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# Utilization of HIV Care Coordination Programs to Address Gaps in Care

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**Utilization of HIV Care Coordination Programs to Address Gaps in Care**

by

Jessica Marie Chavis

A project submitted to the faculty of  
Gardner-Webb University Hunt School of Nursing  
in partial fulfillment of the requirements for the  
Master of Science in Nursing Degree

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2021

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### **Abstract**

This project evaluated the use of HIV care coordination programs in healthcare and their impact on care. The purpose of this project was to evaluate the role of HIV care coordination programs and their relationship with patient outcomes. The goal was to provide education on the benefits of these programs and how the lack of their presence in today's healthcare system impacts transmission and general patient care. The plan of implementing a care coordination program at a local health department was established. Gaps in care, increasing medication adherence, and improving viral suppression rates were targeted by addressing social, mental, and physical disparities. Implications for nursing based on this project include timely linkage to care by patient navigation practices, increasing care engagement to meet HIV goals, and achieving viral suppression as imperative.

*Keywords:* HIV care coordination, viral load, viral suppression, patient navigation.

### **Acknowledgments**

I would like to thank Jesus Christ for His guidance, grace, and presence in my life. Without His love and mercy upon my life, I would not be able to accomplish this great achievement. In addition, I would like to thank all my supporters: Joshua (my husband), Daryl and Gloria (my parents), family and friends, and my awesome church family. Thank you to the faculty and staff of Gardner-Webb for all the encouragement and motivation along my educational journey. A special thank you to Dr. Candice Rome and Dr. Brittany Hudgins-Graham for answering all my many questions and offering to help in any way possible. To conclude, as a first-generation Native American college graduate, I am my ancestors' wildest dream.

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## **CHAPTER I**

### **Introduction**

The diagnosis of Human Immunodeficiency Disease (HIV) is one of many life-altering health-related diagnoses that can be difficult to process. Finding ways to cope and navigate this information is essential. HIV care coordination programs aid to meet the various needs of people living with HIV (PLWH). Linkage to care is the initial step towards a successful HIV treatment plan. Placement in care plays a key role within the HIV care continuum and is a necessary precursor to retention in care, medication initiation, and viral suppression (Melvin & Gipson, 2019).

### **Problem**

Within the public health setting, there is a lack of coordinated care for HIV-positive patients, resulting in a decreased number of virally suppressed individuals. A study conducted by Dombrowski et al. (2015) found that “many participants in public health did not have an HIV case manager, and many never had. This presents a possible opportunity for improvement of our public health and HIV care system” (p. 284). Dombrowski (2020) outlined, “It is incumbent upon each local community to define roles and accountability for the linkage to care process” (p.3). It is crucial to acknowledge that linkage to care does not guarantee retention in care. Clinics and health departments should similarly develop systems to maximize retention in care. (Dombrowski, 2020). Patients often suffer from medication adherence due to being lost in care. Factors that contribute to this gap in organized care are frequently related to social determinants of health. Swan et al. (2019) reported, “Social determinants of health include social support, financial resources, housing, food, transportation, access to health services, level of



education, literacy, culture, language, and socioeconomic conditions that further exacerbate complexities” (p. 318).

Implementation of nurse care coordinators is essential in addressing patient needs and service linkage. When those social issues are satisfied patients are more likely to take initiative in their healthcare plan. Imperative matters become their focal point, medication compliance and keeping appointments become less important when housing or food is lacking. Once those concerns are attended to patients are more inclined to take their medication correctly, becoming virally suppressed. Viral suppression affects the health of the population by decreasing the chances of HIV transmission. It also reduces the risk of HIV patients acquiring other opportunistic infections such as tuberculosis or pneumonia. If a patient is off antiretroviral medication for a small length of time, their viral load increases putting them at higher risk of contracting other infections and transmitting the virus to others. HIV affects vulnerable and marginalized populations, and those living with HIV have higher rates of mental illness and substance use disorders that create barriers to achieving desired HIV outcomes (Swan et al., 2019).

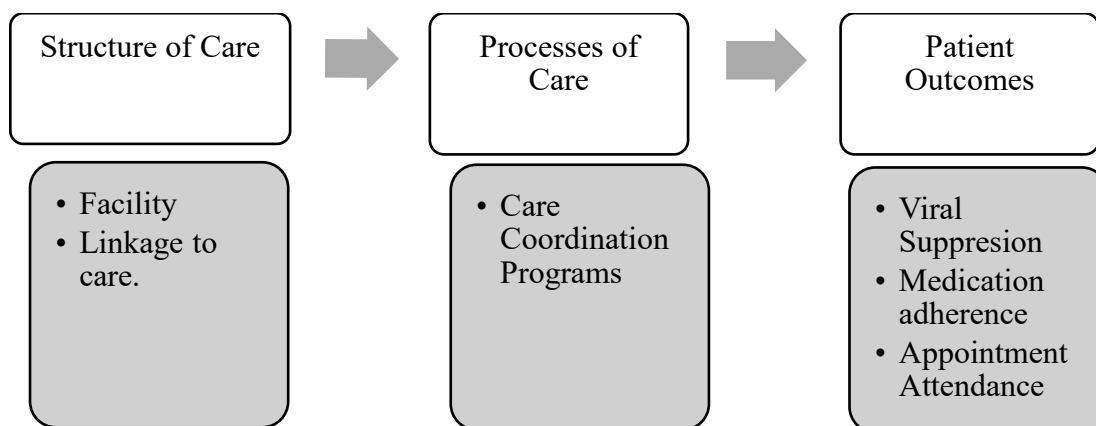
### **Purpose**

The purpose of this project was to evaluate the role of HIV care coordination programs and their relationship with patient outcomes. The goal was to provide education on the benefits of these programs and how the lack of their presence in today’s healthcare system impacts transmission and general patient care. Information concerning care coordination programs can be utilized to establish new approaches to reach PLWH to reduce fragmented care. It is important to establish routine programs to minimize gaps along the HIV care continuum.

### **Theoretical or Conceptual Framework**

Avedis Donabedian projected the trio of structure, process, and outcome to evaluate the quality of health care (Ayanian & Markel, 2016). Ayanian and Markel (2016) declared, “Donabedian defined structure as the settings, qualifications of providers, and administrative systems through which care takes place; process as the components of care delivered; and outcome as recovery, restoration of function, and survival” (p. 206). These measures demonstrate how care is delivered and measure the impact of provided services on the patients’ health.

