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Provider’s Perceptions of Couples HIV Counseling and Testing in South Florida: A Qualitative Study

Natalie Marie Leblanc

University of Miami, nmaryleb40@gmail.com

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PROVIDERS’ PERCEPTIONS OF COUPLES HIV TESTING AND COUNSELING IN SOUTH FLORIDA: A QUALITATIVE STUDY

By

Natalie Marie Leblanc

A DISSERTATION

Submitted to the Faculty of the University of Miami in partial fulfillment of the requirements for the degree of Doctor of Philosophy

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PROVIDERS’ PERCEPTIONS OF COUPLES HIV TESTING AND COUNSELING IN SOUTH FLORIDA: A QUALITATIVE STUDY

Natalie Marie Leblanc

Approved:

Joseph P. DeSantis, Ph.D.  Victoria B. Mitrani, Ph.D.
Associate Professor of Nursing and Health Studies  Professor of Nursing and Health Studies

Jason W. Mitchell, Ph.D.  Guillermo Prado, Ph.D.
Assistant Professor of Public Health Sciences  Dean of the Graduate School

Rosa M. Gonzalez-Guarda, Ph.D.
Associate Professor
Duke University School of Nursing
Providers’ Perceptions of Couples HIV Testing and Counseling in South Florida: A Qualitative Study

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Couples HIV testing and counseling (CHTC) is a dyadic approach to HIV prevention which has proven to reduce transmission within couples, promote condom use and disclosure, and sustain linkages to care. Literature on providers’ perceptions about CHTC in the U.S. is lacking. This study aims to: 1) ascertain provider knowledge, attitudes and perception of CHTC, and 2) identify provider perceived challenges and facilitators of CHTC. Providers were also asked to describe current practices to engage partners to screen.

A qualitative descriptive design was used to conduct in-depth, semi-structured interviews among healthcare (clinical and non-clinical) providers (N=22) in South Florida. These interviews aimed to attain their knowledge, attitude and beliefs about CHTC among their patient population. A qualitative content data analysis was conducted to develop codes, categories and themes. This was followed by a thematic analysis to explore more latent content and underlying themes from the narrative.

Most HCP’s possessed a favorable attitude toward CHTC and believed it to be warranted among their patient population. Content analysis revealed that provider’s perceptions were influenced by their personal ethos and experience, their knowledge of the local context including the context of their patient vulnerabilities. The content
analysis also revealed that HCP providers attitudes towards CHCT was shaped by their response to the protocol, couples consideration in providing HIV testing and care, and perceived challenges and facilitators of CHCT implementation. A thematic analysis identified four themes: Whom is this strategy for?; balanced engagement; provider experiences, practices and preferences; and the model of care and the health problem.

Providers perceived the strategy to be for couples who were aiming to establish commitment or monogamy. Providers perceived that the strategy allowed for the reconceptualization of health promotion within couples and approaches between patients and providers. Current provider practices and preferences were believed to either facilitate or impede CHCT, and the model of care employed in one’s facility was perceived to either be in concordance or in discordance with the strategy aims.

Providers identified a need for a paradigm shift in healthcare and medicine toward an integrative, interdisciplinary, holistic and preventative approach to disease prevention and health promotion. This shift would also ensure there is some concordance between the model of care and the health problem of interpersonal risk. Specific recommendations included the need for provider and patients education regarding interpersonal health risk; a need to refine the existing strategy protocol to include the offer of PrEP, pregnancy planning and an assessment of joint past risk behavior; and a need to streamline existing services so that partners are able to be screened for HIV if present with the index patient.
DEDICATION

This dissertation is dedicated to my grandmothers: Lamercie Innocent Leblanc (December 1925-April 2014) and Gaynell “Sugar” Broadnax-Hughes (April 1934-March 2014) who both transitioned as I was conferring this degree. Without their intrinsic passion for humanity and insight I could not be who I am today.
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Chapter 1

Introduction

HIV testing is the gateway to identifying and engaging HIV infected people into medical care. Innovative strategies to increase testing uptake, such as the availability of rapid testing and effective treatment, has made testing more accessible and acceptable worldwide. The World Health Organization reported that from 2009 to 2013, HIV testing increased globally by 33% (World Health Organization [WHO], 2014). The introduction of modalities that cater to individual preferences such as client-initiated testing, mobile testing, home-based testing and routine provider-initiated testing in clinical settings, has also contributed to uptake of HIV testing. National and organizational policy and guidelines have also given providers the tools through which to engage people to test for HIV infection (Cherutich, Bunnell, & Mermin, 2013). However, challenges to get people tested for HIV infection remain. Among those countries who reported testing rates in 2013, no greater than 50% of the populations have ever been tested for HIV infection, leaving many people unaware of their HIV status (WHO, 2014). This is significant because people who are unaware of their status contribute to the proportion of new infections (Marks, Crepaz, & Janssen, 2006; Skarbinski, Rosenberg, Paz-Bailey et al., 2015).

HIV voluntary counseling and testing (VCT) has been effective in reducing risky individual behaviors, increasing condom use and decreasing partner concurrency (Fonner, Denison, Reilly, & Sweat, 2012). However, men are less likely to be aware of their HIV status because HIV testing remains largely concentrated within reproductive health services. Even among women, non-pregnant women are least likely to be offered
HIV testing because VCT primarily caters to expectant mothers in reproductive health services (Bernstein, Begier, Burke, Karpati, & Hogben, 2008). Despite the contextual interpersonal nature of HIV transmission, HIV testing is still primarily individually focused (WHO, 2014). VCT is also based on a purely biomedical approach to disease prevention, diagnosis and treatment. However, as the research on factors associated with HIV risk, testing and treatment adherence among those who are infected evolves, a greater understanding of the psychosocial and interpersonal elements that influence screening has emerged (Avery et al., 2013; Berscheid & Regan, 2005).

Within generalized epidemics (i.e., characterization of the HIV epidemic in Sub-Saharan Africa) and among certain at-risk populations (i.e., men who have sex with men, injection drug users), risk for HIV transmission is heightened within intimate couples (Allen et al., 1992; McMahon et al., 2015; Simmons & McMahon, 2011; Sullivan, Salazar, Buchbinder, & Sanchez, 2009; Sullivan et al., 2014). Relationship factors such as interdependence, building trust and intimacy, and relational nuances like gender power imbalance and couple dynamics can challenge the success of individually-based HIV prevention frameworks. Such interpersonal characteristics can impede safer sex behavior, such as condom use and sero-status disclosure, limiting the impact of individually focused HIV prevention programs and interventions (Karney et al., 2010; Mitchell & Petroll, 2013).

Acknowledging the limitations of individualized approaches has led to interests in dyadic approaches to HIV prevention (Burton, Darbes, & Operario, 2010; Karney et al., 2010). This is due to a greater appreciation that individuals in a relationship are capable
of influencing the behavior of one another (mutual influence), and that relationship factors are essential predictors of HIV risk (Karney et al., 2010; Lewis et al., 2006b). It is this leverage that individuals have on the shared interests within an intimate dyad has influenced the introduction of couple-based health interventions (Burton et al., 2010; Simmons & McMahon, 2011). Dyadic approaches to HIV prevention are essential to address HIV transmission among couples at risk for HIV infection (El-Bassel & Wechsberg, 2012). Interventions that aim to reduce risk among couples have been shown to significantly impact adoption of safer sex behavior. One meta-analysis found that among 29 interventions, condom use significantly increased and partner concurrency significantly decreased (LaCroix, Pellowski, Lennon, & Johnson, 2013). The limits of VCT effectiveness demonstrate that there is a need to diversify testing strategies to (a) increase the proportion of men (irrespective of sexual orientation) and non-pregnant women who have access to testing and who actually test for HIV infection, (b) identify serodiscordant couples and strategize to minimize transmission, and (c) tailor prevention efforts that would maximize treatment and prophylaxis options for serodiscordant couples (Cherutich et al., 2013).

Review of the Literature

Provider-Initiated HIV Testing and Counseling

Provider-initiated testing and counseling (PITC) for HIV is an approach to routinize HIV testing within general medical care to identify people who are seropositive and who may not have tested otherwise. Studies have shown that the rate of missed opportunities among those who subsequently tested antibody positive for HIV infection warranted routine provider-initiated testing in clinical settings (Fernández et al., 2003;
World Health Organization [WHO], 2007). Routinized PITC in the antenatal clinic (ANC) setting has contributed to near universal screening among pregnant women, and identification of HIV-infected mothers has resulted in the reduction of vertical transmission to infants (Hensen et al., 2012). Studies have also shown that a healthcare provider at times is the sole motivator for individual testing, and is also cited as having an impact on the global increase in HIV testing (WHO, 2014), thus indicating the significance of provider involvement in facilitating HIV screening in primary care settings.

The literature provides insight to barriers and facilitators to provider-initiated HIV testing strategies (Medley & Kennedy, 2010). Some facilitators included organizational support to provide testing and having an existing patient load that included HIV-infected individuals (McNaghten et al., 2013). Other facilitators involved clinical indications from patient symptomatology, an assessment of patient risk for disease, provider knowledge of national testing guidelines, and provider practice within a jurisdiction whose legal framework allows for less restrictive consenting processes (Cohan, 2009; McNaghten et al., 2013). One systematic review revealed that provider attitude and practice had the strongest impact on patients engaging in HIV testing (Deblonde et al., 2010). Provider demographics such as provider role (nurse practitioners were more likely to test patients), provider gender (women more likely to offer), and provider ethnicity (Black and Latino providers were more likely to offer HIV testing), were also seen as important facilitators to testing (Grov, Bimbi, Nanín, & Parsons, 2006; Kushner & Solorio, 2007). Challenges to implementing HIV testing and provision of results included poor perception of patient or partner risk, encountering serodiscordant couples, perceived lack of ability, lack of
awareness of recommended HIV testing guidelines, and perceived need for more training to offer testing or provide antibody positive results (Gilbert, Nanda, Farley, & Mark, 2010; Medley & Kennedy, 2010; Myers, Koester, & Dufour, 2011). Due to the influence of clinical providers on the uptake of HIV testing and the incorporation of HIV prevention services in general, there is a need to understand provider perspectives and factors that may enhance or impede this approach. These findings are significant given that 85% of HIV testing occurs in clinical setting (CDC, 2013).

**Couples HIV Counseling and Testing**

Couples HIV counseling and testing (CHCT) is a dyadic approach to HIV prevention that entails joint testing and immediate disclosure among couples, and the provision of post-test counseling with specific emphasis to identify HIV-serodiscordant couples and to adopt a risk reduction plan for all couples (Centers for Disease Control and Prevention [CDC], 2012). Karney and colleagues (2010) proposed that interventions like CHCT are considered an efficient and effective strategy for HIV prevention. It ensures information given to couples is consistent and provided simultaneously, and coaches couples to jointly disclose and work towards a risk reduction plan that is tailored to the specific couple. Achievement of these outcomes is based on: a) recognizing the sources of influence that impact the couple’s behavior, and b) understanding the couple’s interaction that would indicate capacity to adopt safer sex/risk reduction behaviors (Karney et al., 2010). Couples HIV counseling and testing is a process facilitated by a provider that aims to achieve these outcomes for their patients.

The Centers for Disease Control and Prevention (CDC) promotes CHCT as an
effective strategy for HIV prevention and suggests clinic-based CHCT as the next step toward implementing this strategy (CDC, 2012). Currently in the U.S., agencies located within high prevalence jurisdictions throughout are piloting CHTC to address needs for testing among male couples. These agencies are primarily community based organizations with some having on-site clinical services (CDC, 2012). Studies that have assessed and reported findings of CHCT implementation in clinic-based settings have been done exclusively in the developing world with a focus on overall programmatic findings or patient outcomes (Allen et al., 2003; Allen et al., 1992; Becker, Mlay, Schwandt, & Lyamuya, 2010; CDC, 2012; Chomba et al., 2008). The majority of these studies focus on the international antenatal clinic setting. These studies have demonstrated the benefits of CHCT in the antenatal clinic setting in reducing mother to child transmission, improving exclusive infant breastfeeding and enhancing adherence to nevirapine among HIV-infected mothers (Conkling et al., 2010; Farquhar et al., 2004).

