategies to adopt TIC at the Clinic in conjunction with local TIC experts.

Aim 3: To disseminate needs assessment findings and resultant TIC strategies to multi-level Center stakeholders and local CBOs that provide support for trauma survivors to 1) further tailor and prioritize the selection of TIC strategies to implement at the Center, and 2) to develop an implementation and evaluation plan for future piloting.

Methods of Sub-study:

Overview of Thesis Sub-study

The sub-study for this project included a mixed methods data collection. First, clinic practices were directly observed. This involved viewing the enrollment and initiation of care process, participation during clinic appointments, locating screening tools and assessments, and discussions with individuals involved in both the on-site clinic initiation process and the hospital-clinic enrollment process. Next, the closed- and open-ended survey questions related to trauma screening processes of the parent study needs assessment were analyzed. Lastly, charts were reviewed for documents used by the clinic to screen patients for trauma.

Emory University Internal Review Board and Grady Memorial Hospital Research Oversight Committee approved this research. As part of the research project, the study team received Partnership Against Domestic Violence (PADV) awareness training and Collaborative IRB Training Initiative (CITI Program) training for conducting biomedical research and working with human subjects.

Data Collection

Observation of Intake and Care Initiation Process

A thorough review of the intake process at the clinic was conducted through several observations of the education enrollment center, the department responsible for enrolling and screening new patients. Additional in-depth discussions with the staff responsible for enrollment of patients, including 3 health educators, 2 peer counselors, social workers, and intake coordinators, was done in order to learn what screening steps and tools were utilized to potentially identify present and prior trauma and to learn how the intake process works. Enrollment

documents from the intake process and providers were identified and located. The new patient orientation meeting (which is held monthly) was attended in order to determine the types of resources made available to patients and what they were educated about.

The patient care and initiation process was also reviewed through observation and participation in new patient clinical encounters with providers. Fourteen (14) observations were conducted in the main adult clinic, 6 in the women's clinic, 3 in the pediatric/adolescent clinic, and 5 in subspecialty clinics including palliative care, pulmonology, and liver clinic. Observations of group therapy sessions fostering adherence, engagement, and support, substance abuse counseling, and trauma and substance abuse counseling were also conducted. Additionally, I directly observed the inpatient hospital HIV service and the hospital social work team involved in the care of HIV-positive patients (as they foster linkage to outpatient HIV care from the inpatient setting). These observations involved participation in components of patient care and working with over 20 providers who helped provide insight into the screening processes. The information gathered was used to determine whether standard screeners were used for trauma, how documentation from the enrollment center was incorporated into patient care, and how trauma-related referrals were made in the various center clinics. This was further supplemented by in-depth discussions with staff and providers at the clinic, including several who were involved in clinic oversight, enrollment, and retention, about the screening process and the documentation used during intake to make referrals.

In addition to exploring the intake process that occurred directly at the clinic, the direct hospital-to-clinic intake process was reviewed through discussion with the hospital social workers responsible for enrolling identified HIV-infected inpatients directly to clinic. The exploration of the intake process was done to better understand the process for identifying trauma in patients during the screening phase and the process for linking them to appropriate resources in the clinic.

Needs Assessment

Eligibility Criteria

Participant eligibility criteria included being 18 years old and having the capacity to provide consent. The HIV clinic provides care to a diverse group of over 5600 adult, adolescent, and children patients living in Atlanta. Patients are nearly 75% male, over a quarter female, and <1% transgender. The majority of patients are African American, followed by White, and Hispanic. There are over 180 staff, providers, and administrators in the clinic who work in various on-site clinics including adult, pediatrics, women's, mental health, education, pastoral, dental, treatment and holding, and various sub-specialty services. All clinic administrators, providers, staff, and people affiliated with trauma-support community based organizations (CBOs) were eligible to participate in the study.

Sampling, *Recruitment and Enrollment*

Patients were identified and recruited in the parent study to participate in surveys and interviews as part of the needs-assessment. Patients in the study were

purposively recruited to reflect the diversity of clinic participants. They were categorized as engaged (having received greater than 2 HIV clinic services in the past year) and inadequately engaged (having received less than 2 HIV clinic services in the past year) and sampled from the various on-site clinics (women, men, young adults). A purposive sampling method was employed for providers and staff as well to sample staff and providers from the different clinics and different clinic duties and titles. Recruitment utilized emails, fliers, and stakeholder sensitization meetings. Potential participants demonstrating interest, were contacted and assessed for eligibility, initially by phone and second, at the time of survey.

Data Collection Procedures

Patient participants were asked to complete the TIC self-assessment surveys on-site, either on iPads or on paper, and research assistants were available to assist with all components of entering or reading the survey. They were compensated $25 for their participation in the surveys. The surveys utilized predominantly closed-ended questions, but also had several open-ended questions to gain a more in-depth understanding. Open-ended questions asked of patients included, *"What if anything would you like to add about your experiences with being asked by staff about your personal history of trauma?" "What (if anything) would you like to add about your experiences with been with offered support services and trauma-specific interventions at the HIV Clinic?"* Questions asked of providers and staff related to screening included, *"What (if anything) would you like to add about how patients are asked about personal histories of trauma by Center staff?" "What (if anything) would you like*

to add about how patients are offered support services and trauma-specific interventions at the Center? What works well? What does not?" and *"Are staff prepared to screen, assess, and provide or refer patients for treatment of trauma? What would make it easier?"*

The surveys consisted of nearly 150 questions pertaining to physical environment, open and respectful communication, screening assessment and treatment services, offering services and trauma-specific intervention, and engagement and involvement. The participants were able to rate each survey item "strongly disagree", "disagree", "agree", "strongly agree", "do not know", "prefer not to answer", and "N/A". Questions pertaining to screening assessment and treatment services, utilized for this sub-study, are presented in Tables 1 and 2.

Data Management and Analysis

Survey gizmo was utilized for online self-assessment survey administration. Questions that were categorized as related to the screening process at the clinic, 78-108, were analyzed and summarized using an average Likert score organized by participant type, patients (n=63), providers (n=14), and staff (n=17). On a scale of 0-3 (strongly disagree to strongly agree), mean item scores <2 indicated consensus on the absence of a particular service, while mean item scores >=2.0 indicated strong consensus about the availability of a particular service.

Chart Review for Screening Documents

An in-depth review of the charts of 69 study patients who participated in the surveys, in-depth interviews (conducted as part of the parent study only), or both was conducted in order to assess how trauma-specific and trauma-related screening and service referral during the intake process was integrated into initiation of HIV care in the clinic. Charts were specifically reviewed for a screening document, called "Atlanta EMA Case Management, Substance Abuse and Mental Health Screen" that social workers and education department staff at the clinic and hospital use to enroll new or re-enrolling patients (Appendix). Access to view the scanned document was obtained through the online chart system under a tab called "Screening Tools and Assessments." The screening tool questionnaire asks patients 22 questions where a "Y/N" circled bubble is completed by the individual asking intake questions on housing stability, HIV management, difficulty with medication and appointment adherence, social support needs, housing needs, sexual activity, syringe use, alcohol use, attempts to cutback on alcohol or drugs, psychiatric and depression symptoms, and suicidal and homicidal ideation. Responses are tallied to indicate a certain number of total circled responses into 5 sections based on the order of questions. On a summary sheet, each section that receives a certain number of responses may trigger a Case Management, Substance Abuse, Mental Health, or Legal Assessment referral. For the first set of questions, a score of 2 or higher would indicate a case management assessment. For the next question, a score of 1 or higher would trigger a referral to legal assessment and for the next question a score of 1 would again indicate case management assessment. For the next set of questions a case management assessment and a substance abuse assessment could

be triggered with a score or 2 or higher and for the last group of questions, a score of 1 or higher could trigger a case management and mental health assessment. The section following the summary sheet allows room for the staff to indicate whether and to whom a referral was made (Image 1).

Recognizing that the potential downstream effects of trauma (i.e. poor mental health, substance abuse, legal and housing challenges) could require referral to case management, substance abuse, mental health, and legal services, charts of the 69 patients were reviewed to determine the number of patients who qualified for each of these services based on their responses and whether a documented referral was made. Hand written notes on the form and intake checklist were also looked at for any additional information about screening and referrals. Additionally, a separate part of the online chart system titled "Consult Referral" was reviewed to determine if any additional referrals related to mental health, substance abuse, case management or other needs related to the sequelae of trauma were made.

Results

Below is a summary of results of the: 1) observations of the intake and care initiation process, 2) needs assessment, and 3) chart reviews relative to this sub-study on integration of trauma screening and referral and HIV care initiation.

Observation of Intake and Care Initiation Process

The Clinic Intake Process

The HIV treatment center has a structured intake process for new and re-enrolling patients. The education department is where the initial intake occurs and was observed. There, patients are met by a reception area and are directed to an open waiting room. From there, the patients meet with a financial advisor in private to enrol in Ryan White and AIDS Drug Assistance Program (ADAP) to receive appointment and medication assistance funding. Patients are informed about the appropriate documentation they need to qualify and remain in these programs, and are assisted with steps needed to acquire these documents. They then proceed to intake nurses where they may receive initial medical symptom screening, a tuberculin skin test, and lab work.