The quality model introduced by Donabedian in 1966 serves as the theoretical framework to examine patient care processes in relation to HIV care coordination. The structure addresses the facility, personnel, and linkage to care. The process is the action that is taken place to reach desired outcomes. Implementation of care coordination programs is that bridge. Desired patient outcomes present as viral load suppression, medication adherence, and appointment attendance. As shown in Figure 1 the correlation amongst the triad provides a system to combat disjointed care. This framework mirrors patient-centered outcomes and emphasizes the need for quality metrics.

**Figure 1***Structure, Process, Patient Outcomes Model***Definition of Terms**

- Care coordination. AHRQ (2018) described care coordination as “deliberately organizing patient care activities and sharing information among all of the participants concerned with a patient's care to achieve safer and more effective care” (para 1).
- Viral load suppression. According to the CDC, viral suppression is having less than 200 copies of HIV per milliliter of blood. HIV medicine can even make the viral load so low that a test cannot detect it, therefore undetectable and untransmissible.

**Summary**

Effective care coordination supports Avedis Donabedian’s 1966 framework. Care coordination programs contribute to improving processes, enhancing quality of health, and improving overall patient outcomes. This integral approach ensures patients obtain ideal care. The purpose of this project was to evaluate the role of HIV care coordination programs and their relationship with patient outcomes. The goal was to provide education

on the benefits of these programs and how the lack of their presence in today's healthcare system impacts transmission and general patient care. HIV care coordination increases patient medication adherence, refines viral load suppression records, and links population with care service needs that are beneficial to their overall health and well-being. The demand for HIV-supported care is evident and efforts are needed to assist this population to obtain its healthiest capacity.

## CHAPTER II

### Literature Review

Registered nurse care coordinators are significant team members needed amongst healthcare organizations. These nurses facilitate connections between individuals, communities, and healthcare systems. Medical, social, and educational requirements are addressed based on patients' individual care needs and preferences (Swan et al., 2019). Care coordinators can be utilized by all populations in a variety of settings throughout the lifespan. Lack of management amongst HIV-positive individuals present challenges, delays, and barriers to treatment and care.

This literature review was conducted to address complexities in care coordination for individuals who are HIV positive and how it impacts their health. Information was gathered from previous studies, similar topics, and parallel themes. The sources were used to uncover literature: Cumulative Index for Nursing and Allied Health Literature (CINAHL), Health Source: Nursing/Academic Edition, Academic Search Complete, and the Public Health Database. The following keywords were explored: HIV, care coordination, patient navigation, case management, viral load, complex care.

#### **Lack of Coordination**

Medical and supportive assistance is necessary to reach the needs of the HIV community. Helping patients locate desired healthcare services by addressing their basic needs, such as food and housing, affects their partnership in the plan of care. Swan et al. (2019) discuss how the lack of coordination results in care that is fragmented, inconsistent, and poorly planned. Swan et al. (2019) address areas that hinder registered nurses from providing care coordination and a recent study identified more than 25

barriers to adopting the model across the continuum of care. The cost associated with training nurses, reimbursement policies, and lack of role definition contributes to the delay in utilizing nurses for care coordination.

### **Complexity of HIV Care**

Advancement of science has afforded those diagnosed with human immunodeficiency virus (HIV) the use of antiretroviral therapy (ART) to improve health, increase survival rates, and opportunity prevent transmission (Stevens et al., 2019). This illness will also contain issues of ageing, comorbidities, and other long-term conditions in a time when management and support is fragmented across primary, secondary, and tertiary care services (Watson, 2018). Watson (2018) explained the medical, psychological, socioeconomic, and other complexities people living with HIV (PLWH) encounter. Some patients are living with other co-morbidities, a sick child, are at risk of losing their home, or have not disclosed their status to their family. Management of HIV may be the last thing on their mind (Watson, 2018). Among vulnerable people with HIV, comprehensive care coordination may markedly improve short-term effects for earlier diagnosed clients, especially those resuming care after a lapse of > 6 months. (Watson, 2018).

### **Effects on Viral Load Suppression**

The objective of HIV treatment is to attain viral load suppression (VLS). This happens when the viral load flowing through the body is lower than 200 HIV RNA copies (Nash et al., 2018). Newly diagnosed patients are often never in care, lost to care, inconsistently in care, or exhibiting antiretroviral treatment adherence problems. Nash et al. (2018) conducted an observational study to evaluate the relative effectiveness of HIV

care coordination as an intervention on viral load suppression. The setting was New York City and included a sample of HIV-positive patients with known barriers to care and treatment. A surveillance-based method was used to compare groups. Those utilizing the care coordination program (CCP) and those who were not enrolled. From their research, Nash et al. (2018) discovered that New York's Ryan White care coordination program intervention had a significant positive result on viral load suppression for newly and previously diagnosed individuals who repetitively had not been suppressed the year prior to enrollment. However, further research should evaluate longer-term outcomes, including continuous viral suppression for individuals with known barriers to HIV care and treatment.

Surveillance programs are in place that manages rosters to target HIV-positive individuals who are not suppressed or not in care. Those with absent viral load findings 9 months prior to the study and those with an unsuppressed viral load, received increased care coordination and peer support (Hewitt et al., 2019). Hewitt et al. (2019) noticed that within 2 years, 44% of those successfully contacted achieved a viral load of less than 200 copies/mL. Managed care organization programs that provide enhanced care coordination and support can positively support viral load suppression within an inner-city HIV population.

Ideal HIV care continuum outcomes are complicated to navigate for individuals experiencing psychosocial barriers such as unstable housing, lower mental health functioning, and/or drug use (Irvine et al., 2017). Irvine et al. (2017) performed an observational study using data from the Ryan White care coordination program along with surveillance of laboratory data to review viral load suppression. Clients were

categorized as newly diagnosed or previously diagnosed (more than 12 months prior to enrollment). Inadequate housing, mental health issues, and drug use difficulties were reviewed over time because these are barriers that the care coordination program could potentially impact within a year. Irvine et al. (2017) found that groups experiencing barriers at baseline displayed a trend toward greater relative outcome improvement when a decline in that barrier was attained during the 12 months following CCP enrollment. These findings suggest further evaluation in the role of care coordination to increase the health and survival of those at peak danger for substandard HIV outcomes.