Couples HIV testing and counseling has been shown to reduce transmission within HIV discordant couples, promote consistent condom use, increase and ease partner disclosure, and sustain linkages to medical care for those who are seropositive (Allen et al., 1992; Allen et al., 2003; Becker et al., 2010; Chomba et al., 2008). In the United States given the heightened risk of HIV transmission within highly vulnerable couples (e.g., gay male couples, women of color in high-risk heterosexual unions), CHCT is a strategy that can be used to identify serodiscordant couples and minimize risk within couples in the U.S. Although there is a paucity of studies assessing the acceptance of CHCT among women and heterosexual couples in the United States, the literature has demonstrated its applicability and feasibility among couples at risk, namely gay male
couples, to get tested and counseled together (Mitchell, 2014c; Stephenson, Rentsch, & Sullivan, 2011; Wagenaar et al., 2012). One randomized control trial found that male couples in Atlanta, Georgia who participated in the CHCT arm (vs. standard individual services) reported fewer extra-dyadic partners following the intervention (Sullivan et al., 2014). Current literature on couples HIV testing lacks such assessments among U.S. women and there is a paucity of literature on providers’ perceptions about offering this service in the U.S., as well as insight into considerations for implementation in a U.S.-based clinical setting.

**Provider’s Perceptions of CHCT**

An integrative literature review approach as detailed by Broome (2000) and Whittemore and Knafl (2005) was used to identify literature on healthcare providers’ perceptions of couples HIV testing and counseling (CHTC). This approach entailed identifying articles that used varying strategies of inquiry to answer a particular research question. It is an approach that welcomes diversity in the “perspectives on a phenomenon” and that allows for a comprehensive analysis of the literature and topic of interest (Whittemore & Knafl, 2005, pg. 547). Integrative literature reviews allow for the inclusion of both qualitative and quantitative approaches to inquiry, thus adding to an expansive understanding of the phenomenon of interest.

Five databases were accessed (Google Scholar, CINAHL, PsycINFO, Medline, Pubmed) to identify articles on providers’ perceptions of CHTC by using varying combinations of relevant keywords (“healthcare providers”, “perceptions of”, “couples HIV testing”, “couples centered approach”, “HIV testing”) resulting in 36,400 titles screened. These articles, which were published from 2000-2015, were screened for
relevancy which resulted in 11 articles identified. Upon further screening of the 11 articles and their abstracts, and the removal of duplicates, six articles were found to provide adequate and relevant findings pertaining to provider’s perceptions of couples’ HIV testing. All six of these articles used qualitative approaches as the method of inquiry and were studies whose participants included patients/clients, and clinical and non-clinical providers. Only one of these studies used a quantitative approach as well (Theurrig et al., 2010). Among these studies, 5 included heterosexual populations in Sub-Saharan Africa (Kebaabtswe et al. 2010; Mlay et al., 2008; Njau et al., 2012; Orne-Gilemann et al., 2010; Theurrig et al., 2010), one included providers of men who have sex with men (Lippman et al., 2015), and two were multi-site studies (Lippman et al., 2015; Orne-Gilemann et al., 2010).

The studies used varying terminology for provider (i.e., healthcare provider, counselor or health worker) and in some instances the type of provider was not mentioned. Clinical providers made up less than a quarter of all the samples which has implications for the review of the provider-specific perceptions. Although there were some areas within studies where provider-specific responses were noted, for other articles particular findings are integrated and reported in aggregate. Only one study distilled and analyzed provider’s perceptions of couples’ HIV testing separate from other participants (Lippman et al., 2015). Across studies clinical practice implications for couples testing indicated that providers will have to be quite comfortable in communicating, especially with couples, to engage couples to test, disclose and adopt a risk reduction strategy (Lippman et al., 2015). Findings also suggested that providers must be knowledgeable
about the variety of options available to couples that are beyond the monolithic idiom of exclusive condom use (Njau et al., 2012; Orne-Gilemann et al., 2010).

The perception of couples testing was all positive and included acknowledgement of potential challenges and barriers. It also appeared to be mainly assessed in the context of men’s ability and willingness to participate in joint HIV prevention, specifically testing services. There was a perception that couples testing should be incorporated in other health services, whereas the antenatal setting is the only one where couples-based approaches would appear to intuitively complement existing services. Overall, providers reported that although at times they employed a couple-oriented approach when engaging clients, a protocol and guidelines for service delivery of couples’ HIV testing would be useful for them to have (Lippman et al., 2015).

Current couples-based interventions tend to begin with couples already having disclosed, include self-reports of serostatus or involve individual-based testing. Studies reported on the outcomes of the particular intervention that require mutual knowledge of one’s and their partner’s serostatus (El-Bassel & Wechsberg, 2012). The actual process of jointly testing, disclosure and agreement of a risk reduction plan are seldom reported in aggregate. It is important as couples’ HIV testing is considered as a strategy, that those who attempt to employ CHCT are aware of the attributes that constitute couples’ HIV testing and the protocols which are open to adaptation.

There are several factors for consideration of couples’ HIV testing in the United States. These factors are those perceived throughout the literature to influence provider perception and uptake of couples testing and the significance of them doing so that were mentioned previously (Gilbert, Nanda, Farley, & Mark, 2010; Medley & Kennedy, 2010;
Myers, Koester, & Dufour, 2011). The significance of couples testing is the known influence of dyadic processes on individual health, which is steeped in current knowledge regarding HIV transmission, the epidemiology, and sources of infection. It is also steeped in current provider practice regarding partner involvement in HIV testing and the clinical guidelines that advocate for provider-initiated HIV testing and counseling (Lippman et al., 2015; McNaghten et al., 2013; Passin et al., 2006).

**Theoretical Frameworks**

Acceptance and adoption of CHTC in clinical and community-based settings in the United States is contingent upon two main factors: (a) the characteristics of couples seeking or eligible for couples testing for HIV infection and their willingness to test, and (b) provider acceptance of CHTC as a viable strategy and their readiness to engage with couples to implement CHTC. A common undergirding concept among these two factors is that of the interpersonal relationship between individuals to promote health. Within couples, relationship factors such as trust and the desire to work toward a joint goal determine the likelihood of couples to engage in CHTC (Lewis, Gladstone, Schman, & Darbes, 2006; Montgomery, Watts, & Pool, 2012). Likewise, the literature has shown that relationship factors such as communication and trust influence the provider-client interpersonal relationship, which is important in health promotion. The characteristics of this relationship can enhance or impede the adoption of health behaviors by the client and/or undermine or facilitate patient care (Alli, Maharaj, & Vawda, 2013; Mitchell, 2013).

Couples’ HIV counseling and testing and negotiated safety sexual agreements are proposed to be contextualized within frameworks that characterize interpersonal
relationships. Two distinct processes characterize the interpersonal and interdependent contexts. First, the patient (couple in this case) and the provider as well as the individuals within a couple undergo emotional and cognitive processes geared toward reaching the patient’s health goal(s). Peplau’s theory of interpersonal relations (Peplau, 1952/1997) is based on the premise that nursing is a goal-oriented process characterized as “therapeutic” and “interpersonal” because it involves intimate interactions between people. It characterizes the patient – provider interpersonal relationship to identify and address a health problem (Peplau, 1997). This approach requires the provider to be mindful of his/her interaction with the patient in a specific context and to be mindful of the verbal and nonverbal communication that characterizes the patient-provider relationship. Other health professionals share with nursing health attainment as a goal, thus allowing broad applicability of the theory of interpersonal relations to all health providers who are involved in the implementation of CHTC.

The CDC protocol for CHCT (2012) offers a prescribed list of eight tasks to guide provider practice which can be integrated with Peplau’s theory of interpersonal relations. Central to the implementation of the CDC protocol and Peplau’s theory is provider communication to facilitate the couple to jointly test by helping both individuals understand the disease process and their individual contribution to mitigating risk. Communication can be both verbal and non-verbal. The first task of the CHCT protocol involves introducing the strategy to the couple which would constitute the orientation phase of Peplau’s theory and involves verifying both partners’ intentions to jointly test. This involves discussing HIV risks and observing couple dynamics, which would constitute the working phase of Peplau’s theory. During this phase the provider’s role is
to work with the couple to help them utilize relationship strategies to understand the joint risk and realize the communal benefit of engaging in CHCT (i.e., knowledge of each other’s status). The last two tasks exemplify the termination phase within the interpersonal relation theory by focusing on a discharge plan that aims to reduce risk for the couple. This would include being initiated into HIV treatment if applicable, linked to other related services or agreeing to strategies that minimize HIV risk.

Negotiated safety demonstrates an interaction within couples that includes male couples becoming mutually aware of their status and develops a risk reduction plan to mitigate risk. These are also components within the CDC CHCT protocol. Such processes can be explained and informed by the interdependence theory (Kelley & Thibaut, 1978) and the process of communal coping (Lazarus & Folkman, 1984). The theory of interdependence (Kelley & Thibaut, 1978) is a framework for understanding processes toward joint health outcomes as a result of interactions within an intimate dyad (Kelley, 1978; Lazarus, 1984). The outcome is derived by dyadic interaction and the individual influence on the joint outcome (negotiated safety agreement). Communal coping (Lazarus & Folkman, 1984) characterizes how individuals engage in an appraisal process, via cognitive and emotional self-assessments, to address stressors, and later modified to incorporate couples’ joint efforts to confront a common stressor (Lyons, Mickelson, Sullivan, & Coyne, 1998). It has emerged to reflect a couple’s mutual consideration of a health threat and joint aims to engage in shared behaviors to manage this threat (Lewis et al., 2006b) by in this case developing a type of sexual agreement to mitigate HIV transmission.
In closing this chapter, the literature suggests that provider perception of HIV testing strategies such as couples testing for HIV are lacking (Deblonde et al., 2010). It is also proposed that interpersonal strategies like negotiated safety that are inspired and prescribed by patient populations like male couples, but may be used in the literature inconsistently may also warrant further investigation. By addressing the specific aims presented above and through guidance of the theoretical frameworks mentioned, it is expected that this dissertation’s findings will provide guidance and highlight considerations for healthcare providers as they potentially work towards integrating interpersonally-based strategies into HIV prevention services.

**Purpose of Study and Specific Aims**

The purpose of this dissertation is multifaceted and includes synthesis of the factors and context that influence individuals to engage in HIV primary prevention strategies. These factors include HIV screening and condom use, including within the interpersonal context of sexual agreements among couples. The purpose of this dissertation is to ascertain current provider knowledge about and attitudes toward couples HIV testing and counseling (CHTC) as an HIV testing strategy.

**The Specific Aims**

**Aim 1.** Identify and synthesize the qualitative literature on HIV screening and individual receipt of results. Chapter 2 is metasynthesis of the facilitators and barriers to HIV screening. A metasynthesis entails a scientific and specific approach to interpret findings from the qualitative literature on a particular phenomenon of interest. The resultant interpretation reflects a process of integrating individual qualitative findings across studies on the particular phenomenon (Sandelowski & Barroso, 2007). A
A qualitative metasynthesis was selected as the means by which to analyze the studies due to the paradigm’s humanistic approach to contextualizing phenomena and the author’s desire to capture the salient and nuanced elements of HIV screening which quantitative studies may not capture (Creswell, 2013).

**Aim 2.** Examine the use, components and considerations of negotiated safety among male couples. Although there are theoretical foundations of interpersonal relationships which guide our understanding of how dyadic processes, relationships in particular, may impede or facilitate joint initiatives toward health promotion, it has been posited that dyadic processes towards health promotion are still not well understood nor applied (Burton, Darbes, & Operario., 2010; El-Bassel & Wechsberg, 2012; Karney et al., 2010). Chapter 3 is an integrative literature review of the concept “negotiated safety” (NS). Understanding the concept of NS is important for healthcare providers who are engaged in HIV prevention. An integrative literature review would aid in understanding the use and potential applicability of the concept by identifying the attributes, dimensions and factors associated with its use. This systematic review will help maximize healthcare provider’s capacity to facilitate couple’s based sexual health promotion strategies in various settings.