Next, patients meet with a health educator, who is often trained as a social worker or peer counsellor. The health educator provides basic information about the virus and answers patient questions regarding the typical experience at the clinic. Specifically, he/she provides information about the workings of the clinic and information about educational and support group meetings. The educator also completes an intake form, which screens for histories of substance use, mental health illness, and resource limitations (i.e. housing, transportation), that may serve as barriers to their HIV care, determines whether referrals to mental health services, case management, substance abuse, and on or off site social services are necessary, and provides space for documenting which referrals were made. Importantly, the form does not directly screen for any form of trauma nor refer to trauma-specific services; it only assesses potential downstream or concurrent

effects of trauma (i.e. mental health, substance abuse, sexual risk) and allows for related referrals.

Upon completion, the form is uploaded into the patient chart. The health educator will also schedule the patient for their first appointment with a medical provider, which may occur in a few days or weeks depending on the circumstances. Peer educators in the clinic provide guidance, support, and advice to those patients in the waiting rooms. Many are patients themselves and will serve as liaisons or "tour guides" through the process. There is no direct screening process that occurs during enrolment of new patients that directly addresses trauma.

One opportunity for patients to learn about services at the clinic is a monthly new patient orientation meeting that is hosted by the education department. At the meeting, representatives from the various services provided at the clinic are invited to speak and a meal is provided to listening participants. The agenda may vary slightly by month, but generally includes information provided about and by various clinic and some off-site services, including; wellness, insurance, ADAP, the pediatric clinic, dental services, chaplain services, the clinic research team, a drug pharmaceutical representative, nursing, peer counselling, HIV testing for partners, care coordinators, and time for questions. While trauma or services related to trauma are not directly addressed through the agenda or during these meetings, personal stories of peer counsellors and returning patients at the meeting may provide insight into the types of struggles many individuals living with HIV face.

Hospital Intake Process

Patients who are identified as HIV-positive at the hospital site go through a similar intake process, but bypass a number of the steps. There is a team of social workers at the hospital that specifically work with patients who are HIV-positive in the various hospital departments. One social worker in the team is assigned to work specifically with newly-identified cases of HIV and patients who are eligible to enrol at the Ryan White funded clinic, independent of whether or not they are new to the clinic or new to the diagnosis. The social worker completes the same intake form that the health educators at the clinic complete and uploads it to the chart system. The hospital social work team helps identify documents needed for enrolment at the clinic and into the Ryan White program, including ID and proof of income. They work directly with the HIV treatment clinic to bypass the other steps and directly schedule the patient for an initial appointment with a provider.

Initial New Patient Appointment

Once a patient is scheduled for an appointment the next step is to meet their medical care provider (i.e. physician, nurse practitioner), for a new patient encounter. At this appointment, which is scheduled for a longer time then general appointments, the provider will gauge the patient's understanding of the diagnosis and review their health history (i.e. medical conditions, hospitalizations, substance use history, sexual history, concerning symptoms) and needs. A thorough physical exam, appropriate medical screening, and discussion of medications and next steps in care management usually occurs. Typical screening questions will ask about symptoms related to opportunistic infections that are common to HIV (i.e. difficulty

swallowing, lymph node enlargement, respiratory symptoms, fevers, rashes) and other sexually transmitted infections. These appointments are generally busy with a number of agenda items to be accomplished, the content is patient and provider dependant, and varies greatly depending on patient needs.

Prior to meeting the patient for the initial medical encounter, the medical care provider will receive a patient file on their door with basic information including vitals and potentially needed vaccines. For charts of new patients who were enrolled in the education department, there will frequently be a slip at the front of the chart labelled “Patient Intake Checklist” which documents that appropriate financial counselling, tuberculosis control, and health educator Ryan White forms have been completed. There is also room on the form for notes where the health educator may make a note of the results of screening and suggestions for referrals to resources like mental health services. This sheet does not appear to go into the online medical record, unlike the rest of the information from the clinical encounter.

Outside of the screening that occurred during the intake process, the physician has an additional opportunity to screen the patient for trauma and needed resources based on the discussions that occurred during the appointment. There is no standardized screener for the provider, but the result of the first appointment may conclude with some trauma-related referrals. The referral process is highly variable: some may walk the patient to another part of the clinic for a direct introduction, others will communicate with a case manager or social work for assistance, and many will document this information in their online charting with

plans to refer and follow-up. Referrals may vary and can include on-site mental health services, case management, or other sub-specialties located in the clinic or at the main hospital. Patients are often provided with a referral form that is filled out by a physician on the spot that they can directly take to another part of the clinic to schedule an appointment. These forms are typically not included in the patient's online chart and may not be formally followed up on if the patient does not take the form directly to another part of the clinic.

Trauma Screening

While some providers may screen for trauma based on their conversations with a patient, there is no specific or standardized screening tool that ensures that patients are screened for trauma. A discussion of types of trauma like physical abuse, IPV, sexual abuse, and potential effects of trauma like mental illness and substance abuse may occur during clinical encounters, but varies greatly by provider and patient circumstance. These discussions may occur during initiation, follow-up appointments, after re-enrolment, and may be patient or provider triggered.

During my month in the health clinics, where I was part of both initial and routine care appointments, I found that specific trauma questions were not part of routine initial care screening or standard follow-up care. However, physicians frequently asked about effects of trauma, like substance usage, mental health, and other social barriers. Some trauma history or other potential downstream effects was often noted in patient charts. Trauma topics including, childhood abuse, stigma,

emotional trauma, death of a loved one, and traumatic events, were discussed in a number of appointments. These conversations sometimes stemmed out of discussions of medication and clinic appointment adherence, substance usage, open-ended questions, or were patient-initiated.

On several occasions these discussions resulted in direct referrals to mental health services or case management. Referrals were done in different ways depending on the provider, patient, and the needs. For example, an established patient who had not revealed his HIV status to his wife and children, and was dealing with social and cultural isolation, was provided with a referral slip to bring to the mental health floor himself. When another established patient revealed that he had grown up with a parent in prison and another who was addicted to substances and that it had been a burden on him, the provider called a clinic psychologist and asked if she could come stop by the room to meet the patient and she did. When a third new patient revealed his significant history of substance usage, depression, treatment non-adherence, that he did not have stable housing or food, that he was dealing with the traumatic death of his mother, the provider was rather surprised that screening for these needs had not occurred and that no referrals had been made for the patient prior to the appointment. The encounter involved a bit of confusion, as off-site medical records were searched for and the way to make referrals to address all the needs was uncertain. The appointment involved making a call to the on-site nutrition team, involving the nurse to help with documents, talking to the case manager to locate referral documents, writing referrals to mental health, and physically walking the patient over to case

management for assistance. Physical exam and initiation of ARV medications were deferred and the encounter lasted well over the designated time.

Individuals who are identified as needing case management, either through the health educators screening process or through a discussion with a provider are referred to one of the clinic case managers. Case management screens patients with a more in-depth form that does ask questions directly related to forms of trauma including domestic abuse, partner safety, social barriers, high-risk behaviour, and histories of violence. Key questions/check boxes on the "Medical Case Management Assessment" include: social support needs including being in imminent danger or having no support system, questions about housing stability, transportation, sexual exploitation, domestic violence, histories of incarceration, mental illness, suicide attempts, physical threat, rape, social isolation, and threats against children (Appendix). Additional questions include detailed substance abuse history, legal issues including gang violence, treatment adherence, and review of high-risk sexual practices. The case manager uses the form to refer patients to appropriate resources and assists with provision of needed resources.

Of note, case managers are not assigned to all adult patients, but rather those who are identified through screening and clinic appointments as potentially in need. Therefore, among adult patients, only those who are directly referred to case management, or have specific discussion with providers about trauma are screened for and evaluated for trauma histories and related needs. Patients in the pediatric/adolescent clinic, however, are automatically assigned to a case manager.

Needs Assessment Result for Screening and Initiation

Participant Characteristics

Study patients (n=63) had a mean age of 39.8 (SD 12.2), and 64% were male, 19% female, and 4% transgender. Eighty-one percent (81%) of study patients identified as Black/African American, 8% as White, and 7% as multiracial. The majority of patients (49%) classified their sexual orientation as heterosexual/straight, 44% as gay or lesbian, and 6% as bi-sexual. The patients were sampled from various on-site clinics including Women's Clinic (18%), Main Clinic (51%), Pediatric/Adolescent (21%), Transition Clinic (10%), and other (2%). Participants were classified as well engaged (40%) or inadequately engaged (60%), and whether they had received greater than 2 clinic services (56%) or less than 2 (44%) (Table 3). Staff and providers were classified according to the clinic department in which they provided services the majority of time (Table 4).