Robertson et al. (2020) compared the time to immune recovery and viral suppression among people newly diagnosed with HIV who enrolled in the HIV Care Coordination Program. Immune recovery is defined as a CD4 count of >500 consecutively. From December 2009 to March 2013, the CCP enrolled 1,133 newly diagnosed individuals. By 12-months viral loads suppression after enrollment reached 84% in comparison to 69% not enrolled in a CCP. After 18 months CCP and non-CCP enrollees had attained immune recovery (Robertson et al., 2020, p.1240). The CCP has been shown to improve long-term viral suppression among PLWH who were unsuppressed the year prior to enrollment. The findings of Robertson et al. (2020) suggest that the program may have a public health impact by targeting viral load suppression rapidly after initial diagnosis.

### **Patient Navigation and Engagement**

Patient navigation is an intervention that may enhance retention and engagement specified by regular clinic attendance, medication adherence, and virologic suppression (Hemmy et al., 2017). Hemmy et al. (2017) organized a study in Washington, DC at the



Veterans Affairs Medical Center Infectious Disease Clinic, an urban primary care clinic with a predominantly African American patient base. The clinic hired a nurse navigator to encourage engagement and apply tactics to increase medication adherence. This new program included coordination with members of the clinical team, HIV education, and patient follow-up pertaining to appointments. The aim of this study was to assess the impact the nurse navigator had on clinic attendance, medication adherence, viral load, and CD4 count. Over the course of 1-year Hemmy et al. (2017) determined following navigation, viral suppression ( $<200$  copies/mL) was achieved in 69.0% ( $n = 58$ ) of patients, compared to 47.6% ( $n = 40$ ) of patient's pre-navigation. The study suggests that incorporating nurse navigation into a primary HIV care setting had a considerable effect on commitment in care, medication adherence, and virologic suppression among those at the highest risk of poor HIV outcomes (Hemmy et al., 2017).

Patient navigation programs display success in enhancing health outcomes, especially among vulnerable populations, playing a position in diminishing health disparities. Schumann et al. (2019) described a study that took place in Wisconsin where patient navigators were hired to aid newly diagnosed HIV patients. The goal was for the navigators to initially help with medication adherence and refills, coordinating appointments, referrals, and developing disease management skills. After some time, the patient navigator transferred certain responsibilities to the patient. For example, having the patient make their appointment, arrange for transportation, and call for medication refills (Schumann et al., 2019). The new program served over 540 people living with HIV in southern Wisconsin. The initiative offered a degree of service not previously offered in

Wisconsin and cultivated strong emotional connections between the client and their navigator (Schumann et al., 2019).

Maintaining engagement in care is often a challenging goal. Utilizing patient navigators assists re-engagement in care and attests to being a valuable resource (Parnell et al., 2019). Parnell et al. (2019) explored the viewpoints of HIV patients who had fallen out of care and the State Bridge Counselors of North Carolina Division of Public Health. These employees were responsible for locating these individuals and helping them re-engage in HIV care once they were reported out-of-care by the HIV medical clinic. Each clinic establishes and defines how long a person is without care before their name is submitted to the bridge counselors for follow-up. PLWH shared that working with navigators increased their desire to resume HIV care and reinforced their ability to overcome barriers that kept them out of care. Navigators expressed that a strengths-based methodology to listening to PLWH and meeting them where they were in life helped enable care re-engagement targets (Parnell et al., 2019).

Mizuno et al. (2018) addressed and studied the association between patient navigation in relation to HIV care continuum outcomes. A systematic review was conducted through online databases. Positive associations with linkage and retention in care indicate that patient navigation may be profitable in moving people living with HIV through the complexities of the medical system and keep them from being lost in care. Mizuno et al. (2018) reported, “From 20 studies, 85% found one or more positive associations, showing some evidence supporting patient navigation as a potentially effective strategy to enhance engagement in care among PLWH” (p. 6).

## **Social Network of Providers**

Along the HIV care continuum case management and providers are commonly connected, but there is a lack of governmental agencies involved. Health departments play a central role in care coordination for HIV treatment and prevention. The local health department may help fill the gaps in care by coordinating supportive services that are essential to HIV care (Lightner et al., 2020). The study of Lightner et al. (2020) aimed to show the role of health department staff in care coordination for HIV treatment in a Midwest city in California where a Ryan White funded program existed. Data was gathered via a survey evaluating interactions of professional networking within the HIV service system. Lightner et al. (2020) identified that medical case managers and providers were more likely to be connected amongst others within their field. From this study, health department staff appeared to play an essential role in communicating throughout provider systems and organizations. Linking organizational and occupational agencies can impact care coordination.

HIV treatment programs and public health groups should investigate the development of the primary care provider (PCP) and case manager collaborative working relationships as a tactic to improve health outcomes and quality of care (Mavronicolas et al., 2017). Mavronicolas et al. (2017) created and operated a mailed cross-sectional survey among HIV PCPs and case managers working in HIV ambulatory care settings in New York City in November 2009. The survey aimed to assess the influence of interprofessional collaboration among HIV PCPs and case managers. Three subscales were included: relationship initiation, role specification, and trustworthiness. The results of Mavronicolas et al. (2017) indicated that all members of the healthcare team initiate

the working relationship, build mutual dependence, and recognize and appreciate their complementary roles. Trust, communication, and professional interactions amongst staff service the population best.

### **Integrative HIV Care**

“A federal call for integrated HIV prevention and treatment was published in June 2015” (Watts et al., 2019, p.1). Addressing HIV health services was a new concept for the Jacksonville Transitional Grant Area. Introducing this idea is an attempt to mend the gaps in care amongst the HIV community. Careful examination, planning, and system thinking were applied by healthcare leaders within their respective roles (Watts et al., 2019). This study identifies the local response of the Florida area provides as they navigate and plan how to integrate HIV care. The jurisdiction encouraged relationship building amongst organizations and individuals. A plan was formed to reduce HIV infections, increase outcomes, and decrease HIV-related disparities in their community (Watts et al., 2019).