**Aim 3.** Ascertain perception’s about CHTC as an HIV testing strategy among healthcare providers practicing in South Florida. Gaining perspectives from clinical providers gives insight into potentially perceived facilitators and challenges to implementing CHCT in a clinical setting. Zheng et al. (2014) demonstrated with their literature review that provider knowledge was an important barrier to VCT even in a context where HIV testing policies were established to routinize testing. Furthermore,
even with provider knowledge, provider attitudes that counter national or local jurisdiction testing guidelines proved to de-motivate provider initiated testing. To achieve this aim, it is believed that to fully elicit an emic perspective from providers about a newer approach to disease prevention which requires their involvement warrants a qualitative approach. In-depth interviews were developed to create a conversation with providers to capture their understanding and insight of couples testing for HIV infection. Chapter 4 reports the findings of healthcare provider’s perceptions of CHCT.
Chapter 2: Facilitators and Barriers to HIV Screening: A Qualitative Metasynthesis

Background

HIV screening remains the gateway to primary prevention of HIV transmission and subsequent treatment of disease. It is also an opportunity to reassess risk for HIV transmission and renew efforts to reduce exposure to HIV, if seronegative (World Health Organization, 2008). Voluntary counseling and testing (VCT) has been found to influence safer sex practices via increased condom use and decreased acquisition of sexually transmitted diseases (STDs) (Mola, Mercer, Asgar, Gimbel-Sherr, & Gloyd, 2006; Sherr et al., 2007). VCT also has been found to reduce the number of sexual partners and influence the reduction of unprotected sexual acts (Denison, O'Reilly, Schmid, Kennedy, & Sweat, 2008), known risk factors for HIV transmission.

Accomplishments in biomedical research and technology development, combined with innovative community and clinically-based interventions, have expanded HIV screening globally and in the United States (Cherutich, Bunnell, & Mermin, 2013). In settings such as jails, it is only with the introduction of rapid testing that VCT is feasible to implement, albeit still with facility-based challenges (Beckwith et al., 2012; Hammett, 2001). Routinized, provider-initiated testing (PITC) in the antenatal clinic (ANC) setting has greatly contributed to near-universal screening among pregnant women, and identification of HIV-infected mothers. This has resulted in generous reductions in vertical transmission (Hensen et al., 2012). The ANC setting also has been optimized in

home settings to promote couples HIV testing and counseling (CHTC), capturing heterosexual men who may not otherwise test for HIV, and to enhance subsequent linkages to care (Conserve, Sevilla, Mbwambo, & King, 2013; Msuya et al., 2008). CHTC encourages joint disclosure of status, engagement in safer sex practices, a reduction in HIV transmission, and partner support with the disease and neonatal health (Allen et al., 2007; Bunnell, 2005; Rosenberg, 2012).

Community-based innovative testing strategies like the social network strategy (SNS) for HIV testing among men who have sex with men (MSM) and mobile testing in targeted areas have been shown to reach vulnerable populations who may have a lower perception of risk and would not or could not test otherwise, or are highly marginalized (Bowles et al., 2008). Implementation of the SNS has revealed seroprevalence rates within networks to range from 3% to 8%, which is 1 to 4 times greater than those found with other targeted strategies (Kimbrough et al., 2009; Shrestha et al., 2010). A seven city study demonstrated that mobile testing in various venues, like bath houses and parks, garnered a 60% acceptance rate for HIV testing, with 75% of those who tested positive receiving confirmatory results (Bowles et al., 2008). A newer strategy, home-based testing, has proven to be highly acceptable among men and couples in sub-Saharan Africa (Dalal, 2013; Kyaddondo, Wanyenze, Kinsman, & Hardon, 2012; Wachira, Kimaiyo, Ndege, Mamlin, & Braitstein, 2012). It has shown efficacy in increasing access to HIV testing among those who may not test otherwise and in identifying serodiscordant couples and those individuals with acute infection (Ibitoye, Frasca, Giguere, & Carballo-Diegez, 2014).
Significance

Given the benefits of HIV screening, increased access and acceptance of VCT as a prevention intervention is important. The efforts to increase access to HIV screening through innovative behavioral strategies and technologies with enhanced specificity demonstrate promise towards increasing the number of people who are aware of their HIV status. To fully assess global screening and its accessibility, international health bodies attempt to retrieve community-based sample data on HIV testing history and health facility data. Access to this information is difficult and if accessible, common indicators are not used which would allow for cross-country comparisons. In some cases, HIV screening and/or testing data are simply non-existent. It is estimated that current collective information on HIV screening is limited to a dozen countries that are located largely in Asia and Africa. There is a great range in the proportion of facilities that provide HIV screening services, with most doing so in private, urban, hospital-based settings (World Health Organization, 2010). Likewise, the proportion of the population who have screened range from less than 2% among men in Niger to close to 45% among women in the Ukraine. Relatedly, those knowledgeable of their HIV serostatus range from 5% in Guinea to 60% in the Dominican Republic (World Health Organization, 2008). This variation in screening requires an explanation to the barriers to HIV testing uptake in different settings.

With more than 2 million new HIV infections globally in 2012, many countries have devised national strategies to increase uptake (as defined as adoption of HIV testing by people or by entities as a service) and expand access to HIV screening. Some utilize the strategies mentioned above; however, shortcomings remain (Joint United Nations
Programme on HIV/AIDS [UNAIDS], 2013). For example, one Ghanaian study reported an increase in testing by utilizing national testing campaigns to enhance access at health facilities, resulting in exceeding national annual testing targets (Yawson, Dako-Gyeke, Ayisi Addo, Dornoo, & Addo, 2014). Despite these efforts, screening rates in high prevalence regions in that country remained critically low, where less than 12% of the population had ever screened for HIV (Yawson et al., 2014). In the United States, despite national guidelines for provider-initiated testing and recommendations for screening for specific groups, the Centers for Disease Control estimates that 1 in 7 people who are HIV seropositive are unaware of their status (Centers for Disease Control and Prevention, 2014). If the benefits of increasing accessibility to HIV screening are to be optimized, it is imperative that there is a better understanding of the barriers to and facilitators of HIV testing.

The barriers to and facilitators of HIV testing are numerous. Most studies that assessed facilitators and barriers to testing focused on what motivates clients and client characteristics and circumstances that may facilitate screening. In comparison, there is a paucity of literature on the structural and provider-related factors that act as barriers to or facilitate HIV screening (Deblonde et al., 2010). This information is crucial to maximizing current testing strategies and further developing innovative technologies and novel interventions.

As part of a larger metasynthesis we explored factors associated with the various components of the HIV/AIDS care continuum (Gardner, McLees, Steiner, del Rio, & Burman, 2011), otherwise known as the HIV treatment cascade. We sought to enhance the current knowledge of barriers to and motivators of HIV screening and subsequent
receipt of HIV confirmatory results by assessing all HIV/AIDS-related qualitative studies on this subject from 2008-2013. We chose these years to take into consideration the most recent advances in HIV screening. This metasynthesis focuses on the first two parts of the HIV treatment cascade: (1) screening uptake - people screening for HIV infection, and (2) receipt of test results or serostatus awareness. Qualitative metasynthesis was selected as the means by which to analyze the studies due to the paradigm’s humanistic approach to contextualizing phenomena and the authors’ desire to capture the salient and nuanced elements of HIV screening which quantitative studies may not capture (Creswell, 2013). The aim was to identify qualitative studies that addressed what influences people to: (1) screen for HIV infection?, and (2) receive their results?

Methods

This study is a metasynthesis of qualitative articles relevant to HIV screening uptake and receipt of testing results, as part of the HIV/AIDS care continuum. A metasynthesis entails a scientific and specific approach to interpret findings from the qualitative literature on a particular phenomenon of interest. The resultant interpretation reflects a process of integrating individual qualitative findings across studies on the particular phenomenon (Sandelowski & Barroso, 2007). The approach to developing this particular metasynthesis study involved elements proposed by Sandelowski and Barroso (2007) and include: a) deriving a research question or problem, b) systematically identifying and extracting articles to be analyzed, c) article appraisal, d) data abstraction and e) data synthesis.
Search Strategy

Principles of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines for data retrieval and reporting were adapted for this qualitative synthesis. In particular, this framework was used to detail information regarding the specific search strategies and selection of studies from article identification, screening, and eligibility, to final inclusion.

We conducted a comprehensive review of all published qualitative studies from the following three online reference databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL), MEDLINE (PubMed) and PsycINFO. To ensure that a thorough search was conducted, the McMaster Qualitative Filter for Maximum Specificity was used (Letts et al., 2007; see Table 1). Various combinations of the key words and controlled vocabulary terms “Human Immunodeficiency Virus”, “Acquired Immune Deficiency Syndrome”, “qualitative’, and “themes” were used along with a combination of Boolean operators (and, or, not) to search the literature. We consulted with a Duke medical library health information specialist throughout the project to ensure a thorough and systematic search of the online databases.

Inclusion Criteria and Article Extraction

Inclusion of the articles was restricted to those that were: a) published in a peer-reviewed journal, b) with publication date limits from January 2008 to December 2013 to include the most current research (Barroso, Sandelowski, & Voils, 2006), c) published in English, and were original qualitative studies or were the qualitative findings from mixed methods studies that focused on barriers to and facilitators of screening for HIV infection and receipt of their tests results.
No geographical criteria were applied to the search strategy; we accepted studies conducted across the globe. Literature reviews were excluded from the analysis because the original articles were captured in our searches. We included articles from all perspectives, including those from individuals living with HIV/AIDS, care providers and community stakeholders.

Article Appraisal

Our appraisal did not involve the use of a metric to evaluate the quality of the individual articles. As Sandelowski and Barroso (2007) noted in the development of the process of metasynthesis, much has been written about the appraisal of qualitative studies, with little agreement about what constitutes a “good” study. But no consensus has been reached on quality criteria; indeed, the assumption that the description of something in a research report is the equivalent of what actually occurred during the conduct of a study may be incorrect. Even when the same criteria are used, there is no guarantee that we will achieve intra-reviewer consistency. More recently, Sandelowski (2015) argued that “the process of judging inevitably entails the active deployment of taste, or the selection of those considerations deemed applicable to any one object of evaluation in addition to the continual (re)interpretation of those considerations and their applicability to any other comparable object of evaluation” (p. 89). For these reasons, amplified by the fact that we chose to look at studies from around the globe which represented tremendous diversity in all aspects of research, we did not conduct a quality appraisal on the articles (Sandelowski, 2015).

After duplicates across the published citations were removed, article abstracts and titles were assessed. This resulted in 285 articles that met the inclusion criteria (see
The articles were exported to an EndNote library to facilitate data management, and article authors and publication information were chronicled in an Excel spreadsheet. The three authors of this paper alternately performed quality tests to verify which articles met the inclusion criteria (e.g., spot checking every tenth article by reading the abstract or the full-text article). Of the 285 accepted articles, 128 unique publications contained qualitative findings that had implications for HIV screening and receipt of results.

**Data Abstraction**

The final 128 full-text articles were read multiple times and analyzed. Findings from these included studies were abstracted via the matrix method (Garrard, 2011) to efficiently organize data. One Excel spreadsheet for each database was developed to summarize articles in a standard structure according to the most pertinent findings we identified. We retrieved information such as study design, samples and findings from the articles extracted for inclusion. The qualitative study findings were further grouped according to which part of the HIV/AIDS care continuum they illuminated. This report will detail only those extracted results that pertain to HIV screening uptake and awareness of one’s serostatus (Sandwelowski & Barroso, 2007).

**Data Synthesis**

Once the design and sample information was catalogued in the Excel spreadsheets, the findings were reviewed and analyzed again to first identify recurring content across the studies (Barnett-Page & Thomas, 2009; Sandelowski & Barroso, 2007; see sample in Table 2). Notes were made of patterns which allowed for the integrated interpretation of the themes identified in the original study (Sandelowski & Barroso,
2007). The metasynthesis consisted of grouping similar findings into codes that identified the salient factors which encouraged successful screening for HIV infection across multiple geographic and care sites and populations, and the consistent barriers that hindered individuals from returning for or receiving the results of their tests. These codes were synthesized further to create categories and eventually themes based on consensus among the authors (Sandelowski, Barroso, & Voils, 2007).