Quantitative Survey Responses

For the 31 survey response items, staff (n=17) had an average score of >2.0, indicating high perceived availability of the services. Providers (n=14) had a score of >2.0 on 9/31, a score of $1.4 \leq x \leq 2$ on 17/31, and a score of <1.4 on 5/31 items, indicating a perceived absence in the availability of these services. Patients (n= 63) had a score of >2.0 on 17/31 items, and a score of $1.4 \leq x \leq 2.0$ on 14/31 items (Table 5).

The areas of greatest consensus, where staff, providers, and patients all indicated that the availability of the service was high, included screening for mental

health issues, substance abuse, and physical health issues, the availability of privacy to conduct intake assessments, screening related to history of homelessness, discussions of social supports, and importantly, trauma related to learning of their HIV diagnosis. Participant perceived strengths related to trauma screening and referral included screening for substance abuse, screening in a private setting, and explaining why questions are being asked. Areas of decreased consensus where staff, providers, and patients had the most differences in average scores included discussions surrounding personal strengths, history of combat violence, history of experiencing other community-based violence, history of physical, emotional or sexual abuse and neglect as a child or adolescent or by an intimate partner/spouse.

The survey items that received the lowest score by providers, indicating a lack of availability of the services were titled, "personal strengths," "history of combat violence", "the patient's HIV care provider reviews the results of the initial intake with the patients", "before leaving the program, staff work with patients to develop a plan to address potential safety issues," and "before leaving the program, staff work with patients to develop a plan to address future service needs related to trauma." The major center screening gaps, based on averaged participant scores included asking about previous head trauma, histories of combat violence, and screening for histories of community violence and reaching childhood milestones.

Qualitative Survey Data

Open-ended questions in the surveys provided further insight into the trauma experiences of patients and screening related to trauma. In response to the

question, *"What if anything would you like to add about your experiences with being asked by staff about your personal history of trauma?"* a 24 year-old male from the Pediatric/Adolescent Clinic stated, *"They ask good questions; I feel like they want to help me and they know what I've been through."* A 40 year-old male from the Main Clinic responded, *"Great at listening, and actually create a plan."* A 50 year-old male from Main Clinic said, *"This place saved my life, I don't complain. They treat me good."* A 25 year-old male from the Pediatric/Adolescent Clinic said, *"Nothing to add, they were really compassionate, helpful, and very nice and sympathetic."* A 39 year-old male from Main Clinic wrote, *"It's refreshing that they inquire about trauma. I am thankful."*

Other patient comments provided additional insight into potential areas of need. In response to the same question, a 33 year-old male from Main Clinic wrote, *"they were pretty straightforward, but late on the timeframe."* A 47 year-old male from Main Clinic said, *"I would like them to ask, no one has ever asked."* A 48 year-old male from Main Clinic said, *"They could show more compassion in situations you can't control, be more understanding."* A 54 year-old female from Women's Clinic said, *"more HIV classes and resources for patients."* A 56 year-old male from Main Clinic stated, *"It needs to be more direct, there should be an orientation on what trauma is, and what falls under the definition of trauma. Educating the patient on what trauma is, more proactive in telling patients about the existence if trauma, and have a productive conversation around it."* And a 31 year-old male from Main Clinic stated, *"They should have a plan or something to refer back to things that could trigger you.*

How to make me more comfortable if you were in that situation, they should have some kind of reference to go back to."

In response to the question, *"What (if anything) would you like to add about how patients are asked about personal histories of trauma by Center staff?"* staff responses included, *"I believe that there are discrepancies on how this information is sought/handled within each clinic. Pediatrics is much more in tune with trauma-informed care and performs a more thorough assessment of trauma/violence from a child protection perspective, but adult providers are not likely to specifically screen for these issues unless particularly triggered to do so."* And, *"It should be done by the Mental Health Center if there is a need. Intake staff may not have been trained in this area. An immediate referral can be completed if the patient has a need."* Responses of providers included, *"It varies, it seems to occur with intake and during mental health appointments, but usually not at other times." "It needs to be done with every patient, respectfully. I think it is rarely done at all,"* and *"This is very variable depending on providers."*

In response to the question, *"What works well? What does not? Are staff prepared to screen, assess, and provide or refer patients for treatment of trauma? What would make it easier?"* a provider wrote, *"I am not certain if patients are screened for trauma upon initial enrollment in the Center. Screening questions targeted towards trauma might be useful if not already implemented."* Responses of other providers included, *"Provider's rarely have time, at least not on the first visit. Perhaps every new pt. could have a trauma assessment performed by a trained clinician from MH," "We aren't well prepared as a whole. We are definitely caring and*

willing to learn how to do better," and a staff member stated, *"We do have wonderful psychological and psychiatric services available to assess safety and triggers if needed. It would be nice if more people knew how to recognize that a patient may need those services in the moment."* Another clinician wrote, *"As a provider, I have not seen a lot of the intake screening information on the patients who are assigned to me and what services they have already been referred for. It would be useful to have a location for this information so it can be referenced more clearly defined in the chart so that goals and strategies if a patient feels threatened are clearly available to all providers who may take care of the patient, such as those who may see them for an urgent walk-in but are not the usual primary providers.*"

Chart Review for Screening Documents

The charts of patient participants were located through the online medical record system using the patient's birthdate and name. Of a total of 71 participants that were searched for using this method, charts were located for 69 of the patients. Upon chart review, 58/69 patient charts had at least one intake EMA form and 17 had more than one EMA form that had been done on different occasions, with a maximum of 4 forms that had been inputted for two of the patients. Forms that pre-dated 2014, which were found in patients who had more than one form, consisted of fewer categories, but still allowed for referrals to case management and other services. There was 1 partially filled out and 1 blank form in the system. The majority of forms indicated the date, location, and individual responsible for inputting the data. Of the 37 forms that listed a location, 9 were entered by the

hospital social worker and 28 were performed by a health educator or social worker at the HIV treatment clinic.

Question responses were tabulated based on the 5 pre-determined sections. For the first set of questions, 16/58 (or 27.6%) patients with completed forms qualified for case management based on a score of 2 or higher. Nine (9/58 or 15.5%) qualified for legal assessment based on responses to the next question. For the third question group, 18/58 (or 31%) qualified for case management based on a score of 1 or higher. In the next set, 6/58 (or 10.3%) qualified for case management and substance abuse based on a score of 2 or higher. In the last grouping of questions, 19 of the 58 (or 32.8%) forms qualified for case management and mental health services.

There were a total of 26/58 (or 44.8%) unique patients that qualified for case management, where systematic trauma screening occurs. Of the 26 patients, 16 (or 61.5%) were directly referred to a resource that was specified in the form. For 9/26 (or 34.6%), it was not indicated that a referral had been made. One of the twenty-six (1/26 or 3.8%) patients declined referral. Two patients were referred to case management even though a need was not specifically indicated by the form (Table 6). Out of the total number of patients searched for (n=69), 18/69 (or 26%) received referrals to case management, 3/69 (or 4.3%) received referrals to substance abuse, 13/69 (or 18.8%) to mental health services, and 2/69 (or 2.9%) received referrals to legal assessment.

The second part of the form indicated “Y/N” if a referral was actually made and a blank space allowed the interviewer to write-in to where a referral was made

and which date it occurred. In addition to case management referrals, the reviewed forms included documented referrals to the mental health clinic, organizations and resources in the surrounding city for needs like housing, legal aid, and substance abuse support groups. Many of the community-based resources have a physical representation at the clinic to help link patients to the external services. This section was predominantly not filled out if a referral was not indicated. It was typically filled out when a referral was indicated to note that a referral had been made and to what service. Sometimes the form was left blank even when a referral was indicated, meaning that no documented referral was written. It was filled out for 22 of the forms and not filled out for any of the forms that had been completed at the hospital.

There were additional areas for staff to write notes on the documents used for intake. There were 8 notes written in the forms or on the checklist that were uploaded with the form that had notes pertaining to referrals. As an example, "Referred the patient to the mental health clinic for mental health and substance abuse counseling", "Patient has an appointment with case management and the housing program, still need to connect with mental health," and "Patient enrolled at the hospital, did not show up at previous new patient appointments."

In an additional part of the chart, under a tab where separate referral sheets could be uploaded, an additional 20 referrals related to trauma and/or other potential sequelae of trauma were located. These referral forms were not directly related to the intake assessments, however the date the forms uploaded was often close to the date of intake. The majority were referred by primary care providers at the clinic and the documentation provided insight into some of the referrals made as

a result of patient encounters. The notes included location and indication, for example in a note written from education to the department to mental health, it said, “Patient states he has depression issue, needs appointment”, in another written to mental health from Main Clinic stated, “Patient with AIDS, multiple life stressors, struggling with substance abuse, clean for several weeks on her own, please assist with counseling and resources”, another note from clinic to mental health stated, “substance abuse, heroin, anxiety, insomnia.” and another referral from Main Clinic to mental health stated, “patient has history of depression, 3 year-old daughter was recently molested by a family member.” There were other referrals written to other resources and to outside sites. For example, a referral from clinic to an outside resource stated, “Patient is homeless, needs assistance with housing.”