Integrative care is patient-centered that emphasizes innate healing capacity and the importance of lifestyle to enhance health. Melvin and Gipson (2019) discussed five care coordination components: case management, HIV health care, behavioral health adherence counseling, and social support services. The study setting was the Open Arms Healthcare Center located in Jackson, Mississippi. Linkage to care, retention, adherence, and viral load were factors that were evaluated after implementing the five care coordination components. Melvin and Gipson (2019) presented that linkage to care was 100% due to rapid initial treatment. Positive patients were allocated a case manager within 72 hours of diagnosis. Over a 3-year span retention increased from 42% to 53%,

adherence increased from 82.8% to 95.6%, and viral load suppression increased from 59% to 81%. The lack of timely entry into care creates missed opportunities beneficial from HIV treatment at the earliest stage possible.

Effective care coordination models respectful relationships between providers and supports patients along the healthcare spectrum (Brennan-Ing et al., 2016). In 1990, New York State introduced Target Case Management (TCM). TCM was intended for HIV-positive individuals who require frequent contact with care providers and have difficulty accessing and sustaining medical and supportive services (Brennan-Ing et al., 2016). Cost, utilization, and clinical outcomes were examined to identify the influence of TCM over time. Throughout the study, findings support the concept that TCM increases clients' engagement with care and treatment adherence as demonstrated by significant increases in actuarial risk scores, medication costs, and total costs (Brennan-Ing et al., 2016).

### **Retention and Reconnecting Care**

Individuals diagnosed with HIV but not engaged in HIV-targeted medical care accounted for the majority of HIV transmissions in 2009 in the United States. There is a pressing need to implement and disseminate HIV retention in care programs (Maulsby et al., 2017). Between 2012-2015 seven retentions in care programs were implemented in the United States. Implementation cost for 1 year varied from \$47,919 to \$423,913. Models and intervention within each program varied which explain such a wide range in cost (Maulsby et al., 2017). From this study, Maulsby et al. (2017) concluded that cost-saving thresholds for the retention in care programs were 1.18 or less, representative that six of the programs would be cost-saving if they averted one transmission per year, and

the seventh would be cost-saving if it averted two transmissions per year. The study results propose that retention in care programs can be delivered at fairly low costs and seem to be a resourceful use of HIV prevention funds given seemingly achievable thresholds (Maulsby et al., 2017).

Persons living with HIV who have been incarcerated often have a delay in care after release. The transition is a critical time to minimize delays in treatment and care. It is important for these individuals to find a clinic to establish care. The Virginia Department of Health launched a program to link recently imprisoned individuals with HIV to treatment resources immediately after release from a prison (Bailey et al., 2019). This effort builds community relationships and ensures continuity of care. The care coordination program included patient navigation, mental health assessment, medication access, and treatment. In 2014 a total of 94 PLWH were released from correctional facilities in Virginia. Of the 94 served by the care coordination program 95% were linked to HIV care within 90 days of their release from a correctional facility, and 97% had evidence of HIV care within the 12 months following release. Furthermore, 94% were retained in care, and 68% were virally suppressed in the 12 months following their release (Bailey et al., 2019, p.29). Overall, the program encouraged positive health outcomes, communication between agencies, and served as an integrated approach to helping recently incarcerated PLWH during a crucial transitional period.

### **Interventions**

Care coordination includes the use of several interventions and the coordination of two or more persons to facilitate a patient's care. In 2011, New York State's Special Projects of National Significance funded a project called New York Links. This program

provided implementation manuals for three interventions: peer support, appointment procedures, and case management. The goal was to improve access and retention in care for those infected with HIV or those at high risk of infection (Addison et al., 2019).

Addison et al. (2019) identified three common themes: “concerted buy-in and coordination of staff, building upon existing infrastructure including ensuring sufficient staff capacity, and allowing adaptability of certain parts of the intervention to better fit patient needs and clinical settings” (p. 11). Findings support the need to incorporate the examination of quality improvement processes.

HIV care requires life-long intervention that requires continuous engagement in care along with medication adherence to reflect optimal benefits. Westergaard et al. (2017) adopted the mPeer2Peer model as an intervention to reach individuals out-of-care. This intervention utilized a smartphone application and patient navigation delivered by peer navigators to support HIV treatment for patients who had been minimally engaged in care. “Between September 2013-November 2014, 19 individuals were enrolled and randomly assigned to receive the mPeer2Peer intervention” (Westergaard et al., 2017, p.5). Twelve participants were interviewed after 9 months of operation. The common theme conveyed by participants was that it provided reminders to take medications and attend appointments. Innovative mobile technology tools such as smartphone applications have the capability to enhance existing care coordination programs (Westergaard et al., 2017).

Targeted approaches are needed to engage patients. The Max Clinic in Seattle, Washington aimed to connect with PLWH even though other means of outreach support were available (Dombrowski et al., 2019). The clinic included walk-in visits for primary

care purposes, provided incentives for completing visits and achieving viral suppression, and offered case management support. Having an open scheduling process and financial motivations are not commonly used but should be explored as an alternative.

Dombrowski et al. (2019) identified that after 1 year of enrollment 41 (82%) of Max Clinic patients achieved viral suppression. Dombrowski et al. (2019) found that patients who enrolled in the Max Clinic were significantly more likely to achieve viral suppression compared with patients marginally engaged in a more conventional clinic.

The purpose of this project was to evaluate the role of HIV care coordination programs and their relationship with patient outcomes. Information regarding care coordination programs can be utilized to find new tactics to reach PLWH to reduce disjointed care.



## **CHAPTER III**

### **Needs Assessment**

#### **Population and Setting**

People living with HIV (PLWH) are the population that would be serviced throughout this project. Participants would be chosen based on their status in care. Those who are newly diagnosed HIV positive, individuals that are not virally suppressed meaning a viral load  $> 200$  copies/mL, and clients who have been lost to follow up would be the target population. These focus groups would be utilized to see if there is an impact on care in relation to HIV care coordination programs.

The setting would take place at a rural local public health department in southeastern North Carolina. This health department provides clinical services for child health, family planning, communicable disease, and maternal health. The community is encouraged to seek health services at this local facility regardless of their ability to pay.

#### **Sponsors and Stakeholders**

The health director, providers, and director of nursing would be key sponsors for this project. Implementing this program would create a systematic method for follow-up phone calls and visits. Supportive measures would be taken to bridge the gap in care and provide additional resources for the HIV-positive community.

Internal key stakeholders in this project are patients, nurses, and administrators. Patients will be given additional support along their healthcare journey. Nurses will learn a new role in providing HIV care where follow-up and connections are prioritized. Swan et al. (2019) report- “Whether they are employed specifically as care coordinators or provide care coordination in their RN role, RNs are ideally positioned to be the point of

accountability” (p. 319). Administrators can gain insight into the influence of coordinated care for patients within their organization.