Further interpretation of the findings revealed that a broader framework had emerged. The realization guided the authors to employ reciprocal translation as the analytical approach to integrate the findings across studies and to synthesize the themes. According to Sandelowski and Barroso (2007), reciprocal translation is an integrative process of that is used to interpret and synthesize data to give greater meaning to the results as an aggregate in order to answer or address the phenomenon of interest. It involves the use of in vivo concepts or themes and the introduction of those imported from the theoretical literature.

Results

Synthesis Framework

Our metasynthesis revealed that barriers and facilitators to HIV screening and the receipt of test results were multifactorial and ecological in nature. Consequently, we felt that a socio-ecological perspective provided an appropriate approach for synthesizing the qualitative literature. The ecological perspective posits that there is a complex relationship between an individual and their environment (Bronfenbrenner, 1979). This framework appreciates that engagement in health promotion activities, such as HIV testing, is not an individualized endeavor, but occurs in context of the social, structural
and political environments. Ecological influences have an enduring effect on an individual’s perception of HIV as a disease and screening. Our findings suggest that an individual’s general perception of health and disease, related behaviors as a result of one’s perceived reality in concert with interpersonal experiences, and broader contextual elements influenced individuals to seek screening and to receive their results.

**Levels of Influence**

In concordance with an ecological perspective we propose three levels of influence that emerged from our metasynthesis on the barriers and facilitators of HIV screening uptake and receipt of testing results: individual attributes, interpersonal attributes, and broader patterns of influence. Individual attributes represent the experiences of and the emotional and psychological processes endured by individuals undergoing or refusing to screen for HIV. It also involved individual attitudes and self-concepts that influence the perceptions and motivations for HIV screening. Interpersonal attributes are those that engage the individual with other people, such as a spouse, and those who are involved in the HIV screening process or engaged within a setting that influences screening, such as a healthcare provider. The third level of influence we termed the broader patterns of influence, which involved structural influences posed by a particular setting, strategy or policy at a local or national level that facilitated or impeded testing uptake.

The majority of studies reported on individual attributes regarding the barriers to and facilitating factors for HIV screening. Factors that influenced individual receipt of testing results were couched in findings with screening. Fewer studies assessed the greater ecological and socio-political factors influencing how to get people to test for
HIV infection. Many of the studies focused on those experiences in Sub-Saharan Africa and globally predominated among factors affecting women. Despite these trends in the literature, we found the factors that facilitate or impede screening uptake and serostatus awareness were global and universal in scope. Studies that comprised the metasynthesis are noted with an asterisk in the reference list.

**Individual Attributes**

**Fear.** Fear was the most prevailing individual attribute which influenced engagement in HIV screening and receiving results. Depending on the setting and the population, fear operated as a facilitator of and/or an impediment to HIV testing. For example, fear of transmitting the virus to a partner or an unborn fetus, specifically for pregnant women, was a motivator for HIV screening. Fear of knowing one’s status and the anticipated emotional and psychological turmoil from a seropositive result prevented people from getting screened.

Anticipated breaches to positive interpersonal experiences such as dissolution of an intimate relationship or abandonment by family and friends also served as strong impediments to HIV screening. To maintain positive interpersonal experiences, people would delay HIV testing or simply refuse to test. Anticipated and actual breaches are primarily fueled by stigma which manifested as more than just individuals perceiving and anticipating discrimination based on serostatus, but also based on the interpretation by others of a seropositive diagnosis being indicative of ones’ immorality and lack of chastity. Stigma was not a concept specifically used by study participants, but rather was exemplified by the reporting of positive interpersonal experiences individuals desired to maintain. These anticipated breaches of community and social support were common
sources of stigma which fueled the fear of screening and subsequent refusal to test for HIV.

**Lack of Awareness.** Individuals’ lack of awareness about HIV screening, diagnosis and treatment emerged as a factor related to fear but independently served as an impediment to screening uptake and to subsequent knowledge of one’s results. Lack of awareness was characterized as individuals not knowing where to access services, assumptions about the screening process and harboring outdated beliefs regarding the success of treatment for people who have HIV (i.e., believing death was imminent for someone with HIV), and lacking sufficient understanding of an HIV diagnosis, including not knowing what a positive result actually means. Related to a lack of awareness about HIV screening and diagnosis were individual perceptions about the disease (including HIV risk) and, to a larger extent, an individual’s personal assessment of wellness and health as barriers to and/or facilitators for seeking HIV screening services.

**Perception of Risk.** Perception of seropositivity operated as a barrier based on an individual’s presumption that they were already seropositive, and their anticipation of poor psychological and emotional outcomes, should they test positive, dissuaded people to test. For other people, HIV screening was used as a confirmation of perceived symptomatology of HIV infection or AIDS. Therefore, testing for some was motivated by a desire to confirm self-perceived seropositivity, even if this was not the case. HIV screening was also reported by some to be exclusively a gateway to treatment, not as a health maintenance-related behavior. As a facilitator of HIV screening, perception of disease from a preventative perspective inspired a desire in other individuals to engage in wellness behavior and to enhance their quality of life by knowing their HIV status.
Denial of HIV risk was often presented in conjunction with a fear of screening. It emerged as some people reported low self-perceived behavioral risk for HIV acquisition and delayed screening until symptoms arose. Occasionally, men would present with HIV symptoms, eventually test but not accept that they were infected with HIV, thereby denying their infection. In several reports non-gay identified men who had sex with men (MSM) delayed HIV screening allowed them to maintain an identity that incorporated their heterosexual identity. For others delayed testing was deliberate until symptoms required seeking medical expertise. In other scenarios, the experience of HIV symptoms was the impetus for individuals to seek HIV screening. All of these cases appeared overrepresented among men regardless of sexual orientation. It should be mentioned, however, that not all individuals who have a low risk perception are in denial or delayed testing; in many cases, they simply lacked the awareness of what constitutes risk for HIV transmission. Perception based on current or previous sexual/drug using behavior or engagement in occupations that posed a risk for transmission, such as a traditional birth attendant or commercial sex work, were also motivators for HIV screening.

**Interpersonal Attributes**

**Partner Considerations.** Partner-based risks for infection emerged as an enduring interpersonal attribute that influenced individuals to seek or not seek HIV screening services. This was due to individual concerns regarding lack of trust in their partner to be monogamous, cases of infidelity, or as a result of an unexplained illness or death of a sexual partner or spouse. Relatedly, among many men who chose not to seek HIV screening, some perceived their risk for HIV and subsequent motivation to test for HIV based on the serostatus of their female partner. This finding emerged primarily in
studies reporting attempts to engage male partners in antenatal services. Men often referred to their female partners’ serostatus as a proxy for their own and therefore refused testing if she was seronegative or did not disclose. Knowledge of or suspicion of a partner’s HIV risk can motivate someone to screen, and viewing one’s partner’s status as proxy for one’s own can impede testing. It was commonly reported that HIV screening within married couples suggested infidelity, and therefore testing was avoided under these circumstances by both men and women. In other circumstances, women could not test without the consent of their husbands or intimate partners. Other couples, however, were amenable to screening within certain settings and perceived testing to be indicative of their commitment to one another.

Provider Attributes. Provider attributes were one of the important factors in getting people to screen for HIV and receive their results. The attributes of both clinical providers and lay health workers either motivated people to screen or posed as significant barriers. For many individuals, provider-initiated testing was the sole reason for someone engaging in HIV screening services. In the presence of other potential individual barriers, such as individual engagement in drug rehabilitation, provider offers of HIV testing still proved a strong motivator.

Patient-provider interaction in the form of communication and interpersonal skills also posed as a deterrent or motivator for people to screen for HIV infection and the dissemination of test results. The time spent by providers discussing with patients the benefit of knowing one’s status and the accurate provision of information about treatment convinced patients to screen. Also, a nonbiased approach from providers or testers and a welcoming atmosphere in testing sites or clinics facilitated HIV screening. More
specifically, the interpersonal skills of screening staff and clinic employees mattered, whereby a reassuring pre-test counseling experience facilitated getting people to test. However, client discord with the provider engendered patients’ lack of trust in providers, and lack of confidence in providers to maintain confidentiality. Tangibly mentioned but not the focus in the literature regarding stigma is the potential of provider-induced HIV-related stigma which emerged in the form of patient-perceived breaches in confidentiality. It also emerged in patients’ perceived ill treatment and discriminatory behavior of providers.

Provider perspectives of the HIV screening process in tandem with providers’ willingness to offer testing influenced screening uptake. If not as routine practice, patient symptomatology was the reason most providers offered an HIV test. Provider-perceived time constraints in relation to other priorities and patient load impeded providers’ routine offers to test. Time constraints included having to consent individuals for screening and engaging individuals in pre-test counseling. Consent and pre-test counseling were perceived as unnecessarily lengthening the HIV testing process and thus created a burden that impeded providers’ engagement with patients to screen for HIV. However, other providers felt a moral obligation to discuss potential seropositivity with patients who consent to testing, which demonstrated a willingness of some providers to commit the time to engage patients to screen and provide them with their results. Patient symptomatology and certain patient demographics (women and persons of color were more likely to engage patients to test) were other provider-based motivations to offer HIV screening.
Although non-HIV specializing providers may be willing or already include the offer of HIV screening in their current practices, their lack of confidence in their skills related to HIV testing drastically altered the testing experience for both patients and providers. These providers’ lack of experience with HIV-infected patients lowered their confidence to broach the issue of screening and HIV risk with patients, and engendered feelings of anxiety over providing a positive test result to client. These issues emerged as deterrents for health providers to offer an HIV test and to ensure that people got their results. Despite these barriers, many providers believed that HIV screening should be routine because it is good public health practice.

**Broader Patterns of Influence**

**Location Attributes.** Location of clinical services emerged as a consideration among many people seeking HIV screening services and returning for test results. Concern about the physical location of services included settings that were freestanding, within a larger facility or part of a greater health service, and their proximity to ones’ home or workplace. Locations perceived to be inconvenient and distant to one’s residence were reported as potential barriers to HIV screening uptake. Economic constraints commonly emerged in tandem with location of services, specifically transportation costs to distant screening sites and those accrued with a second trip to receive confirmation of results. Furthermore, limited service hours at testing sites were a deterrent to screening as were receipt of results, due to competing obligations during clinical hours. These issues made testing services not readily accessible even in instances where they were locally provided.
Location issues with regards to clinic-specific services were another consideration. Overwhelmingly, men were uncomfortable pursuing HIV screening services at antenatal clinics, due to their perception of the clinic as strictly a women’s space and uninviting to men. As mentioned previously, men also used the HIV status of their partners or spouse as a proxy of their own HIV status and thus would forgo confirmation of their status. Also, sites that offered testing and known to provide HIV/AIDS care were avoided for fear of being recognized at these facilities and assumed to be HIV-infected. The possibility of seeing neighbors or acquaintances employed at local testing sites served as justification for not screening.

**Strategies to Test.** Specific strategies aimed at enhancing HIV screening services generally proved to be facilitators to engage people in testing services. Lengthy wait times were perceived to invoke anxiety in people who sought testing and posed a potential barrier to obtaining results. Testing strategies that reduced wait times for screening and receiving results, and that maintained confidentiality, were perceived to facilitate testing. For example, oral rapid testing was perceived as one strategy that minimized the time of anxiety between screening and receiving results. Rapid testing also was perceived as less burdensome on providers’ time. Incorporating point of care testing (POCT), with rapid testing as part of routine primary health services, allowed clinical and lay health providers to conduct more tests with patients seeking general health services.

**Discretion of Services.** Home-based testing received mixed reports of facilitating or deterring people to test. On one hand, it did not always engender perceptions of privacy due to the provider potentially being from the same community as the couple being tested. However, most people endorsed home-based testing as a strategy which
offers a setting that promotes privacy, discretion, and a gender-neutral space that addresses the barriers of transportation and men’s lack of comfort in antenatal clinics.