Discussion

The direct clinic and hospital-to clinic intake process observation, multi-tiered needs assessment analysis of the screening process, and chart review of the enrollment and referral documents revealed that there was no formal or systematic screening process for trauma at the HIV treatment center that occurs at care initiation.

The clinic enrollment process demonstrated that an established procedure was in place to introduce patients to the clinic. While screening occurred during this phase for potential effects of trauma, there was no established screen or referrals made specifically for trauma. When patients met providers in clinic, screening and referrals for social needs and potential effects of trauma were situational. Trauma

had the potential of being discussed, but was not part of routine practice. Both of these areas are potential areas for integration of trauma-informed screening and referral into practice. By screening patients during enrollment, perhaps through additional questions in the intake form, there may be an opportunity to better recognize the need for trauma related interventions. While there is a standard screening process in place, those who conduct the initial intake assessments may not have the training or qualifications to do the screening. Clinicians may or may not have the appropriate training, but importantly are also limited by time and have other key care responsibilities during patient clinical encounters. Integrating trauma-informed screening requires recognition of these needs, trauma-informed care training, and an organized trauma-informed referral process in order to be able to implement these strategies and address the needs that come up during that screening.

One challenge made apparent through the observation of the enrollment and clinic process was that referrals are made in many different ways. When a need was recognized, providers would fill out a referral form, make a phone call, or walk a patient to make a direct introduction. Given the variety of referral options, documentation of these referrals also varied. While many may note the referrals that they made in the online chart system, others mentioned that they would not necessarily write down all referrals and a paper record of all ones made may not be uploaded or available in the online chart system. Having a more standardized referral documentation process might help with tracking these needs.

Only those who had a direct referral to case management had a standard trauma screening. The chart review revealed that of a sample of patients, the majority did not receive direct referrals to case management. The implications of this result are that a good number of people do not receive standardized trauma screening. Given the demonstrated long-term sequelae on HIV health outcomes, a standard screen for trauma in every HIV-positive patient would be ideal. Clinic resources including time, support staff, and funding are factors that limit the number of case managers and/or number of patients who are able to receive direct trauma screening through this process. Of note, chart assessment documents were not easy to locate, which might provide a barrier to integration of screening documents into care appointments. Intake documents were not readily available to providers during clinic encounters. With further adaptation of trauma screening, ensuring that the overall screening and referral process is incorporated into the data provided in these appointments would be ideal and assist providers with integration of trauma-informed care.

Quantitative results from the needs assessment screening questions revealed some variations in the perceived availability of services provided by the HIV treatment center. Staff responses suggested that they felt most trauma screening and referral procedures were adequate. Providers ranked several of the services <1.4, indicating low perceived practice. Given different roles and responsibilities of those in clinic, staff and provider perceptions may be based on services they directly provide or based on services they perceive others provide. Most staff are onsite at the Center fulltime, whereas many providers only have one-day clinics at the center,

suggesting staff may have a better understanding of clinic proceedings. Additionally, response bias may be present, as staff may feel pressured to respond in a certain way while answering questions at and/or about work. The process of screening and discrepancy in responses indicate that there are areas where improvements can be made, including making all employees aware of what is available and what occurs during screening and by each department. The average responses of staff, providers, and patients, indicate that there is need for improvement in the screening process.

Additional open-ended questions provided further insight into clinic resources and the trauma screening process. Staff/providers recognized a need for trauma-specific screening and referral. A number mentioned that time, resource constraints, training, and the online charting system, hindered their ability to provide these services. Survey responses indicated that there would be support for the incorporation of a routine trauma screen and to improve the flow of the screening and referral process. These responses were supported by observations in clinic. Providers indicated that there was unfamiliarity with the intake process, that the screening documents were not incorporated into clinic appointments, and that trauma screening would be helpful for the care of patients. Patient responses highlighted the quality of care provided by clinic. Their responses pointed to potential gaps in trauma screening and an interest in further integrating trauma-informed practices into care. Several mentioned that they would appreciate additional screening, education, and resources about trauma and dealing with the sequelae as part of their care in the clinic.

Strengths and Limitations

The multi-tiered mixed methods parent-study needs assessment and sub-study allowed for integration of various forms of data. Needs assessment qualitative and quantitative results were further supported by clinic observations, in-person discussions, and a through chart-review. The variety of methods allowed for greater supporting evidence for the need to incorporate trauma-informed screening and referral into HIV care initiation. Additionally, the purposive sampling method of patients, providers, and staff allowed for a broad representation of clinic employees and patients over the age of 18. Study team leaders and research assistants were familiar with the procedures and practices of the clinic, which allowed for a thoughtful and directed study design and implementation over a yearlong period.

Some of the challenges of the study included accounting for the variability in procedures in different offices and clinics. Documentation, including what was needed for the chart review was difficult to find and required additional approved access. The process of locating screening documents might point to system-wide challenges, and/or the data located may not be a complete representation of the screening process that was done. Additionally, the chart review process did not account for phone calls or other forms of communication that were not documented in the chart. For example, none of the hospital-to-clinic charts had documented referrals. The forms uploaded in the system may represent a gap in communication between hospital and staff and/or not represent all of the communication and calls that do occur between the hospital and clinic teams.

During clinic observations, the clear variability in referral, screening knowledge, and processes for documenting referrals, might also point to a gap in the ability to capture the complete screening process that does occur in the clinic. Social desirability bias may be present, as staff/providers may have had the tendency to behave more favorably (i.e. conducting trauma screening), knowing that they were being observed. While discussions did incorporate case management, further research into the practices that occur in case management, where the screening forms with the trauma screening questions are filed, and how the responses to the questions are used, is warranted.

Recommendations

In order to appropriately identify trauma and the potential sequelae that affect individuals with HIV, a targeted, standardized screening process for the various forms of trauma would be helpful. This study revealed potential areas for integration of trauma-informed screening and trauma-informed referral into the HIV care setting, specifically in the care enrollment and initiation stages. Clinic employee and patient data demonstrated that there is both need and support for the integration of these services.

Recommendations for an ideal screening process for trauma in the HIV care setting have been proposed by Brezing: Once trauma is identified in a patient, providers should screen them for symptoms related to trauma and its sequelae like PTSD including avoidance, numbness, flashbacks, and dissociative symptoms. Next, referrals to the appropriate resources would ideally be incorporated as part of

treatment. Patients should also be screened for trauma related risk factors and comorbidities that increase individual risk for poor ARV compliance and poor medical outcomes. High-risk sexual behaviors, unstable housing, and unsafe IV drug usage are examples of "mediators" of HIV and trauma co-occurrence that providers could also address (Brezing, 2015).

As part of screening and recognition of trauma, patients should be informed about the association between trauma and HIV and be made aware of the potential impact of a history of trauma on medication compliance, medical outcomes, and HIV associated morbidity and mortality. Providing patients with information about how some of their current behaviors and activities may have been influenced by their trauma experiences is key for patients with HIV, whose medical outcomes rely on treatment compliance (Brezing, 2015). Providers should work to identify resources available to patients to help address these needs, including mental health services, social support, family resources, housing, and food.

In those who screen negative for trauma, those involved in providing medical care should continue to educate their patients about the potential ongoing risk of trauma in HIV-positive patients, especially given the overlapping risk factors. A strategy would include reviewing behaviors that put individuals at higher risk for trauma and violence and mitigation of these risk factors should be part of the treatment plan (Brezing, 2015). As the risk of trauma is still present, a negative screen does not mean that trauma will not occur in clinic patients in the future, or that an individual choose to disclose to the provider when asked, as individuals may not feel comfortable or ready to discuss their trauma histories. HIV negative

patients who have been identified as never having experienced trauma and violence should also be educated by their primary care physicians about the increased risk for further violence and the acquisition of HIV and on safer practices that help decrease these risks (Brezing, 2015).

Integration of trauma-informed screening and referral into the HIV care setting could be attempted through several approaches at this site and others; 1) training employees in trauma-informed care practices would be helpful to allow for greater recognition of the negative effects of trauma on HIV outcomes and of patients with trauma needs; 2) trauma-informed questions could be incorporated into the initial health screen and enrollment process so that all patients are screened; 3) a more standardized screening and referral process could be implemented to ensure trauma-informed questions are asked and appropriately dealt with; and 4) patients can be provided with more trauma-informed educational activities and resources, which could be incorporated into the once monthly new patient orientation or peer-lead discussions.

Conclusion

This study demonstrates a gap in standardized trauma-specific screening and referral to trauma-specific support services at HIV care initiation. Providing the clinic with resources and training to better integrate trauma-informed practices into care has the capacity to improve HIV care outcomes. Future efforts should focus on integrating trauma-specific screening and referrals into the HIV care enrollment process and incorporating additional trauma-informed practices, so that this

important barrier to retention in care and adherence to antiretroviral therapy can be addressed early on.