External crucial stakeholders affected by this project are the Ryan White program and AIDS Drug Assistance Programs (ADAP). A study conducted by Lightner et al. (2020) assessed a single Ryan White funded region where the health department acts as a main hub of federal pass-through funds. The health department staff are essential to the network and act as highlighted connections that build quantity and quality relationships across the network. ADAP is a part of the Ryan White Part B that works with health departments and community-based organizations to provide HIV-related medical care and prescription drugs for people living with HIV who have no insurance (HRSA, 2021).

### **Desired/Expected Outcomes**

From this project, the overall desired outcome is that PLWH will take an active role in their care. To attain this goal, HIV care coordinators will serve as support to help navigate care. Patient navigation is one intervention that shows potential for elevating engagement and retention in care for PLWH (Parnell et al., 2019). The objective of implementing an HIV care coordination program is to increase linkage to care, medication adherence, and sustaining viral load suppression. Maintaining a healthy lifestyle while living with HIV through treatment and medication adherence, safe sexual practices, and the use of sterile needles, is essential to prolonging the life of people with HIV and reducing the spread of the virus (Buehler et al., 2017).

To evaluate outcomes, appointment attendance and lab report values will be utilized. By keeping appointments for lab draws and provider consults this reflects the patient is actively participating in care. Lab values echo if the patient is virally

suppressed. If viral suppression is present that means the patient is taking their medication appropriately. If the patient reports they are taking their medication as prescribed, and the viral load does not mirror that the provider may need to switch the ART due to resistance. Skipping doses or starting and stopping medication can lead to drug resistance which can result in limited treatment options.

### **SWOT Analysis**

A strengths, weakness, opportunities, and threats analysis has developed into a major tool used for strategic planning (Benzaghta et al., 2021). Internal and external elements are identified and used to analyze the organization or new projects. Strengths and weaknesses are internal components. Strengths are factors that enable goals to be met, while weakness are characterized by matters that hinder organizational success (Benzaghta et al., 2021). Opportunities and threats are external aspects. Opportunities are identified to help bridge gaps or create new events, behaviors, or experiences to enhance the organization. Any barriers or potential obstacles are considered threats because it interferes with reaching goals (Benzaghta et al., 2021).

#### **Strengths**

Introducing an HIV care coordination program at the public health department opens opportunities for high-risk populations to receive proper medical care. The support and guidance provided by coordinators could decrease barriers to care. Access to care is a major barrier for those in rural communities and affects linkage to care. Transportation issues limit one's ability to keep appointments. This is one of the many factors that care coordinators would help patients work through to find solutions and maximize retention in care. Dombrowski (2020) echoed, "...Clinics providing HIV care should address

barriers to care such as transportation problems, unstable housing, substance abuse, and mental health conditions...” (p. 7). Linkage to care and retention in care is equally imperative. Care coordinators also help with ADAP applications as well as other Ryan White funded programs.

### **Weaknesses**

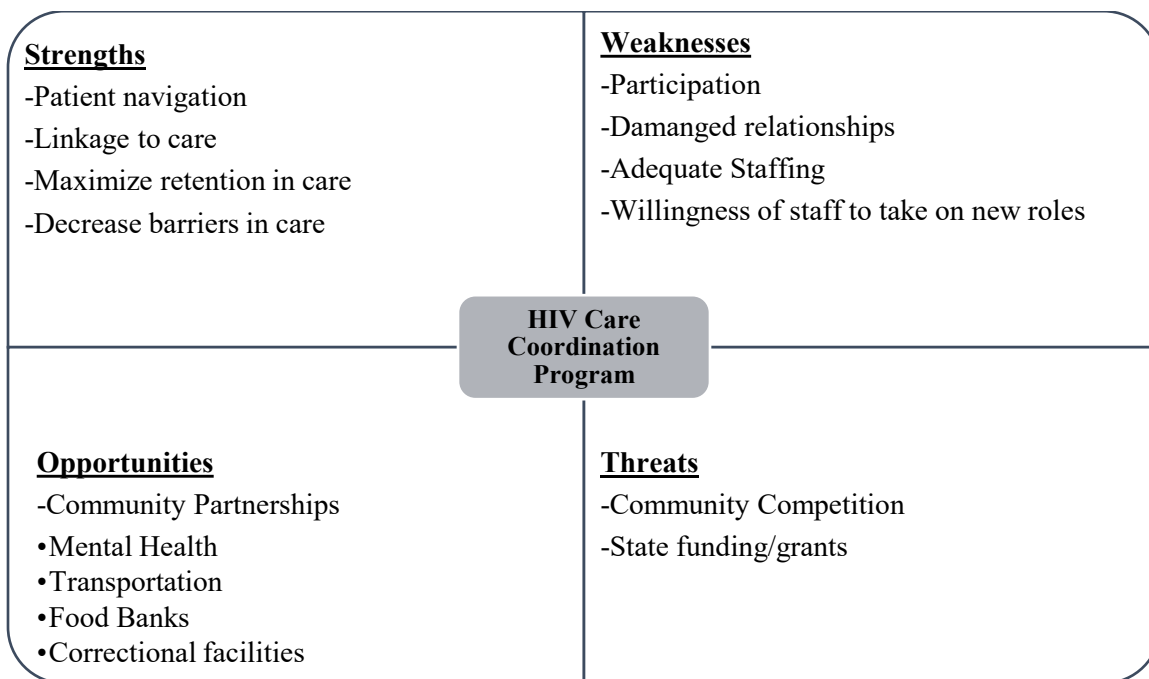
One major weakness for initiating a care coordination program would be participation. Finding creative ways to reengage people in care would be the biggest challenge. The program can be planned perfectly but if there is no involvement it is a waste. Previous encounters with staff that may not have been positive at the health department may generate a hindrance. Damaged reputations can leave lasting impressions, therefore, making it difficult to build trusting relationships again. Also, having adequate staff to fulfill the duties of managing the program who are willing to learn and take on new roles and responsibilities.

### **Opportunities**

Community partnership opportunities with mental health facilities, food banks, transportation, and housing complexes are possible. It is important to link individuals to community services. A collaborative effort based on well-established relationships among other trusted community partners sets the program up for success. Connections with the department of corrections and local jails can bridge the gaps in care for those who have been recently incarcerated. The program creates an opportunity to reach those individuals prior to release, therefore decreasing the likelihood of them being lost in care.