**Global Contexts.** National and local guidelines are contextual elements that have been reported as salient barriers and facilitators to HIV screening. Policies that encourage routine testing in emergency departments, targeting pregnant women for the prevention of mother to child transmission, and adequate funding to enhance existing screening programs, facilitated provider-initiated testing and getting people to test who may not otherwise do so. These forms of support enhanced screening services by providing a framework for service delivery and funding to hire lay health workers to support testing programs. It also ensured that testing materials and other resources to follow-up with those who test positive or who are in need of supporting services were available.

Incorporating HIV screening into primary health care or other routine care services and policy issues effectively influenced persons to screen for HIV. The incorporation of HIV screening into primary care addressed some provider attributes such as time constraints and patient concerns such as stigma, which posed barriers to testing.

Structural impediments that prevented HIV testing and receiving results involve laws that criminalize sex work, IV drug use and behaviors that do not conform to the norm, such as male-to-male sex. In settings where these behaviors are taboo or prosecuted, screening for HIV is a complicated process that has repercussions beyond individuals’ health concerns. Similarly, populations such as undocumented immigrants or seasonal laborers perceive a greater incentive in not accessing HIV screening services rather than to risk deportation or threats to security or livelihood. Missing from the
literature were greater policy implications for getting people to test and obtain their results.

**Discussion**

Our findings are based on what was available in the qualitative literature on findings regarding HIV screening. Through this metasynthesis we identified universal factors related to HIV testing and the obtaining of results. Most studies that assessed facilitators and barriers to screening focused on what motivates clients and client characteristics and circumstances that may facilitate testing. In comparison, there is a paucity of literature on the structural and provider-related factors that act as barriers to or facilitate HIV testing (Deblonde et al., 2010). This information is crucial to maximizing current screening strategies and further developing innovative technologies and novel interventions. We were able to identify areas of further consideration in the effort to increase HIV screening uptake and the provision of test results.

**Alleviate Fears of HIV Screening**

*Address the Interpersonal.* Fear of a potential positive result that may cause dissolution of important interpersonal relationships and stigma were pervasive factors in the qualitative literature surrounding screening. Anticipated breaches of community and social support were common sources of stigma which fueled the fear of testing. Community-based support groups that address stigma, threats of violence, and divorce/abandonment for women who contemplate HIV screening may help alleviate some of the anxiety and fear associated with testing. Pre-test and posttest HIV counseling and community education via media and other outlets that address these fears may assist in sensitizing communities to their roles with individuals screening for HIV.
Re-introduce Basic HIV Education. Fear of HIV screening and related stigma operated in tandem with one’s lack of awareness of HIV testing, diagnosis and treatment, and was a factor identified as a barrier to HIV testing and obtaining results. Lack of awareness pertained to being unaware of services (i.e., service locations), having inaccurate information about what an HIV test result actually meant, and poor perceptions of risk that informed testing uptake. Although it may be perceived that most people are aware of HIV and the existence of a diagnostic tool, there is a need for ongoing basic HIV prevention education. Specifically, education regarding the belief that an unexplained illness automatically indicates HIV infection is essential. Education is also warranted to inform people that seropositivity is no longer synonymous with imminent death, but is associated with antiretroviral treatment and enhanced quality of life. Lastly, young people deserve to receive adequate and correct information concerning their sexual health. School-based health education and life-learning curriculums should be encouraged as part of universal education in order to arm young people with accurate knowledge of disease prevention, including HIV prevention.

Clarify Risks and Address Nuances. Clarifying levels of risks associated with specific behaviors, addressing HIV testing myths, and explaining the benefits of early diagnosis and treatment would allay fears of a positive result, disease progression and death. Introducing HIV screening as a preventive health strategy through varying educational modalities such as media outlets in areas where medical attention is usually sought due to declining health may assist in routinizing testing and removing stigma. This may help to reframe the perception of health and disease, specifically HIV screening as a
pre-emptive wellness-enhancing measure (either in assuring one’s status or by engaging in treatment to prevent disease progression).

HIV prevention education must also include more insight on HIV transmission and the concept of serodiscordance within couples. This area proved to be poorly understood and is a dominant factor among men’s perceptions of the disease and subsequent disengagement in individual and couples-based HIV screening and preventative services. This finding exemplified a potential cognitive disconnect in the understanding of serodiscordance within couples, or a lack of consideration and awareness of the personal risk men may contribute to their relationships, which is related to the issue of denial in our findings. Clarifying that a partner’s known serostatus does not automatically translate to one’s own status is key to reduce HIV transmission. Framing HIV screening and counseling efforts in the context of porous marriage and relationship boundaries, encouraging shared decision-making about couples testing prior to pregnancy, or appealing to couple’s sense of responsibility to the family should be incorporated in HIV prevention work.

**Strengthen the Broader Contexts**

**Enhance Healthcare Provider Capacity.** Provider interpersonal relationship skills and confidence in delivering HIV-related services influenced individual’s motivations to test. Our findings suggest greater exploration of the level of training clinical and lay health providers need regarding sensitivity, ethical dilemmas, and communication with patients in the context of HIV screening and treatment. Clinical staff must receive adequate education and training to successfully encourage and reinforce the value of knowing one’s serostatus (preventative health) and to successfully communicate
to those newly diagnosed what a seropositive result means. Training that equips providers with the skills to engage clients in discussions about their sexual health, and continuous education that emphasizes unbiased approaches to engage patients to test, will help address provider-related barriers to scaling up HIV screening. Furthermore, clinic staff must receive organizational support when called to enhance HIV testing services and are assigned additional responsibilities (e.g., HIV screening). For example, increasing staff capacity and operational hours for walk-in testing can decrease wait times in some settings. Provider education can also include the provision of scripts to use when engaging patients to test and delivering results in general health settings, which may help improve provider confidence and ensure consistent communication in the provision of test results. Lastly, curriculums of schools that train clinical providers can benefit future patients by enhancing interpersonal and communication skills, and cultivating a preventative health perspective in engaging individuals to screen for HIV.

Although the literature provided some patient reports of poor provider communication and interaction and perceived lack of confidentiality, the literature did not provide adequate insight on the mechanisms of provider-fueled stigmatization of people seeking screening services and client retrieval of testing results. A similar absence in the qualitative literature was the lack of recent research about providers’ perceptions of HIV screening. Although we identified literature that was provider focused, we need further exploration of provider perspectives on HIV screening and other HIV prevention services. Their insights as to what works for getting people to test may inform screening programs and enhance policy development.
**Holistic Targeting of Services.** Most HIV prevention efforts were overwhelmingly conducted among heterosexual women in antenatal settings and among samples of gay-identified men. This neglects populations such as heterosexually identified men, non-expectant women and bisexual individuals whose patterns of risk and engagement in HIV prevention services was not well represented in the literature. A focus on male-friendly strategies, other than those focused on gay-identified men, must be considered in HIV prevention. These strategies would include advocating for male-friendly health clinics with male staff that can normalize HIV screening for other men. Gender-neutral clinical spaces may be developed by the inclusion of trained male peer educators who can reinforce the value of knowing one’s serostatus for general personal health reasons or participation in prenatal care as a responsible father. Education targeted to men must be explored and should include consideration of the cost and benefits to screening for one’s family.

**Further Investigate and Promote Testing within the Larger Context.** Lastly, broader strategies and policies that facilitate HIV screening and obtaining ones’ results warrant greater attention. Our synthesis identified an absence regarding how the broader context in which HIV prevention is situated influences an individual’s willingness to seek testing. For example, an individual’s ability to afford travel to a screening location that is not near their home or place of employment and that requires use of personal limited funds to access public transportation hinders efforts to test or access healthcare in general. Even the provision of home-based testing that is self-facilitated or guided by a provider in the home, and that would alleviate the burden of transport costs, requires an infrastructure that can financially accommodate these strategies. Costs and
accommodations by larger structural entities would be associated with purchasing tests, employing health providers to facilitate home-testing, community surveillance and incentivizing testing. Unless jails and prisons are legally bound and held accountable to provide disease prevention and health promotion services to those who are incarcerated, overall community health in some areas will always be threatened and health disparities will remain pervasive.

Although opt-out testing in clinical settings is common in most countries, routine offer of HIV screening is not universal. We identified a need to incentivize and streamline the routine offer of HIV screening in clinical settings. The literature lent insight into the merits of streamlined HIV primary prevention services by incorporating HIV screening into general treatment of sexually transmitted infections (STIs) and primary care health services, and removing formal consent procedures. The provision of standard testing guidelines within clinical settings that involve decentralized testing and receipt of results from central hospitals to local community clinics could create efficient patient flow and reduce wait times. Bolstering electronic health records and telecommunication by incorporating referral systems between central and local health settings with the adoption of telehealth strategies to relay testing results to individuals may help streamline services. This could alleviate stigma associated with the location of services, individual costs, and provider-perceived barriers. There is also the possibility of enhancing all-around health services and improve subsequent timely engagement in care for those who test seropositive.

**Encourage the Availability of Diverse Screening Modalities.** To access populations who may not frequent the clinical setting and to offer alternatives for
preferred sites that are not associated with HIV screening, evidence-based innovative testing strategies warrant greater support for implementation. Strategies such as couples-based testing, home-based testing and mobile outreach testing were perceived as ways to engage those who would not necessarily patronize clinical settings. Location concerns can be addressed by scheduling testing at an individual’s home, increasing the availability of home-based testing kits or the provision of test results via telecommunication modalities for non-rapid tests. Less structured modalities would be convenient and a timely way of delivering results and post-test counselling to individuals with competing priorities. These types of modalities are also less disruptive to personal schedules and may address issues associated with cost of travel. Extended hours for HIV screening beyond typical work hours and on weekends may alleviate the issue of competing obligations cited in the literature. Greater mobile testing also addresses stigma associated with location of services and can engage high risk populations (e.g., MSM, sex workers, IV drug users) at hard-to-reach locations and at flexible times.

Conclusion

The findings of this metasynthesis focus on the initial phases of the HIV/AIDS care continuum and provide a perspective of what is currently understood about HIV testing and confirmation of HIV screening results. It allows for providers, stakeholders and policy makers to appreciate the multifactorial and ecological considerations for motivating individuals to test and the structural context required for facilitating HIV screening and receipt of confirmatory results among individuals. Our findings also lend insight into the fiscal and logistic support that is required to meet national and local health goals for reducing HIV transmission and increasing the number of people who
aware of their status. Lastly, given our focus, these findings have implications for the facilitators of and barriers to individuals’ engagement in the later phases of the treatment cascade. Given the accomplishments in biomedical technology related to HIV testing, and the enhancement of treatment efficacy, there is a need to normalize HIV screening within the efforts to address all sexually transmitted infections and sexual health. More progressive approaches that streamline testing can motivate people to test and obtain their results. Approaches that dissuade people’s fears, provide holistic HIV education and adequately prepare health providers to engage individuals to test may have an impact on reducing HIV-related stigma within communities.
Background

Although there are theoretical foundations of interpersonal relationships which guide our understanding of how dyadic processes, relationships in particular, may impede or facilitate joint initiatives toward health promotion, it has been posited that dyadic processes towards health promotion are still not well understood nor applied (Burton, Darbes, & Operario, 2010; El-Bassel & Wechsberg, 2012; Karney et al., 2010).

Meanwhile, couples have developed strategies to jointly address potential threats to their sexual health (Snowden, Raymond & McFarland, 2009; Van de Ven et al., 2002). Given the complexity that couples can bring to mitigating health risks, there is a need to better understand and recognize these joint efforts individuals in relationships pursue to achieve mutual health goals. This knowledge would help: (a) inform dyadic approaches toward HIV prevention, (b) enhance understanding of relationship dynamics and relational processes toward joint health goals, and (c) maximize healthcare provider’s capacity to facilitate couple’s based sexual health promotion strategies in various settings.