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Tables and Figures

Table 1. Patient Survey Screening Questions

The next set of questions asks about the time period in which you first entered into care at the Clinic.
14*. Soon after I entered care at the Clinic, at least one staff member asked me about the following:*
Screening, Assessment and Treatment Services
78. My personal strengths.
79. My cultural background.
80. Social supports in my family and community.
81. My current level of danger from other people (e.g. restraining orders, history of domestic violence, abuse, threats from others).
82. My history of physical, emotional, or sexual abuse and neglect as a child or adolescent (age ≤ 18 years).
83. My history of physical, emotional, or sexual abuse and neglect by an intimate partner/spouse.
84. My history of combat violence.
85. My history of experiencing other community-based violence.
86. My history of loss.
87. My history of homelessness.
88. Trauma related to learning about my HIV diagnosis.
89. My previous head injuries.
90. Quality of relationship with my child or children (i.e. caregiver/child attachment).
91. My child's/children's achievement of developmental tasks (i.e. speech and motor skills).
92. My history of mental health issues.
93. My history of substance abuse.
94. My history of physical health issues.
15. In question 14, we asked you about questions the staff asked of you soon after you entered into care at the Clinic. Thinking about that time, read the following statements and select how much you agree or disagree with each.
Screening, Assessment and Treatment Services
95.These questions were asked of me in a private, confidential space.
96. The Center informed me about why these questions were being asked.
97. The Center informed me about what would be shared with others and why.

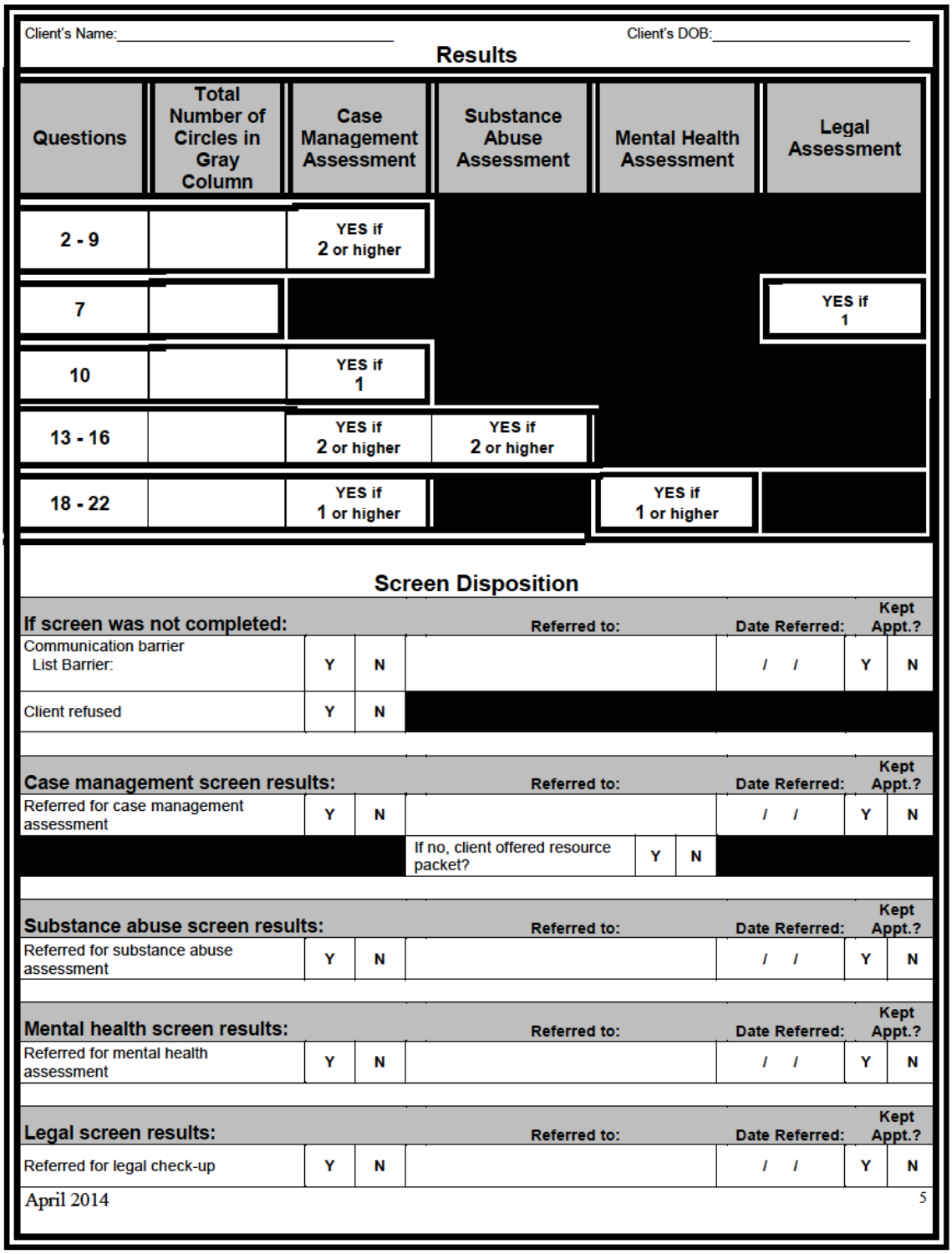
98. Throughout the initial assessment process, the Center staff observed how I was doing and responded appropriately (i.e. allowed me to take breaks).
99. The provided me a translator/interpreter for the assessment process.
100. The results of these initial screening questions were shared with my assigned HIV care provider.
101. My HIV care provider reviewed the results of the initial intake questions with me.
16. In question 14, we asked you about questions the staff asked of you soon after you entered into care at the Clinic. Thinking about any follow-up that occurred afterwards, read the following statements and select how much you agree or disagree with each.
Screening, Assessment and Treatment Services
Intake Assessment Follow-up
102. Based on my responses to these questions, I was referred for specific services that I needed.
103. A member of the Center staff asks me about trauma (i.e. violence, loss, homelessness) that I may be experiencing at least once each year.
104. Staff ask me for my consent whenever it is necessary to speak to a new provider about me.
17. In question 14, we asked you about questions the staff asked of you soon after you entered into care at the Clinic. Thinking about that time and the Clinic's assistance with developing goals and plans, read the following statements and select how much you agree or disagree with each.
Screening, Assessment and Treatment Services
Developing Goals and Plans
105. Staff worked with me in setting my goals.
106. My goals are reviewed with me and updated regularly.
107. Before I leave the clinic, the staff and I make a plan to address potential safety issues.
108. Before I leave the clinic, the staff and I make a plan to address my future service needs related to trauma.

Table 2. Staff/Provider Survey Screening Questions

Screening, Assessment and Treatment Services
Soon after a patient enters care at the Clinic, a member of the Clinic staff asks him/her about the following:
78. Personal strengths.
79. Cultural background.
80. Social supports in the family and the community
81. Current level of danger from other people (e.g. restraining orders, history of domestic violence, threats from others).
82. History of physical, emotional, or sexual abuse and neglect as a child or adolescent
83. History of physical, emotional, or sexual abuse and neglect by an intimate partner/spouse
84. History of combat violence
85. History of experiencing other community-based violence
86. History of loss
87. History of homelessness
88. Trauma related to learning their HIV diagnosis
89. Previous head injury.
90. Quality of relationship with child or children (i.e. caregiver/child attachment)
91. Children's achievement of developmental tasks.
92. History of mental health issues.
93. History of substance abuse
94. History of physical health issues.
The intake Assessment Process
95. There are private, confidential spaces available to conduct intake assessments.
96. The Center informs patients about why these questions are being asked.
97. The Center informs patients about what will be shared with others and why.
98. Throughout the initial assessment process, the Center staff observes patients on how they are doing and responds appropriately (e.g., takes breaks).
99. The Center provides a translator for the assessment process if needed.
100. The intake results are shared with the patient's assigned HIV care provider
101. The patient's HIV care provider reviews the results of the initial intake with the patient.

Intake Assessment Follow-up
102. Based on the intake assessment, patients are referred for specific services as necessary.
103. Re-assessments about trauma (i.e. violence, loss, homelessness) are done at least annually.
104. The Center seeks patient consent whenever it is necessary to speak with a new provider.
Developing Goals and Plans
105. Staff collaborates with patients in setting their goals.
106. Patient goals are reviewed and updated regularly.
107. Before leaving the program, staff work with patients to develop a plan to address potential safety issues
108. Before leaving the program, staff work with patients to develop a plan to address future service needs related to trauma.