**Threats**

There is a local health organization that has an HIV clinic that provides case management to their patients. This clinic is within 5-10 minutes of the health department and used to be a part of their team. Recently the contract ended, and they no longer provided any type of case management services for the health department. When this partnership ended, many of the patients went to the other corporation. Others did not keep their appointments regularly and were not virally suppressed. Competition within the community poses a threat to starting a care coordination program at the public health department. Part B from the Ryan White program finances foundational medical services and support services. The specific allowable services funded by each State/Territory are determined at the State/Territory level based on needs assessment and available funding (HRSA, 2021). Not having adequate funding for the program presents a potential threat. Figure 2 illustrates a SWOT analysis for the project.

**Figure 2***SWOT Model***Resources**

For an HIV care coordination program to exist, establishing funding through the Ryan White program is of the highest priority. An office space for patient/nurse/provider consults is needed to discuss areas pertaining to care. Other resources need are:

- Laptops or tablet to complete ADAP applications and questionnaires.
- Partner with public transportation entities to obtain vouchers to get patients to and from appointments.
- Team up with local food banks to bring boxed goods/meals to health department for those in need.
- Collaborate with mental health facility for referrals.
- Contact local shelters for possible placement opportunities if needed.

- HIV testing, counseling, and referral training for all clinical team members.

### **Team Members**

Gathering team members to bring the vision of the project to life is imperative to its success. The following team members would be needed to provide care coordination services to PLWH:

- Registration staff to schedule patients accordingly for lab work every 3 months followed by provider visit.
- Mental health counselor to address any mental health/substance use issues.
- Providers to review lab work, perform assessments, initiate treatment plans and medications.
- Nurses to serve as patient navigators. RN to lead overall coordination of care to ensure all aspects of care are managed sufficiently.
- Social workers to address food and housing needs and offer additional support services as necessary.
- Director of Nursing to help oversee the project and help with funding/finances/policies in relation to HIV care.

### **Cost-Benefit Analysis**

Financial analysis evaluates businesses and budgets to determine the current performance and its suitability. Investigation to see if the entity is profitable enough to warrant monetary investment is considered. A medical care coordination program was introduced in Los Angeles County to address medical and psychological needs of HIV-positive patients (Flash et al., 2019). A study conducted by Flash et al. (2019) showed that “lifetime medical cost increased from \$311,300 with no medical case management to

\$335,100 with medical case management” (p.5). For those utilizing the medical program viral suppression was 57% and retention in care was 72%, in comparison to 33% and 59% respectively for patients with no medical care coordination. (Flash et al., 2019). From the care coordination program, viral suppression doubled for a cohort of people at risk for poor health outcomes with considerable medical and behavioral comorbidities, at an estimated annual cost of \$2,700 per person. The program was found to substantially increase life expectancy and be cost-effective (Flash et al., 2019).

To implement a similar program at a local health department with financial funding from the state is attainable. Utilizing programs such as ADAP will cover the cost of medication. After securing state funding, a large portion of finances would be spent paying and training staff. Other areas of cost would be used to purchase laptops/tablets, tables, desks, and chairs for the designated area. Advertisement and educational materials are necessary to promote this new opportunity. The benefits associated with starting an HIV care coordination program outweigh the cost. The services to be offered could be life-changing and the community consequently will experience decreased transmission rates. Providing these services helps individuals affected with HIV physically, mentally, and emotionally.

The purpose of this project was to assess the role of HIV care coordination programs and their relationship to patient outcomes. The goal was to educate everyone about the perks of an HIV care coordination program and how its current absence in healthcare affects care. New insight from programs such as this can help patients stay connected and involved in their care.



## CHAPTER IV

### Project Design

#### Goals and Objectives

The goal of this project was to connect the gap between the HIV-positive community and local health departments by establishing a care coordination program. This would be accomplished by improving retention in care, medication adherence, and viral load suppression. Figure 3 outlines the objectives and implementation strategies to reach and maintain goals.

#### Figure 3

##### *Objectives and Implementation*

Objective:	Implementation:
Establish linkage to care for newly diagnosed HIV-positive patients and those lost in care.	<ul style="list-style-type: none"> <li>• Within 48 hours of HIV positive diagnosis, patient will be linked with an HIV care coordinator to establish care and start an ART.</li> <li>• Provide referrals and linkage to supportive services within first appointment.</li> </ul>
Ensure medication adherence and treatment initiation within first provider visit.	<ul style="list-style-type: none"> <li>• The patient will be prescribed an ART to take daily for 30 days with their first meal of the day.</li> </ul>
Acquire viral load suppression, as reflected by lab work.	<ul style="list-style-type: none"> <li>• Viral load lab values will be drawn on the patient at initial visit and again 30 days after initiation of treatment regimen.</li> </ul>

#### Plan and Material Development

The team of staff would be chosen to start the planning and preparation process to review goals and objectives. This includes providers, nurses, registration staff, lab technicians, case managers, and mental health professionals. Defining each member's role