Globally, men and women are equally burdened by HIV infection. Transmission is associated with one’s gender, race/ethnicity and occurs within a local contexts of health inequity, poverty, social isolation, and the historical and current marginalization of vulnerable populations (World Health Organization [WHO], 2015). In industrialized countries including the U.S., anal sex among men who have sex with men and heterosexual transmission among women of color account for the majority of risk within

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these populations (Henry J. Kaiser Foundation, 2015), however men outpace women in new infections. For example, men are four times as likely to be HIV infected compared to women in the United States (U.S.) and male-to-male sexual contact accounts for over half of HIV transmission among men in the U.S. (Centers for Disease Control and Prevention [CDC], 2015). Models of HIV incidence among men who have sex with men (MSM) in the U.S. and other countries suggested that between 39% and 65% of HIV transmission occurs within main partnerships (Goodreau et al., 2012; Sullivan, Salazar, Buchbinder, & Sanchez, 2009). A 2009 study of HIV prevalence in 21 cities revealed that 1 in 5 MSM were infected with HIV and 44% were unaware of their sero-status (Centers for Disease Control and Prevention, 2011). Men in relationships engaged in unprotected anal sex (UAS) more frequently than men not in a relationship (Mustanski, Newcomb, & Clerkin, 2011). Given the HIV transmission rates among male couples and the lack of awareness of sero-status, risk reduction strategies employed by this population warrant investigation.

One such risk-reduction strategy, “Negotiated Safety” (NS), is a dyadic-based approach to HIV prevention used by some male couples to mitigate HIV risk in their relationship. This concept first appears in the literature in 1993 to describe observed patterns of condom use and anal sex among HIV negative seroconcordant gay men (Kippax, Crawford, Davis, Rodden, & Dowsett, 1993). The concept differentiated between sexual behaviors that were perceived as conducive to HIV transmission in without context to those that could minimize HIV risk within the context of a primary relationship (e.g., concordant HIV-negative male couples; Jin et al., 2007; Van de Ven, Prestage, French, Know & Kippax, 1998). However, the concepts’ interpretation in the
literature varied. Further, NS has evolved to be included within the broader context of sexual agreements formed by male couples that define boundaries regarding their sexual and relational behaviors (Prestage et al., 2008).

Understanding the concept of NS is important for HIV prevention as healthcare providers engage MSM, who may not be aware of the strategies to help reduce their risk for HIV infection. An integrative literature review would aid in understanding the use and potential applicability of the concept by identifying the attributes, dimensions and factors associated with its use. The integrative review process was guided by the following questions: (a) what is negotiated safety?, (b) how has the concept been used in the HIV prevention literature, and (c) what are the contextual considerations for the concept? Addressing these questions may guide public health and healthcare providers in their respective practices.

The Review

Aims

The aims of this integrative literature review are to: (a) examine the use of this concept, (b) examine the dimensions of negotiated safety, and (c) identify reported factors associated with NS among male couples’ or gay-identified men.

Design

The integrative literature review (ILR) was guided by the framework proposed by Broome (1993). This review enables a greater “understanding of a phenomenon” and is used when a systematic knowledge of a phenomenon is being examined, developed and constructed from the existing literature. Broome (1993) suggested the following steps are necessary to conduct an ILR: 1) concept identification; 2) research question; 3) search
process; 4) information (data) extraction; 5) synthesis and descriptive summary; 6) historical perspective; 7) taxonomy of measures and 8) implications for further research and practice.

**Search Methods**

Principles of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines for data retrieval and reporting were adapted for this integrative literature review. The literature search was conducted by accessing three online reference databases: Cumulative Index for Nursing and Allied Health Literature (CINAHL), National Library of Medicine (MEDLINE), and Psychology Information (PsychINFO). First, a reference librarian for the School of Nursing and Health Studies at the University of Miami was sought to provide insight on online systematic searches. Literature searches are an iterative process which may include re-vamping the approach in identifying studies and study selection (Broome, 1993). Therefore, initially various combinations of key words such as “HIV prevention”, “male couples”, “agreements” and “negotiated safety” were all used with the Boolean operator, “and” to survey the literature. It was determined that the search terms “negotiated safety” and “HIV prevention” yielded relevant results however “negotiated safety” as the sole search term yielded the most appropriate results and was hence used for retrieving the literature from all three databases. Among the initial results articles with the concept “negotiated safety” in its’ title and abstract were sought first. This approach captured those articles whose sole intentions were to explore, explain or measure the concept. Other articles from the initial search were reviewed for relevancy. An ancestry search from the reference lists of all the articles captured the remaining relevant articles. Inclusion of the articles was
restricted to those that were: a) original studies, b) peer reviewed, c) published up to December 2014, and d) published in English. There were neither geographical limitations on the search criteria nor restrictions on methodological approaches used by individual studies.

Search Outcome

A total of 84 studies resulted from the initial field search using the complete term “Negotiated Safety”. Details of the flow process are depicted in Figure 1. After duplicates were removed and the relevant articles identified a total of 48 studies were included in this review.

Quality Appraisal

Although there have been enormous attempts at defining the appropriate criteria for ascertaining study quality, a sure consensus has not been met (Whittemore & Knafl, 2005). Given that the authors focus was on the use of the concept, not the statistical rigor or methodological approach used, all studies meeting the inclusion criteria were included. It was determined that the inclusion of only peer reviewed primary studies satisfied the minimum quality appraisal for this review.

Data Abstraction and Synthesis

The data abstraction process focused on those studies which provided the most comprehensive interpretation of the concept. Each article was reviewed separately so that comparisons, patterns and themes could be developed. This process allowed the construction of the existing knowledge base of the concept, while gaps in the existing literature were identified for future empirical and conceptual work.
The first phase of this review involved reading the articles and noting those aims that explicitly involved measuring all or some dimension of NS. Those findings were recorded in a literature review grid that also included the stated concept interpretation and individual study attributes (see Table 1). The second phase involved re-reading those initial articles, and including those that mentioned the concept to provide a historical context, or as part of the study background. Differences in the concept’s interpretation were noted. The third phase involved describing the factors warranting consideration in association with the concept use and developing a conceptual model that illustrates dimensions of the phenomenon (see Figure 2). The last phase highlighted the clinical and public health implications.

Results

Studies varied in their interpretation of the concept. Most studies cited original literature, and other studies did not incorporate all of the components recognized to be that of NS. Overall, NS has been characterized as a strategy, an agreement type or a relationship type almost exclusively among male couples.

The majority of studies that explored and operationalized NS did so primarily among samples of men who overwhelmingly reported a gay identity (and hence is the term that will be used onward) and who usually reported having both main and casual male sex partners (Davidovich, de Wit & Stroebe, 2000). Few studies explored its potential use among heterosexual couples or women who reported having male sexual partners (Bertens, Wolters, van den Borne, & Schaalma, 2008; Corbett, Dickson-Gómez, Hilario, & Weeks, 2009; O'Leary, 2000). Initial studies regarding NS examined patterns of sexual practices of gay men and rendered these patterns potentially protective against
HIV transmission (Race, 2003). Subsequent studies appeared to measure the concept’s application within male couples.

**Historical Perspective**

Kippax et al. (1993) offered the first insight of negotiated safety (NS) by describing sexual practices among Australian gay men that contextualized the sexual behavior of gay male intimate couples. The authors proposed NS as a couple-based HIV risk reduction strategy that is part of a broader relationship agreement which explicitly delineated boundaries regarding sex within and external to the primary relationship. Although acknowledged that this may be the centerpiece of NS, the authors had not yet committed to defining NS solely among sero-negative concordant MSM in primary relationships. As a follow-up, Kippax and colleagues (1997) measured NS among 1,000 gay men who were HIV seronegative and who reported being in a relationship by quantifying unprotected anal sex (UAS) with casual partners. In concordance with other literature, the authors found that although most men had UAS with their main partners, many of them regardless of sero-status also had UAS with casual partners (Kippax et al., 1997; Prestage et al., 2001). However, male couples who were sero-concordant negative were least likely to have had UAS with casual partners (8.8%) when compared to other couples, and were also more likely to have a safer sex agreement (80%). Furthermore, male couples who reported having an agreement that included no anal sex outside of the main partnership did not engage in UAS with external partners. The authors concluded that the seroconcordant negative status of men in a relationship influenced engagement in safer sex practices among couples and that the presence of an agreement was the greatest predictor of safer sex practices among male couples (Kippax et al., 1997).
As a result of their findings, Kippax et al. (1997) offered a revised definition of NS as an explicit verbal agreement regarding sexual practices within and external to the main partnership, with an emphasis on rules regarding anal sex outside of the primary partnership. They establish that the main condition of NS is that men in the relationship are sero-negative concordant and that there is mutual disclosure of serostatus. They also included that NS is not a separate part of a broader sexual agreement, but it is the agreement. Examination of sexual practices of NS among gay men in London offered further clarity in that NS involved a sexual agreement about UAS within the relationship and protected extra-main dyadic sex, but for the first time it explicitly included entailed joint HIV testing and mutual sero-disclosure of status (Elford, Bolding, Maguire, & Sherr, 1999).

Negotiated safety emerged in the American literature in 2000. O’Leary (2000) discussed the concept in a literature review of existing and potential HIV risk reduction interventions for women at risk for HIV due to their male partner’s extradyadic sexual practices. One American study to explore the use of NS by characterizing the men who engaged and adhered to this strategy defined NS as a strategy and a relationship type (Guzman & Buchinder, 2005). It agreed with the established tenets of NS but also incorporated a relationship length of 6 months or more and less than 100% condom use with the main partner in the past 3 months. The authors observed that 74% of the men, who reported employing a NS strategy, included a breach disclosure, additional rules within the agreement in the event either partner does not adhere to the established relationship agreement.

**Concept Use**
Negotiated safety was mainly used in the context of sexual behavior between concordant HIV sero-negative partners in a primary relationship (Holt, 2014). It was consistently used in the context of male couples with some exploration among women and heterosexual couples. Negotiated safety incorporated either monogamy accompanied with UAS or non-exclusivity with condom use outside of the main partnership. Crawford and colleagues (2001) offered classifications of agreement types, but differentiated NS by emphasizing HIV testing and knowledge of partner’s negative serostatus as essential to the NS agreement. Knowledge of sero-negative concordance was the linchpin of NS agreement (Crawford, Rodden, Kippax, & Van de Ven, 2001; Gilbert et al., 2000).

In a study of high-risk heterosexual couples, NS was explained by Moreau–Gruet, Dubois-Arber and Spencer (2001) to be a couple’s way of managing potential HIV risk by establishing certain boundaries. These boundaries included couples HIV testing and sero-negative concordance with either monogamy, or condom use with extra-dyadic partners. In a descriptive report on risk reduction behaviors, UAS and HIV infection among Australian gay men, Jin et al. (2009) added that NS is a type of serosorting (partnering with someone who shares the same serostatus), but with regular partners.

Campbell and colleagues (2014) reported in a qualitative study of condom negotiation in the context of NS among HIV-discordant male couples. They found that serodiscordant couples mitigated risk in two ways: by either exclusive condom use or non-condom use if the viral load and CD4+ counts of the HIV infected partner indicated viral suppression, thus demonstrating the heavy reliance on serostatus in determining risk and sexual behavior (Campbell et al., 2014).
Duncan (2011) aimed to explore NS and partner type with an HIV prevention intervention among heterosexual women. The author found that among these women there was greater condom use with non-regular partners. However, it appeared condom use with main partners was also expected. Another study reported on a survey of 125 Surianmese and Dutch Antillean women in the Netherlands and their sexual risks and attempts at risk reduction (Bertens et al., 2008). They reported NS or negotiated sex as one of the measures in their survey, but were actually measuring condom negotiation. Lastly, Corbett and colleagues (2009) explored NS among heterosexual couples including those with extensive drug using history, homelessness and HIV serodiscordance. Although these articles defined NS as a HIV risk reduction strategy, none explicitly defined NS. Two of the 3 studies focused on women in the context of condom use, and none included awareness of their partners’ serostatus.

**Concept Components**

HIV testing and mutual serostatus disclosure were paramount to NS and the development of an explicit agreement within a couples’ relationship. Despite the varying use and interpretation of the concept, NS has the following main attributes: (a) men within a primary relationship who have jointly tested for HIV and have disclosed as seronegative concordant, (b) relationship boundaries which establish non-exclusivity that allows for dispensing of condoms and consistent condom use for external sexual partnerships; or forgoing condoms within a primary partnership and being monogamous, and (c) a lapse clause or breach disclosure (Crawford et al., 2001; Davidovich, de Wit, & Stroebe, 2004; Kippax, 1997; Kippax et al., 1993).