ImageWord did not find any entries for your table of contents. **1. EMA Screening Summary Page**



Client's Name:_____ Client's DOB:_____

Results

Questions	Total Number of Circles in Gray Column	Case Management Assessment	Substance Abuse Assessment	Mental Health Assessment	Legal Assessment
2 - 9		YES if 2 or higher			
7					YES if 1
10		YES if 1			
13 - 16		YES if 2 or higher	YES if 2 or higher		
18 - 22		YES if 1 or higher		YES if 1 or higher	

Screen Disposition

If screen was not completed:			Referred to:	Date Referred:	Kept Appt.?	
Communication barrier List Barrier:	Y	N		/ /	Y	N
Client refused	Y	N				

Case management screen results:			Referred to:	Date Referred:	Kept Appt.?	
Referred for case management assessment	Y	N		/ /	Y	N
			If no, client offered resource packet?	Y	N	

Substance abuse screen results:			Referred to:	Date Referred:	Kept Appt.?	
Referred for substance abuse assessment	Y	N		/ /	Y	N

Mental health screen results:			Referred to:	Date Referred:	Kept Appt.?	
Referred for mental health assessment	Y	N		/ /	Y	N

Legal screen results:			Referred to:	Date Referred:	Kept Appt.?	
Referred for legal check-up	Y	N		/ /	Y	N

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Table 3. Patient Characteristics

N=63	Mean (SD)/N (%)
Age (SD)	39.8(12.2)
Gender (%)	
Female	19(30.2)
Male	40(63.5)
Transgender Female	4(6.3)
Race (%)	
Black/African American	51(81.0)
White	5(7.9)
Multiracial	7(11.1)
Sexual orientation (%)	
Heterosexual/straight	31(49.2)
Gay or Lesbian	28(44.4)
Bi-sexual	4(6.3)
Clinic (%)	
Women's Clinic	11(17.5)
Main Clinic	32(50.8)
Pediatric/Adolescent Clinic	13(20.6)
Transition Clinic	6(9.5)
Other	1(1.6)
Engagement	
Well-engaged	25(39.7)
Inadequately-engaged	38(60.3)
Service Duration	
>=2 HTC Services	35(55.6)
<2 HTC Services	28(44.4)

Table 4. Provider and staff study participants by department

N=31	N (%)
Clinic	
Main clinic	9(29.0)
Family Clinic	5(16.1)
Pediatric/Adolescent Clinic	6(19.4)
Transition center	1(3.2)
Mental health center	4(12.9)
Patient care advocate	1(3.2)
Colposcopy/endoscopy	1(3.2)
Social services	1(3.2)
Other	3(9.7)
Staff	17(54.8)
Provider	14(45.2)

Table 5. Screening, Assessment and Treatment Services

Questions	**Patients**	**Providers**	**Staff**	**Combined**
	(n=63)	**(n=14)**	**(n=17)**	**(n=94)**
	Average Likert Score	**Average Likert Score**	**Average Likert Score**	**Average Likert Score**
78. Personal strengths.	2	1.3	2.1	1.9
79. Cultural background.	1.9	1.7	2.4	1.9
80. Social supports in the family and the community	2.2	2.1	2.4	2.2
81. Current level of danger from other people (e.g. restraining orders, history of domestic violence, threats from others).	1.9	2.2	2.3	2
82. History of physical, emotional, or sexual abuse and neglect as a child or adolescent	2	2	2.2	2
83. History of physical, emotional, or sexual abuse and neglect by an intimate partner/spouse	2	1.9	2.2	2
84. History of combat violence	1.7	1.1	2.3	**1.7**
85. History of experiencing other community-based violence	1.8	1.6	2.3	1.8
86. History of loss	1.9	1.5	2.3	1.9
87. History of homelessness	2.1	2.2	2.4	2.1
88. Trauma related to learning their HIV diagnosis	2.2	2.2	2.4	2.2
89. Previous head injury.	1.6	1.8	2.2	**1.7**
90. Quality of relationship with child or children (i.e. caregiver/child attachment)	1.8	1.5	2.4	1.8
91. Children's achievement of developmental tasks.	1.7	1.8	2.1	**1.8**
92. History of mental health issues.	2.2	2.4	2.5	2.3
93. History of substance abuse	2.3	2.4	2.5	**2.3**
94. History of physical health issues.	2.3	2.3	2.5	2.3

95. There are private, confidential spaces available to conduct intake assessments.	2.4	2.1	2.6	**2.4**
96. The Center informs patients about why these questions are being asked.	2.4	1.9	2.6	**2.3**
97. The Center informs patients about what will be shared with others and why.	2	1.7	2.5	2
98. Throughout the initial assessment process, the Center staff observes patients on how they are doing and responds appropriately (e.g., takes breaks).	2.3	2	2.4	2.3
99. The Center provides a translator for the assessment process if needed.	1.9	2.3	2.5	2
100. The intake results are shared with the patient's assigned HIV care provider	2.3	1.6	2.4	2.2
101. The patient's HIV care provider reviews the results of the initial intake with the patient.	2.2	1.2	2.5	2.1
102. Based on the intake assessment, patients are referred for specific services as necessary.	2.4	1.8	2.5	2.3
103. Re-assessments about trauma (i.e. violence, loss, homelessness) are done at least annually.	2.2	1.4	2.6	2.1
104. The Center seeks patient consent whenever it is necessary to speak with a new provider.	2.4	1.4	2.3	2.2
105. Staff collaborates with patients in setting their goals.	2.2	1.9	2.6	2.2
106. Patient goals are reviewed and updated regularly.	2.1	1.7	2.5	2.1
107. Before leaving the program, staff work with patients to	2	1.3	2.4	2

develop a plan to address potential safety issues				
108. Before leaving the program, staff work with patients to develop a plan to address future service needs related to trauma.	2.2	0.2	2.2	1.9

Table 6. Summary of EMA form responses and referrals made

Patients	**(n=69)**
Intake Form Found	58/69
>1 Form	17
Qualified for Assessment:	
Legal	9
Substance Abuse	6
Mental Health	19
Case Management	26
Referral to Case Management:	
Referred to CM	16/26
Declined Referral to CM	1/26
No Documented Referral to CM	9/26

Chapter IV: Conclusion and Recommendations

Recommendations

In order to appropriately identify trauma and the potential sequelae that affect individuals with HIV, a targeted, standardized screening process for the various forms of trauma would be helpful. This study revealed potential areas for integration of trauma-informed screening and trauma-informed referral into the HIV care setting, specifically in the care enrollment and initiation stages. Clinic employee and patient data demonstrated that there is both need and support for the integration of these services.

Recommendations for an ideal screening process for trauma in the HIV care setting have been proposed by Brezing: Once trauma is identified in a patient, providers should screen them for symptoms related to trauma and its sequelae like PTSD including avoidance, numbness, flashbacks, and dissociative symptoms. Next, referrals to the appropriate resources would ideally be incorporated as part of treatment. Patients should also be screened for trauma related risk factors and comorbidities that increase individual risk for poor ARV compliance and poor medical outcomes. High-risk sexual behaviors, unstable housing, and unsafe IV drug usage are examples of "mediators" of HIV and trauma co-occurrence that providers could also address (Brezing, 2015).

As part of screening and recognition of trauma, patients should be informed about the association between trauma and HIV and be made aware of the potential impact of a history of trauma on medication compliance, medical outcomes, and HIV

associated morbidity and mortality. Providing patients with information about how some of their current behaviors and activities may have been influenced by their trauma experiences is key for patients with HIV, whose medical outcomes rely on treatment compliance (Brezing, 2015). Providers should work to identify resources available to patients to help address these needs, including mental health services, social support, family resources, housing, and food.

In those who screen negative for trauma, those involved in providing medical care should continue to educate their patients about the potential ongoing risk of trauma in HIV-positive patients, especially given the overlapping risk factors. A strategy would include reviewing behaviors that put individuals at higher risk for trauma and violence and mitigation of these risk factors should be part of the treatment plan (Brezing, 2015). As the risk of trauma is still present, a negative screen does not mean that trauma will not occur in clinic patients in the future, or that an individual choose to disclose to the provider when asked, as individuals may not feel comfortable or ready to discuss their trauma histories. HIV negative patients who have been identified as never having experienced trauma and violence should also be educated by their primary care physicians about the increased risk for further violence and the acquisition of HIV and on safer practices that help decrease these risks (Brezing, 2015).

Integration of trauma-informed screening and referral into the HIV care setting could be attempted through several approaches at this site and others; 1) training employees in trauma-informed care practices would be helpful to allow for greater recognition of the negative effects of trauma on HIV outcomes and of

patients with trauma needs; 2) trauma-informed questions could be incorporated into the initial health screen and enrollment process so that all patients are screened; 3) a more standardized screening and referral process could be implemented to ensure trauma-informed questions are asked and appropriately dealt with; and 4) patients can be provided with more trauma-informed educational activities and resources, which could be incorporated into the once monthly new patient orientation or peer-lead discussions.

Conclusion

This study demonstrates a gap in standardized trauma-specific screening and referral to trauma-specific support services at HIV care initiation. Providing the clinic with resources and training to better integrate trauma-informed practices into care has the capacity to improve HIV care outcomes. Future efforts should focus on integrating trauma-specific screening and referrals into the HIV care enrollment process and incorporating additional trauma-informed practices, so that this important barrier to retention in care and adherence to antiretroviral therapy can be addressed early on. Integrating trauma-informed screening and referral into HIV care initiation in this clinic will help pave the way for the integration of trauma-informed care practices throughout the HIV care continuum and for the incorporation of trauma-informed services into the care provided at other HIV care settings around the country and globally.