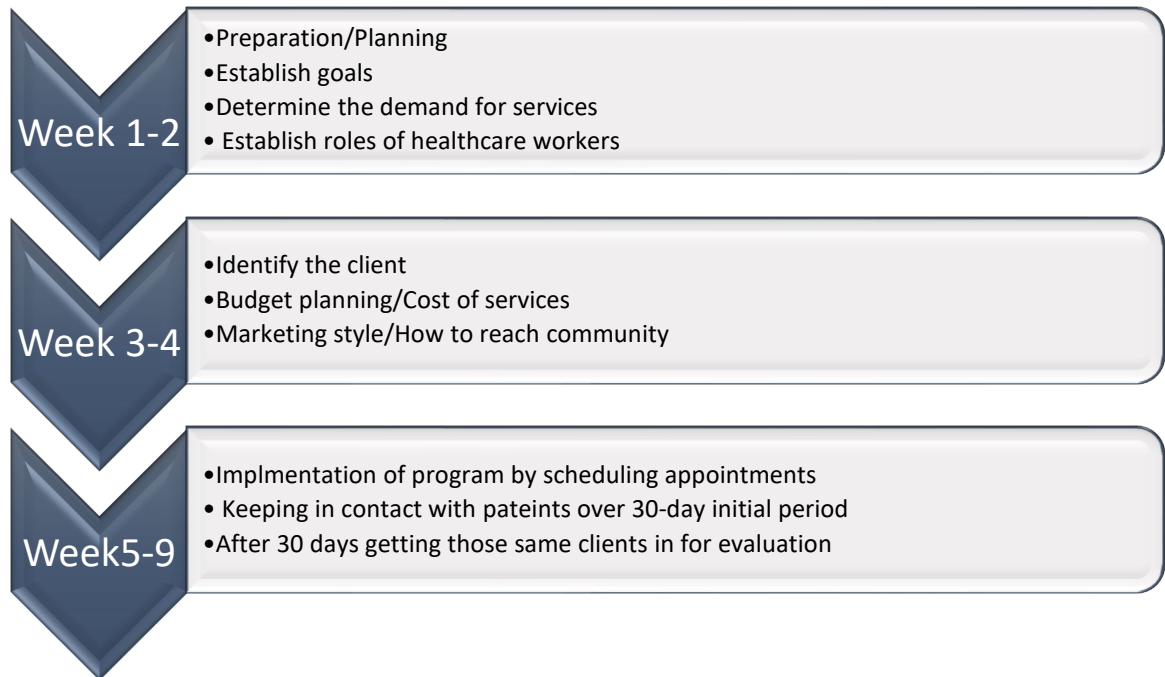
in the program is key. A marketing plan for how to reach the community would also need to be considered.

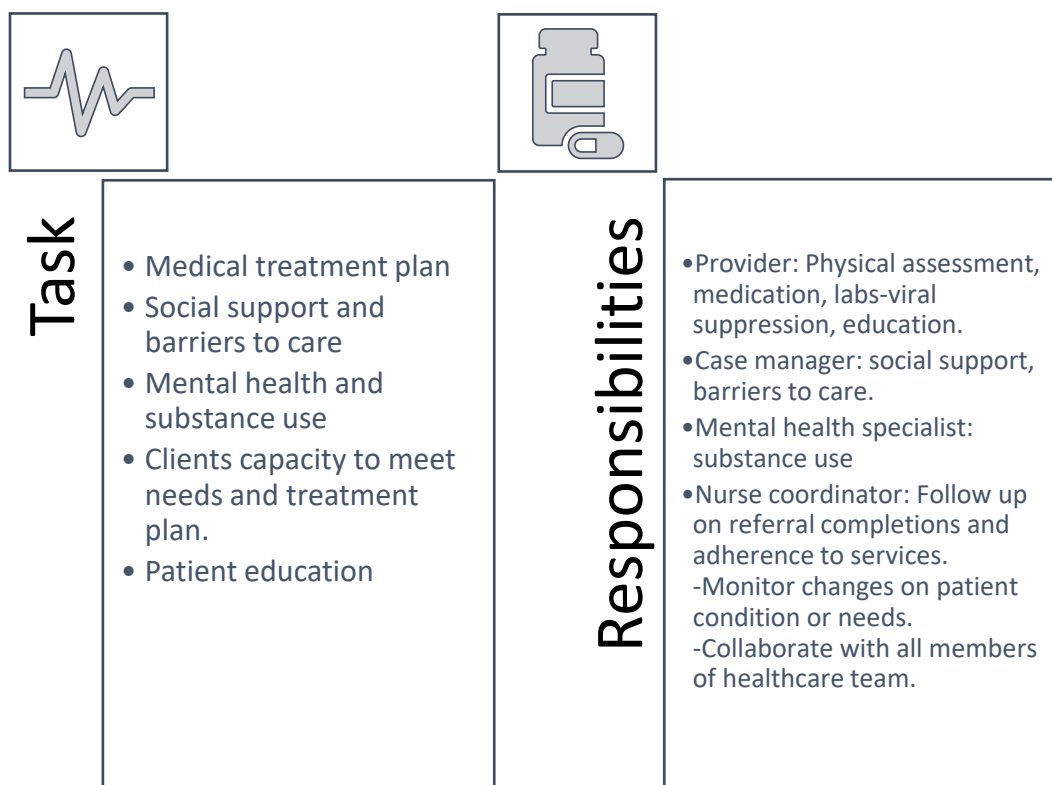
Subsequently, team members would identify individuals who fit the criteria of being newly diagnosed, lost in care, or unsuppressed. From this list created, the nurse care coordinator will reach out to these individuals to establish care, re-establish care, or touch base. Once they have been contacted and an appointment is scheduled by registration for labs and provider visit, enrollment in the care coordination program will begin. The provider is responsible for the physical assessment of the patient, laboratory review, and prescribing medication. Education of what viral suppression is and how to reach that by medication adherence would be explained to the patient by the provider. An antiretroviral therapy (ART) would be prescribed for the patient to start immediately.

Afterward, clients would receive patient navigation services for medical, social, behavioral health services. The patient would schedule appointments to meet with the case manager to address any social barriers to care including transportation or finances. The mental health professional would meet with the patient for an initial session and schedule a further appointment as needed to address any mental health matters. A follow-up lab appointment for 1 month would be made for another lab draw and provider visit. Within that month the nurse would contact the patient weekly to identify any setbacks, improvements, and give reminders of upcoming appointments. These 30-day follow-up appointments would be repeated for a total of 90 days. The nurse would be serving as a point of contact between the patient and other team members. The nurse plays a vital role to ensure the patient is supported. Navigating, advocating, and coordinating care are the three main aims of the nurse coordinator.

### **Timeline**

During weeks 1 and 2, the team would meet to establish the roles of each healthcare worker and determine the demand for this service at the health department. The planning and preparation stage will give time for everyone to familiarize themselves with the goals and objectives of the care coordination program. Opportunities would be given for questions, concerns, or comments about the program. Throughout weeks 3 and 4 the team will create a budget to calculate the cost of providing HIV care coordination services for one year. Marketing and educational material for the program will be discussed. Afterward, the team will begin identifying clients who meet the criteria and scheduling appointments. Within weeks 5 and 9 the program will begin as patients come to their scheduled appointments. In the following 30-days, the nurse will keep in contact with the individual to ensure continuity of care. After 30 days clients will return for evaluation of treatment, lab values, and overall care. Figure 4 illustrates a timeline for implementation. Figure 5 shows the task and responsibilities of each member.