**Factors to Consider**
Several factors associated with the development and maintenance (or breach) of a NS agreement were identified (Davidovich, de Wit & Stroebe, 2006). The factors presented here focus specifically on NS, but also include those found to be most associated with sexual agreements (SA) because the factors associated with NS were at times couched in the literature regarding SA overall.

**Individual Characteristics.** Individual characteristics and preferences regarding sex and sexual practices, HIV testing, motivations for being in a relationship and establishing a sexual agreement appear to greatly influence men’s engagement in NS. One of the significant factors that influenced communication about NS and its adoption is one or both partner’s preference for and perception of UAS. Davidovich and colleagues (2004) found that among a sample of gay men, perceived partners’ need for UAS predicted non-use of condoms. In their qualitative study of young MSM (YMSM), Eisenberg and colleagues (2011) revealed that one of the main conflicts YMSM experience is having partners who prefer condomless anal sex. To these YMSM, UAS exemplified trust and intimacy with prospective long-term partners (Eisenberg, Bauermeister, Johns, Pingel, & Santana, 2011). However, this risk may be adopted quite early in the relationship (De Visser, 2004) before couples confirm their sero-negative HIV status.

Studies found that the greater perceived partner need to engage in UAS, the greater likelihood that NS was practiced (Mao, 2011; Guzman & Buchinder, 2005; Grace et al. 2014). Other studies also reported that most men who reported UAS were usually in a relationship and engaged in UAS with their main partners (Elford et al., 1999; Davidovich et al., 2001; Guzman & Buchinder, 2005; Mitchell & Petroll, 2013). These
findings suggested that there is an association between a desire for UAS and establishment of an agreement.

Condom use or non-use may or may not facilitate the development of a long-term relationship, however, in most instances men perceived that condom disuse elucidates the intention of pursuing an enduring relationship. This motivation in turn may facilitate the adoption of NS with one’s partner. For instance, one study with male couples found that sexual agreements were a mechanism of trust and establishing boundaries regarding sex external to the relationship (Hoff & Beougher, 2010). The authors also observed that the motivation for pursuing a sexual agreement, including NS, may not be to reduce HIV risk, but to allow opportunity for UAS to occur within the relationship.

**Dyadic Characteristics.** Establishing the relationship type and subsequent relationship quality (commitment/motivation, satisfaction, trust and intimacy) have been found to be the motivating factors for adoption of NS and adherence to a SA (Hoff, Beougher, Chakravarty, Darbes, & Neilands, 2010; Karney et al., 2010; Mitchell, Harvey, Champeau, Moskowitz, & Seal, 2012; Mitchell, 2014a; Suarez & Miller, 2001). To ascertain the relationship type necessary for NS and other agreements, it serves to distinguish the partner types within a relationship (Jin et al., 2009). The terminology used to categorize partners that were more emotionally involved varied and included terms like: main, regular and primary partners. Likewise, depending on the relationship context a casual partner can be interpreted as someone who is: (a) a one-time sexual liaison, or (b) not the main partner, but with whom the individual has regular sexual encounters (Zoblotska et al., 2009; Zoblotska, Grulich, de Wit & Prestage, 2011).
Deciphering the partner and relationship type is important to couples adopting NS as well as for health providers who would recommend such a strategy for clients. Main or primary partner in the context of NS is most adequately defined as a male partner, who is married to, cohabitates with, or an individual a man sees frequently and with whom he shares an emotional and intimate connection (Guzman & Buchinder, 2005). Therefore NS is a strategy based on an agreement between intimate, main primary partners.

The literature consistently acknowledged the role of sero-negative concordance as an element in developing sexual agreements especially NS (Hickson et al., 2013; Hoff et al., 2010; Kippax et al., 1997). Therefore, another factor is the couple’s willingness to test together and disclose HIV test results, as influenced by their attitude toward joint testing. Couples’ joint testing for HIV and joint disclosure is an integral part of NS, warranting the inclusion of couples-based HIV testing as part of a NS agreement. One study concluded that greater relationship quality (commitment/motivation, satisfaction, trust and intimacy) among male couples predicted positive attitudes towards couples testing and that couples testing in and of itself was associated with men’s attitude toward a SA in general (Bowles et al., 2008; Mitchell, 2014c).

**Agreement Type.** There are different agreement types and distinguishing NS from among them is warranted (Duncan, Prestage & Grierson, 2015; Mitchell, 2013; Wilkerson, Smolenski, Morgan & Rosser, 2012). Implicit and explicit agreements are ones that characterize couples’ communication patterns that influence adoption of an agreement, rather than the content of the agreement itself. The content(s) of implicit agreements are assumed by the couple whereas the content(s) of explicit agreements are actively discussed by the couple (Prestage et al., 2008; Warren, Harvey & Agnew, 2012).
Negotiated safety is an explicit agreement regarding sexual behaviors with main/primary and other partners and includes both partners’ disclosure of HIV serostatus as negative. It is also an explicit agreement because it actively requires adherence to the prescriptive components of the strategy (Kippax et al., 1997).

Negotiated safety embodies two separate elements: the emotional and the sexual. Sexual agreements are those that pertain to establishing guidelines about what sexual and relational behaviors are permitted to occur within and external to the relationship. An agreement that does not permit extra-dyadic sex or protected non-exclusivity must be explicitly discussed as part of NS. Further, the general perception of monogamy is considered to be a safer and enduring quality within a relationship; this is often the default for heterosexual couples and includes both sexual and emotional monogamy (e.g., closed agreement for male couples; Bonello & Cross, 2009). However, many sexual agreements among male couples allows for sexual non-exclusivity with or without emotional non-exclusivity (Hoff & Beougher, 2010; Mitchell, 2013).

Adherence and breach disclosures are essential elements of NS. Although broken agreements appear to be fairly common among male couples, breach disclosure to their primary partner is not (Beougher, Gómez, & Hoff, 2011; Mitchell, 2013). It has been found that the presence of a lapse agreement influenced adherence to the SA or a renewal of the current agreement. Guzman and Buchinder (2005) found that among gay male couples with a breach disclosure clause, 5% reported a breach, whereas 60% of those without one actually had a breach. A lapse agreement as part of the overall NS agreement entails partners mutually reporting to one another when there is a breach in exclusivity.
and a clause that dictates condom use should there be such a breach (Guzman & Buchinder, 2005; Hoff & Beougher, 2010).

Many of the relationships studied were short term (< 5 years), which has implications for the measure of NS adherence. As relationships matures it may take some time for couples to become comfortable with an agreement that meets the needs of both partners. Therefore, fluidity regarding sexual preferences (i.e. preference for monogamy vs. non-exclusivity) and the importance of UAS at the beginning of a relationship may change requiring a change in the agreement terms (LaSala, 2004; Mitchell, 2014c; Prestage et al., 2008). This suggests that HIV risk may be heightened during the early phases of the couple establishing themselves as an intimate couple in a primary relationship. Thus, a clear and explicit agreement that is motivated by building trust and intimacy earlier in a relationship would help reduce the possible risk for HIV.

**Context.** A few contextual factors should be considered for NS (Kippax et al., 2003). The first is environmental influences on sexual behavior among male couples (Flowers, Hart, Williamson, Frankis & Der, 2002). Studies have shown that the greater neighborhood density of gay men in a couple’s residential neighborhood, the greater preference for non-exclusive sexual relationships and the likelihood of an agreement breach (Buttram & Kurtz, 2013; Egan et al., 2011). Another consideration is the influence of condom accessibility and condom costs. Condoms may be perceived as expensive for those with limited incomes which creates a challenge for adherence to consistent use (Mustanski, DuBois, Prescott, & Ybarra, 2014). Another important consideration is the individual characteristics, such as culture, race/ethnicity and age. There was a paucity of literature that considered the experiences of non-white men who have sex with men and
the establishment of NS. One study among gay Latino couples found that men preferred other Latino men as partners. They also found that closed agreements (e.g., monogamy) were common (Beougher et al., 2010). However, agreement breaches were also common and therefore lapse and disclosure agreements were important considerations for this group (Beougher, Gómez, & Hoff, 2010). Among a sample of Black gay men, implicit agreements were uncommon (Campbell et al., 2014), which may be influenced by cultural taboos regarding discussions around sexual behavior. In another sample it was found that none of the gay Black men reported NS as a seroadaptive strategy (Wei et al., 2011). Additionally, lower educational level among Black MSM was strongly associated with non-condom use (Hampton et al., 2013). Young MSM are still developing sexual communication patterns as they begin to engage in anal sex (Stroebe, Davidovich & de Wit, 2000). Among young men who have sex with men, clear discussions concerning condom use appear to determine their use, however trust building in a new relationship appear to involve their non-use (Eisenberg et al., 2011; Prestage et al., 2001).

Discussion

Negotiated safety is a social public health strategy (Kippax & Race, 2003) that adopts a subjective approach to framing HIV risk reduction for a particular population (Kippax & Stephenson, 2012; Van De Ven et al., 2004). It was developed by gay men who used the available biomedical knowledge at the time (testing and condom use) to help reduce their HIV risk within their relationships. Its development highlights the need to adopt more practical approaches which reflect the actual realities of individuals and not what is deemed to be solely theoretically sound (Race, 2008). There should be a level of expectation that main partners regardless of sexual orientation will not consistently use
condoms, that intimacy and trust are fundamental qualities in achieving meaningful and intimate relationships, and that perhaps consistent condom use may not be considered an element of either of those qualities (Duncan et al., 2015). Therefore, the emotional meaning placed on the relationship and the development of an agreement must be discerned for each individual in the couple. Healthcare providers who deliver HIV/STD services must be sensitive to the reality that men who are in a relationship may forgo standard “safe sex” behaviors with their main partner. Further, clinical practice should also heed that certain nuances and contexts experienced by couples will influence the adoption of NS. For example, culturally-influenced interpersonal communication patterns among non-white gay male couples may challenge the establishment of explicit relationship agreements. The establishment of NS among non-white gay men requires considerations that are culturally appropriate, so that such an agreement is actually developed and maintained.

**Theoretical Implications**

A worldview of reciprocal interaction best represents the nursing paradigm and public health knowledge associated with the concept of NS (Fawcett, 1993). This paradigm proposes that human beings are agents of change and the attributes of their experiences are best understood within context. This analysis provides a starting point for a conceptual-theoretical-empirical (C-T-E) system approach to theory development and to guide sexual health and HIV prevention healthcare practice (Fawcett, 2005, 2012). Fawcett (2005) proposes the C-T-E structure as a process for strengthening nursing knowledge by providing the framework for basic research and clinical application. It is important for providers when developing risk reduction strategies with their patients to acknowledge that not all UAS is high risk. For example, UAS in isolation may be high
risk, but in context of a couples’ relationship with explicit intentions and precautions, it may not be (Kippax & Kinder, 2002; Kippax et al., 2003). Health providers must recognize that most couples in a committed relationship, regardless of their sexual orientation, will not consistently use condoms.

**Practical Implications and Limitations**

Current uses of the concept of NS have included operationalization of the phenomenon for variable development and measurement among samples of predominately gay men. However, the uses have varied which may have some bearing on discerning prevalence and actual application. Additionally, our findings suggest that there is inconsistent consideration of all of the dimensions of the concept when applied. Current studies were all exclusively individual self-reports (Crawford et al., 2006; Jin et al., 2007). Establishing dyadic reports of agreement content will give greater legitimacy to individual reports and actual measurement of couples (Hoff et al., 2010; Mitchell, 2014a). Additionally, HIV status and subsequently seroconcordance were also primarily self-reports and not consistently verified within most studies.