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Appendix

Appendix 1. Complete EMA From

Atlanta EMA Case Management, Substance Abuse and Mental Health Screen

Client's full name:_____ Date: _____ / _____ / _____

Client's DOB: _____ / _____ / _____

Client's gender (circle one): Male Female Transgender

Screener's name: _____

Agency:_____ Start time:_____

Intro: ***"I'm going to ask you some Yes or No questions about your personal behavior and living situation to get you started. We ask these questions of all of our new clients as part of our intake process."***

- ✓ Fill out information above
- ✓ Answer question one based on your knowledge and observation of the client
- ✓ Complete the remainder of questions on the screen, circling the appropriate response
- ✓ Total the client's responses where indicated in the gray right hand column
- ✓ Record the screen results and any referrals made on the last page

DO NOT ASK CLIENT, complete before beginning screen:

1. Is there a communication barrier that prevents the client from completing the screen (cannot communicate in English, is deaf or hard of hearing, etc.)?

Y **N**

If **yes:**

- **End** screen
- **Fill out** screen disposition on back page
- **Refer** for case management assessment

Ask the client EXACTLY AS WRITTEN: **Circle the client's response**

2. Are you able to do things that are necessary for your health and well being? Some examples are getting to your doctor's appointments, preparing meals, filling out forms **OR** budgeting.

Y **(SKIP to Question 3)**

N

Is there someone who is always able to help you when you need assistance? → **Y** **N**

3. Do you have a doctor, nurse or other health care provider that is treating you for your HIV?

Y **(ask next)** **N** **(skip to 4)**

Do you ever miss your appointments AND not reschedule them? → **Y** **N**

Client's Name:_____ Client's DOB:_____

	Ask the client EXACTLY AS WRITTEN:		Circle the client's response		
	medications, such as antiretrovirals for your HIV or medications for another illness like diabetes or depression.		(Skip to Question 5)		
		Are you taking these medications the way your health care provider has instructed you?	→	Y	N
5.	Are your basic needs for things like food and toiletries met **every month**?			Y	N
6.	In the **past year**, have you used a needle to inject drugs?	Y	N (Skip to Question 7)		
		In the **past year**, have you shared needles or works?	→	Y	N
7.	Do you need assistance with access to benefits, such as SSDI, TANF, SNAP or other programs?	Y	N		
	Do you need legal assistance with matters such as: Guardianship or Wills	Y	N		
	Power of Attorney	Y	N		
	Probation or Parole	Y	N	Y	N
	Criminal History	Y	N		
	Bankruptcy	Y	N		
	Housing or Employment Discrimination	Y	N		
	Eviction proceedings	Y	N		
8.	In the **past year**, have you been sexually active?	Y	N (Skip to Question 9)		
		In the **past year**, have you used condoms every time you had sex?	→	Y	N
	DO NOT ASK CLIENT:				
9.	Screener recommendation for assessment:			Y	N
			TOTAL NUMBER OF CIRCLES IN GRAY COLUMN FOR 2 – 9 HERE		☐
10.	During the **next three months**, are you going to need help finding a place to live OR are you currently past due on your utilities, rent or mortgage?			Y	N
			TOTAL NUMBER OF CIRCLES IN GRAY COLUMN FOR 10 HERE		☐

Client's Name:_____ Client's DOB:_____

	Ask the client EXACTLY AS WRITTEN:			Circle the client's response		
11.	Are you **currently** being treated for a substance abuse problem? This includes getting help from a professional like a psychologist or counselor.	Y	N / DK	If **yes**: • **SKIP to question 17**		
12.	Have you **ever** drank alcohol or done drugs?	Y	N	If **no**: • **SKIP to question 17**		
13.	During the **past month**, have you felt you ought to cut down on your drinking or drug use?				Y	N
14.	During the **past month**, have people annoyed you by criticizing your drinking or drug use?				Y	N
15.	During the **past month**, have you felt bad or guilty about your drinking or drug use?				Y	N
16.	During the **past month**, have you had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover (an eye-opener)?				Y	N
	TOTAL NUMBER OF CIRCLES IN GRAY COLUMN FOR 13 – 16 HERE				☐	
17.	Are you **currently** being treated for a mental health problem? This includes getting help from a professional like a psychologist or counselor, or taking medication for depression or anxiety.	Y	N / DK	If **yes**: • **END** screen • **Score** screen		
18.	During the **past month**, have you experienced hearing or seeing things that other people don't seem to hear or see?				Y	N
19.	During the **past month**, have you experienced or been bothered by feeling down, sad, depressed, or hopeless?				Y	N
20.	During the **past month**, have you experienced or been bothered by a decreased interest or pleasure in doing things?				Y	N
	During the **past month**, have you noticed that you don't enjoy doing things as much as you used to?				Y	N
21.	During the **past month**, have you had thoughts:					
	Of wanting to give up?	Y	N			
	Of going to sleep and not wanting to wake up?	Y	N			
	Of not wanting to go on living?	Y	N		Y	N
	That you would be better off if you were dead?	Y	N			
	Of wanting to hurt or harm yourself in some way?	Y	N			
	Of wanting to kill yourself?	Y	N			

22.	During the **past month**, have you had thoughts of:				
	Wanting to harm or hurt other people?	**Y**	**N**	**Y**	**N**
	Wanting to kill other people?	**Y**	**N**		

TOTAL NUMBER OF CIRCLES IN GRAY COLUMN FOR 18 – 22 HERE ☐

Conclusion: "Thank you for your time."

End time:_____

Client's Name:_____ Client's DOB:_____

Results

Questions	Total Number of Circles in Gray Column	Case Management Assessment	Substance Abuse Assessment	Mental Health Assessment	Legal Assessment
2 - 9		YES if 2 or higher			
7					YES if 1
10		YES if 1			
13 - 16		YES if 2 or higher	YES if 2 or higher		
18 - 22		YES if 1 or higher		YES if 1 or higher	

Screen Disposition

If screen was not completed:			Referred to:	Date Referred:	Kept Appt.?	
Communication barrier List Barrier:	Y	N		/ /	Y	N
Client refused	Y	N				

Case management screen results:			Referred to:	Date Referred:	Kept Appt.?	
Referred for case management assessment	Y	N		/ /	Y	N
			If no, client offered resource packet?	Y	N	

Substance abuse screen results:			Referred to:	Date Referred:	Kept Appt.?	
Referred for substance abuse assessment	Y	N		/ /	Y	N

Mental health screen results:			Referred to:	Date Referred:	Kept Appt.?	
Referred for mental health assessment	Y	N		/ /	Y	N

Legal screen results:			Referred to:	Date Referred:	Kept Appt.?	
Referred for legal check-up	Y	N		/ /	Y	N

Appendix 2. HIV Center Medical Case Management Assessment

Patient Name: _____ *MRN:*_____ *DOB:*_____

Medical

- ☐ Gap in medical visits
- ☐ Has an outside provider _____
- ☐ Stable health with access to ongoing HIV medical care
- ☐ Short-term acute condition; receiving medical care
- ☐ Viral suppression
- ☐ CDC Defined AIDS
- ☐ Multiple medical diagnosis
- ☐ Poor health
- ☐ Home bound; home health needed
- ☐ Medical emergency
- ☐ Intensive and or complicated home care required
- ☐ Hospice services or placement indicated
- ☐ Other

Women only

- ☐ Pregnant

Nutrition

- ☐ GI concerns_____
- ☐ Weight Concerns

*Overweight/obesity

- ☐ Chronic medical condition requiring changes in diet-following recommended diet _____
- ☐ Unplanned weight gain

*Wasting

- ☐ Needs referral to registered dietitian for nutritional therapy related to a chronic medical condition
  - ☐ Changes in eating habits in the past 3 months not related to food insecurity
  - ☐ Visual assessment shows initial signs of wasting syndrome or other obvious physical maladies
  - ☐ Unplanned weight loss
  - ☐ Problems eating due to thrush, difficulty swallowing, chewing, dental
- ☐ Body image

Women & Children only

- ☐ WIC info/follow up
- ☐ Failure-to-thrive
- ☐ Low birth weight <5lbs
- ☐ Pregnancy

Social

- ☐ Young Adult
- ☐ Adult with child/ren
- ☐ Adult
- ☐ Lives with roommate(s)
- ☐ Lives with relatives
- ☐ Lives with husband/wife
- ☐ Lives with partner
- ☐ Significant persons aware of diagnosis:_____
- ☐ Significant persons not aware
- ☐ assistance needed with disclosure _____ _____
- ☐ Support

*Isolated/alone *Non-supportive family

*emotionally dependable and physically available relatives and friends *family and or significant others often unavailable when crisis occur
*patient provides significant support to others; primary caregiver
*imminent danger of being in crises
*acute situation, unable to cope without professional support within a particular situation or time frame
*gaps exist in support system
*no stable support system in place