**Figure 4***Timeline of Project*

**Figure 5***Task and Responsibility***Budget**

For this project, the staff needed are already employed by the local health department. The current triage and exam rooms would be utilized for services. The cost of at least two tablets cost approximately \$800.00. Whetstone Consultations has a contract with the North Carolina Communicable Disease Branch. This company provides a 2-day HIV testing, counseling, and referral training to staff of local health departments and designated North Carolina state employees free of charge. Educational pamphlets about HIV are also free and located on the Department of Health and Human Services website. There are brochures, fact sheets, and posters that discuss HIV infection. To market the new program setting up at community events would be an option. This gives

the community the chance to ask questions and inquire more about the services offered. Several areas that HIV care coordination programs target is covered by Ryan White funding. Services include medications, mental health, substance abuse, oral health, nutrition therapy, transportation, food bank meals, and psychosocial support services amongst others (Cahill et al., 2015). From the Los Angeles County, medical care coordination program for HIV-positive individuals Flash et al. (2019) determined the estimated annual cost was \$2,700 per person. Their team included a registered nurse, case manager, and social worker. Similar programs provide strategies toward meeting national retention and suppression goals (Flash et al., 2019). Figure 6 presents the expenses for this project. The health department already occupies many of the tools necessary for a successful care coordination program.

**Figure 6**

*Items and Associated Cost*

<u>Item</u>	<u>Cost</u>
Laptop	\$800.00
HIV testing referral, and counseling training	\$0.00 provided by Whetstone for state employees.
Educational Materials	\$0.00 DHHS website
Supportive services	\$0.00 Cost covered by Ryan White Program Funding
<b>Total (approximate) Cost = \$800.00</b>	

### **Evaluation Plan**

Examining the outcomes of the HIV care coordination program will be completed by various measures. Chart review will be utilized to evaluate the timeliness of linking the patient with a navigator. To determine if this process was successful initial diagnosis dates in relation to the start of care dates will be used to calculate the overall percentage of timely care. Appointment attendance will also be calculated by this same method. The lab results at the initial visit would be compared to lab results after 30-days of medication adherence. If the viral load is decreasing the goal of helping the HIV population become virally suppressed is targeted. Another key method for evaluation will be a survey given to all clients at their first 30-day follow-up visit. The survey (Appendix) will address what is working, needed improvements, or any other feedback the patient desires to provide. From this information data from lab values, attendance at appointments, and prompt assess to care can be reviewed to see whether the project is effective. Measuring these outcomes will determine if introducing the HIV care coordination program will impact linkage by minimizing barriers and gaps. The purpose of this project was to evaluate the role of HIV care coordination programs and their relationship with patient outcomes. Creating routine programs to minimalize breaks in care along the HIV care continuum is vital.

## **CHAPTER V**

### **Dissemination**

The project being presented would strive to solve a practice problem within the local health department. The purpose of this project was to evaluate the role of HIV care coordination programs and their relationship with patient outcomes. Information regarding HIV care coordination will be important to public health providers. The program will aim to keep clients engaged in care and moving towards a healthy state.

#### **Dissemination Activity**

The HIV care coordination project would be presented to staff members of the local health department. The format would be a recorded poster presentation using voice-over PowerPoint. Initially, a meeting with the health director and director of nursing would be established to share the project proposal. During this meeting, the lack of HIV coordinated care would be discussed and how it affects clients. Literature of different health departments adopting similar programs and how it has impacted their organization would be reviewed and presented for pertinence and relevance. The significance, purpose, implementation strategies, and desired outcomes would be outlined. The plan is to show how uncoordinated HIV care increases transmission rates due to increased viral loads, medication adherence difficulties, and gaps or linkage to care. It will also include how coordinated care positively influences patient navigation, suppression, and engagement. A time for questions, comments, or proposals would be available to address any concerns. If the health director and director of nursing concur, the project will then be presented to the remaining staff members. Everyone would be aware of the project



agenda and be provided the opportunity for questions or suggestions. All feedback gathered would be used to improve the project to reach its ideal potential.

### **Limitations**

Client participation limitations could be a factor. The smaller local health department could have very little participation due to the number of HIV-positive individuals. Implementing this project at a larger health department could strengthen the project by possibly boosting participation. Another limitation is the time frame of 30-days. Analyzing the project over a longer period would show a greater idea of how an HIV care coordination program would impact care.

### **Implications for Nursing**

The following are implications for public health nurses at local health departments based on this project:

1. After initial diagnosis of HIV, help client establish care and start the process of treatment.
2. Offer support, encouragement, and guidance to those already in care and those newly diagnosed. Reaching out to clients that have not been to the clinic in month is a great place to start.
3. Offer supportive services that are not just physical. Mental and social services are needed to manage an HIV diagnosis.
4. Identify common factors or trends that play a role in client's choice to keep appointment or take their medications.

People living with HIV need coordinated health and social care system that delivers streamlined amenities (Watson, 2018). People are now able to live longer lives due to

advances in medicine and having systems in place to ensure that is necessary. Watson (2018) explained, “As nurses working in HIV we need to enable our patients to manage this journey with ease, but systems may not be available; breaking down the complexities, case management, and skilled support will be our tools” (p. 8). Supporting patients as they navigate through the care system is vital to ensure model care is maintained.

### **Recommendations**

Recommendations to further the project include implementing the project at a larger facility that has a greater number of HIV-positive individuals. This would allow more people access to the program to see how it impacts their HIV care journey. Another recommendation would be to track the prevalence of medication resistance. Resistance can happen when someone skips multiple doses or starts and stops ART medications often. Tracking resistance for individuals enrolled in the care coordination program and those who are not would be evaluated to see if the program is beneficial to addressing this issue.

### **Conclusion**

Implementing an HIV care coordination program at a local health department served as a tool to help patients. The project offered a method to navigate the complex healthcare system of HIV care. Ensuring newly diagnosed individuals are linked to care in a timely manner, medication adherence, and viral suppression were priority areas. Patient-centered care plans along with antiretroviral treatments are key components to maintaining a healthy lifestyle. Overall, the project shined light on the many opportunities an HIV care coordination program can contribute to the organization and

patients. Areas for growth and development were evaluated to see how the project can be improved for the future use. Effective care coordination contributes to improving patient experiences, enhancing quality of health, and creating a smoother transition into care.

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6. How likely are you to recommend the HIV care coordination program to someone else whom is HIV positive?

- Not likely
- Somewhat likely
- Very likely