- ☐ No family issues present
- ☐ APS referral
- ☐ Current APS involvement

Women & Children only

- ☐ Child
- ☐ Young Adult/Teen
- ☐ Teen with no parental involvement
- ☐ DFCS referral/
  Current DFCS involvement

Education

- ☐ Requests assistance in resources in furthering education
- ☐ Deferred

Family & Youth Clinic only

- ☐ Currently enrolled in school
  - Pre-K
  - Elementary School
  - Middle School
  - High School
  - College
- ☐ Receives Special Education services
- ☐ High School Diploma received
- ☐ GED received
- ☐ In process of enrollment
- ☐ In training/certification program
- ☐ Voc/Rehab
- ☐ No attempt towards furthering education

Housing

- ☐ Living situation stable; not in jeopardy
- ☐ Homeless
  - emergency shelter
  - car
  - street
- ☐ Housing is in jeopardy due to projected financial strain; needs assistance with rent/utilities to maintain housing
- ☐ Formerly independent person temporarily residing with family or friends
- ☐ Needs temporary recuperative housing after illness/hospitalization, loss of housing
- ☐ Eviction imminent
- ☐ Temporary transitional shelter
- ☐ Fleeing domestic violence
- ☐ Pregnancy
- ☐ Cannot obtain housing due to:
  *criminal background/history
  *chronic substance use
  *mental health instability
  *transgender identification
- ☐ Shelter
- ☐ Transient
- ☐ Sexual exploitation for housing
- ☐ Home inhabitable due to health and/or safety standards

- ☐ Recent release from jail
- ☐ Recently completed residential substance abuse treatment
- ☐ Incarcerated:
- ☐ Other arrangements to stay with others have fallen through _____ _____
- ☐ Eviction
- ☐ Needs assisted living facility; unable to live independently

Mental Health

- ☐ No history of mental illness, psychological disorder or psychotropic medications
- ☐ Recent hospitalization
- ☐ In mental health treatment and compliant
- ☐ In treatment but not adherent
- ☐ Requires therapy not accessing it
- ☐ Pregnant and not on psychotropic medication
- ☐ Danger to self or others
- ☐ Previous suicide attempt
- ☐ Level of patient/family stress is high. Needs emotional support to avert crisis
- ☐ Needs counseling referral _____
- ☐ Active chaos or problems due to violence or abuse
- ☐ Depression ___ functioning ___ Not functioning
- ☐ Experiencing an acute episode and/or crises
- ☐ Needs mental health assessment _____

Domestic Violence

- ☐ Physical violence, threat, inducing fear
- ☐ Emotional abuse, attacks on self esteem
- ☐ Sexual coercion and rape
- ☐ Unilateral financial and other decision making
- ☐ Social isolation/restriction on outside contacts

- ☐ High hostility, verbal abuse and occasional physically violent struggles
- ☐ Refusal to submit to one another's rules/demands
- ☐ The perpetrator is still in the victim's home or in the same area
- ☐ There has been a recent violent episode
- ☐ The violence is escalating
- ☐ Threats of violence or suicide have been made by the perpetrator
- ☐ Weapons are present

Women & Children only

- ☐ Threats of violence or abuse have been made towards the children.
- ☐ Insistence on sole child-rearing authority
- ☐ High conflict divorce
- ☐ Ongoing disagreement over parenting, mutual distrust and blaming

The following indicators of dangerousness in an offender:

- ☐ Threats of homicide or suicide
- ☐ Instability of employment or
- ☐ Availability of weapons
- ☐ A history of violence
- ☐ Drug and alcohol misuse
- ☐ Obsession or possessiveness about partner
- ☐ Dependence on the partner
- ☐ Severe depression or rage
- ☐ Mental health/personality disorder
- ☐ Misogynist attitude
- ☐ Low self esteem
- ☐ Disregard/contempt for authority or antisocial behaviors and attitudes
- ☐ Childhood abuse or violence in family of origin

- ☐ Existence of a recent stressor
- ☐ Prior arrests (i.e. involvement in criminal activity), whereas prior arrest for inflicting family violence decreased risk

Substance Use

- ☐ No difficulties with addiction including alcohol, drugs, sex or gambling
- ☐ Current addiction but is willing to seek help in overcoming addiction
- ☐ Current usage:
  - THC
  - Cocaine
  - Crack
  - Heroin
  - MDMA (Molly)
  - Meth
  - Illegal Prescription
  - Other_____
- ☐ Past Problems with addiction:>1 yr. in recovery _____
- ☐ Major addiction impairment of significant other
- ☐ Current addictions: not willing to seek or resume treatment
- ☐ Fails to realize impact of addiction on life/indifference regarding consequences of substance use
- ☐ Treatment/Counseling:
  - Currently receiving
  - Willing to seek help
  - Not willing to seek help
  - Previously received

  Women only

  - ☐ Pregnant and actively using

Legal

- ☐ No criminal history or legal issues
- ☐ Currently in a gang
- ☐ Previously in a gang
- ☐ No gang involvement
- ☐ Previous arrests: _____
- ☐ Probation/Parole
- ☐ Charges pending
- ☐ Immigration concerns _____
- ☐ Involvement in legal proceeding
- ☐ Needs assistance in completing legal documents (advance directives)
- ☐ Immediate crisis involving legal matters (ie. Legal altercation with employer/landlord, civil, criminal, immigration and family/spouse)
- ☐ Incarceration
- ☐ Recent release from jail
- ☐ Other legal issues_____

Treatment Adherence

- ☐ New to care
- ☐ Adherent to medication as prescribed >6 months without assistance
- ☐ Keeps medical appointments as scheduled
- ☐ Misses at least half of scheduled medical appointments
- ☐ Misses several doses weekly
- ☐ Takes long/extended "drug holidays" against medical advice
- ☐ Refuses/declines to take medications against medical advice
- ☐ Utilizes ER only for primary care
- ☐ Inability to take/give meds as scheduled; requires direct observed therapy to take/give meds and keep appointments

Gender

- ☐ Female
- ☐ Male
- ☐ Transgender F/M
- ☐ Transgender M/F

Risk Reduction

- ☐ Frequent STI's
- ☐ Good understanding of risks
- ☐ Understands the importance of preventing the spread of HIV
- ☐ Understands the importance of avoiding re-infection
- ☐ Poor understanding of risks
- ☐ Relationship barriers to safe behavior
- ☐ Alcohol and drug use
- ☐ Mental health impairment
- ☐ Engages in survival sex
- ☐ No understanding of prevention methods or how to avoid re-infection
- ☐ Other

  _____

  _____

Sexual Partners

- ☐ Has sex with men
- ☐ Has sex with women
- ☐ Both

Transportation

- ☐ In area under or unserved by public transportation
- ☐ Unaware of or needs help accessing transportation services
- ☐ Lack of transportation is a serious contributing factor to current crisis
- ☐ Lack of transportation is a serious contributing factor to lack of regular medical care
- ☐ Lack of funds for public transportation

Financial

- ☐ Receives TANF
- ☐ Receives Food Stamps
- ☐ Financial support from family
- ☐ Receives child support
- ☐ Employed
- ☐ Unemployed
- ☐ Loss of employment
- ☐ Not seeking employment
- ☐ Applying for disability
- ☐ Financial support from family
- ☐ Receives child support
- ☐ Other: _____

Insurance

- ☐ Uninsured
  - o undocumented
  - o ineligible/denied public benefits
- ☐ Has Insurance coverage or medical coverage
- ☐ Insurance issues/changes:
  - ☐ Extensive Prescription Co-pays
  - ☐ Lost insurance coverage
  - ☐ CM assistance needed to enroll in coverage for medical cost
  - ☐ Immediate CM assistance needed in accessing insurance or other coverage for medical cost due to medical crisis

Spirituality

- ☐ Religion:
  - ☐ Christian
  - ☐ Muslim
  - ☐ Jewish
  - ☐ Agnostic
  - ☐ Atheist
  - ☐ Other _____
  - ☐ Alternatives/Natural/Holistic
- ☐ Degree of religious involvement:
  - ☐ Regular
  - ☐ Seldom
  - ☐ Only in crisis
  - ☐ None

Cultural Beliefs

- ☐ Understands service system, able to navigate
- ☐ Language is not a barrier to accessing services (including sign language)
- ☐ Needs interpretive services for medical/case management services
- ☐ Needs interpretive services to access additional services
- ☐ Non-disclosure of HIV status to family is barrier to care
- ☐ Cultural factors significantly impair patient and or family's ability to effectively access and utilize services
- ☐ Crisis intervention is necessary
  *team intervention noted
  Staff involved _____

Support Services

- ☐ Completed new patient orientation _____
- ☐ Attends Support group
- ☐ Attends education classes
- ☐ Completed education modules
- ☐ CAB participant
- ☐ None

Other: _____

Transition Planning

- ☐ Patient is over 23 (Young adults only)
- ☐ Patient is admitted to hospice/long term care facility
- ☐ Patient has moved out of state

Care Resource Coordinator/Social Worker:_____ Date:_____