Attempts to use this concept among samples of women have mainly been in the context of condom use (which are exclusively worn by men) and not in consideration of her partner’s serostatus or parity in the relationship. The samples in the literature that measured this phenomenon do so overwhelmingly among white men with a gay identity. Men of color are not adequately represented and specific contexts surrounding age or the educational level of men, which can greatly influence access to information and health literacy around HIV prevention strategies, is not adequately discussed.
To further develop opportunities for the concept’s use there is a need to address these deficits in research (Kippax & Kinder, 2003). For the NS concept to be used appropriately, we propose that all dimensions of the concept are included in its definition and application. This will allow for adequate measurement in researching the phenomenon, as well as addressing the deficits among populations who attempt or would benefit from employing such a strategy. For health promotion purposes it is important that there is a finite consensus of the concept dimensions to ensure that practitioners are adequately informed when educating the public or individual patients. One last limitation is that although a systematic approach was used to identify the articles for this review, all relevant articles may not have been captured.

**Conclusion**

**Gaps in Knowledge and Future Research**

Several areas for further research on NS were identified in this review and in the literature (Race, 2014). Broadly more research on the role of interpersonal relationships and HIV prevention and transmission is warranted. Additional studies that collect dyadic data from couples to measure the presence of and associated factors of NS are also warranted. Although NS is almost exclusively used in the context of concordant HIV-negative gay male couples, a few studies explored the potential applicability among other couples. Gender dynamics present within heterosexual couples may create a level of parity that threatens the possibility of a mutual agreement. Sexual nonexclusively may be normative in some gay relationships, but it is largely unacceptable in heterosexual relationships (Boekhout, Hendrick, & Hendrick, 2003). Likewise, monogamy and fidelity are largely conceived as synonymous terms but may not have the same meaning in gay relationships where non-exclusivity is often accepted within the confines of an agreement.
(Gotta et al., 2011; Shernoff, 2006). Given these nuances a greater grasp of the possibility of how NS could be applied to heterosexual couples’ relationships and the factors that would be associated with its uptake represent a critical gap in the literature.

General dyadic approaches to HIV prevention are emerging due to a better appreciation of the interpersonal relationships that influence health promotion and disease prevention. Negotiated safety contributes to this understanding. The use of NS must include these components: (a) confirmed seronegative concordance, (b) dispensing of condoms within main partnerships, and consistent protection with external partners, if permitted, or monogamy; and (c) a breach disclosure. Absence of these dimensions denotes that the strategy being discussed is not NS, but some other seroadaptive behavior that may in itself warrant further exploration.
Chapter 4: Healthcare Provider’s Perceptions of Couples HIV Counseling and Testing in South Florida

In the United States it is estimated that 92% of new HIV infections are attributable to undiagnosed individuals and those who are HIV infected but not in medical care (Skarbinski, Rosenberg, Paz-Bailey et al., 2015). Other modeling data suggests that 30% to 60% of global HIV transmission in gay men is attributable to men in main partnerships (Goodreau et al., 2012; Sullivan et al., 2009). Since the beginning of the global epidemic the literature has demonstrated that among women, including women of color in the United States, partner attributes heightened risk for infection (Wingood & DiClemente, 1998; Wyatt et al. 2013). Given the increased risk of HIV transmission within highly vulnerable couples (gay male couples, women of color in heterosexual unions), testing couples may be a strategy that can be used to identify serodiscordant couples and minimize transmission within couples in the U.S. So far, studies which have assessed the acceptance of couples HIV counseling and testing (CHCT) in the United States has demonstrated its applicability and feasibility predominantly among male couples (Jones et al., 2014; Mitchell, 2014c; Stephenson, Rentsch, & Sullivan, 2011; Wagenaar et al., 2012). The literature is also lacking in demonstrating the role of providers in the promotion of CHCT within healthcare facilities and among patient populations. Therefore, a need remains to understand provider perspectives and factors that may enhance or impede joint HIV screening and disclosure. The purpose of this study is to explore healthcare providers’ perceptions about couple’s HIV testing in a clinical setting.
Background

Provider-Initiated HIV Testing and Counseling

Provider-initiated testing and counseling (PITC) for HIV infection is an approach to routinize HIV screening within healthcare facilities. This approach can identify people who are seropositive who may not have been diagnosed otherwise (Fernández et al., 2003; World Health Organization [WHO], 2007). Studies have also demonstrated that a healthcare provider at times is the sole motivation for HIV testing (Dowson, 2012; Siegel et al., 2010; WHO, 2014), thus indicating the significance of provider involvement in HIV screening in primary care.

Barriers and facilitators to provider-initiated HIV testing strategies have been identified and are varied (Medley & Kennedy, 2010). One systematic review revealed that provider attitude and practice had the strongest impact on patients engaging in HIV testing (Deblonde et al., 2010). Organizational support to provide testing and having an existing patient load that included HIV-infected individuals also facilitates HIV screening (McNaghten et al., 2013). Other facilitators involved clinical indications from patient symptomatology and patient risk, provider knowledge of national testing guidelines, and provider practice within a jurisdiction whose legal framework allows for less restrictive consenting processes (Cohan, 2009; McNaghten et al., 2013). Provider demographics such as provider role (nurse practitioners were more likely to test patients), provider gender (women more likely to offer), and provider ethnicity (Black and Latino providers were more likely to offer HIV testing), were also seen as important facilitators to testing (Grov, Bimbi, Nanín, & Parsons, 2006; Kushner & Solorio, 2007).
Couples HIV Counseling and Testing

Couples HIV counseling and testing (CHCT) is a dyadic approach to HIV primary prevention that entails joint testing and immediate disclosure among couples, and the development of a relationship/sexual agreement. It is also entails the provision of post-test counseling with specific emphasis on identifying HIV-serodiscordant couples and their adoption of a risk reduction plan (Centers for Disease Control and Prevention [CDC], 2012). Couples HIV counseling and testing has proven to reduce transmission within HIV serodiscordant couples, promote consistent condom use, increase and ease partner disclosure, and sustain linkages to medical care for those who are seropositive (Allen et al., 2003; Allen et al., 1992; Becker, Mlay, Schwandt, & Lyamuya, 2010; Chomba et al., 2008). Karney and colleagues (2010) proposed that interventions like couples testing for HIV infection are considered an efficient and effective strategy for HIV prevention. It ensures information given to couples is consistent and provided simultaneously, and coaches couples to jointly disclose and work towards a risk reduction plan that is tailored to the specific couple.

The Centers for Disease Control and Prevention (CDC) promotes CHCT as an effective strategy for HIV prevention, and suggests clinic-based CHCT as the next step toward implementing this strategy (CDC, 2012). Studies on CHCT implementation in clinic-based settings have been conducted exclusively in the developing world with a focus on overall programmatic findings or patient outcomes (Allen et al., 2003; Allen et al., 1992; Becker et al., 2010; Centers for Disease Control and Prevention [CDC], 2012; Chomba et al., 2008). The World Health Organization (WHO) suggests that there are benefits to CHCT and recommend the uptake of CHCT in various settings (WHO, 2012).
The WHO recognized that there is a need to enhance identification of serodiscordant couples to prevent new infections and therefore they have developed guidelines for CHCT. In 2012 the WHO proposed guidelines for the implementation of CHCT that are based on experiences in low-mid income countries. These guidelines recommend that providers’ support for CHTC and for HIV prevention in serodiscordant couples will be critical to the success of such services, and that providers’ attitudes and views must be considered when planning orientation and training for CHCT.

Providers Perception of Couples HIV Counseling and Testing

There is a paucity of literature exploring provider’s perceptions of couples’ HIV testing and counseling (CHTC). Studies were mainly relevant to the low-middle income countries. (Kebaabtswe et al. 2010; Lippman et al., 2015; Mlay et al., 2008; Njau et al., 2012; Orne-Gilemann et al., 2010; Theuring et al., 2010). These mainly assessed partner based testing in the context of men’s ability and willingness to participate in joint HIV prevention, specifically testing services (Kebaabtswe et al. 2010; Mlay et al., 2008; Orne-Gilemann et al., 2010). Other international studies have shown that providers are not always willing to include male partners in the antenatal clinic setting (Msellati, 2009; Theuring, Nchimbi, Jordan-Harder, & Harms, 2010). Among these studies exploring provider perceptions, none actually used the term couples’ HIV counseling and testing. Given the influential nature of providers on HIV testing uptake and known barriers and facilitators of PITC, gaining perspectives from U.S. based provider’s gives insight into potentially perceived facilitators and challenges to implementing CHCT in a clinical setting.
Study Purpose

The purpose of this study is to explore healthcare providers’ perceptions regarding couples’ HIV testing in clinical settings in South Florida. Formative research would provide insight into U.S. based healthcare providers’ perceptions of the strategy, as well as provider-perceived challenges to implementation, and willingness and ability to address these challenges.

This study would add to the literature on couples testing for HIV in the United States and would introduce considerations for implementing couples testing within clinical settings. This insight would also add to the literature on dyadic approaches to HIV prevention in general. Findings from this research can inform future attempts to incorporate CHTC into existing HIV prevention services and potentially inform clinical practice. The aims of this study are to: 1) Explore current provider knowledge about and attitudes toward CHTC as an HIV testing strategy; 2) Examine providers’ perceptions about CHTC and; 3) Identify provider perceived challenges and facilitators of CHTC in a clinical setting.

Methods

The qualitative research paradigm assumes an inductive process to making meaning of the perspectives and contexts of peoples’ realities – the how and why of human experiences from an emic perspective. This method of inquiry is used to explore phenomena in which there is little to no previous insight of the phenomena and may aim to explore or describe a phenomenon or develop a theory about the phenomenon (Joubish et al., 2011; Waltz, Strickland & Lenz, 2010). Therefore, we used a qualitative approach to describe provider’s knowledge and attitudes about couples’ HIV testing and to explore
their perspectives about implementing this strategy in a clinical setting. This approach was used to attain a clear understanding of healthcare provider’s knowledge, attitude and beliefs about couples’ HIV testing by soliciting a narrative that gives a precise description about their perspective on this phenomenon (Magilvy & Thomas, 2010; Sandelowski, 2010).

**Setting and Sample**

**Setting.** In the United States there is approximately 1.2 million people infected with HIV. Of the 10 most populated jurisdictions in the country, Miami-Dade County ranks first in the number of new diagnosis at over 5,000 cases in 2015, a rate of 45.3. This HIV infection rate in Miami-Dade County is almost twice that of the state of Florida (Florida Department of Health [FDOH], 2016). Florida is one of the few states in the country that has HIV specific criminal laws which makes transmitting HIV to an uninformed sexual partner a felony (CDC, 2015). For further context, since other sexually transmitted diseases often are captured among those infected with HIV, treatment for sexually transmitted infections is important for lowering the risk for HIV infection. However, until recently (July 2016) expedited partner therapy was prohibited in the state of Florida (FDOH, 2012). Although HIV routinized testing has been shown to increase those who are aware of their HIV sero-status, up until recently (July 2015) opt-out testing was also not an option for hospitals in Florida (The Florida Senate, 2015). These policies provide a context that affect progressive action to address HIV testing and treatment issues.

**Sampling.** A two-tiered purposive sampling approach was used (Polit & Beck, 2010) to seek providers to participate in this study from health care facilities in Miami-
Dade County (MDC). Clinical and non-clinical providers (jointly referred to as healthcare providers) were sampled from two types of settings in MDC. The first type of setting is characterized as community-based federally qualified health centers (FQHC) that provide primary care services to under or uninsured populations. These multi-site settings are service providers within larger community based agencies that were piloting the CHCT strategy as a component of their existing HIV testing programs. The second setting is characterized as HIV care and OB/GYN specialty clinics co-located within two local hospitals. The University of Miami IRB approval was provided for all settings.

All participants were required to have greater than 1 year of experience engaging patients or clients in HIV screening or HIV care. The study sample included both clinical and non-clinical providers who represented a variety of relevant specialties and years of experience, in addition to reflecting the ethnic/racial diverse (Table 1).

Provider recruitment was individualized for each setting based on consultation with administrative staff and organizational preferences. A recruitment email was drafted by the first author and sent to all organizations for approval. One agency opted to send out initial and subsequent recruitment emails to their staff. The other facilities allowed the lead investigator to send initial recruitment and reminder emails to their staff. Following the first few interviews, snowball sampling was used to recruit providers who were recommended by other providers who had been interviewed.

Data Collection

In-depth interviews were used to create a conversation with providers to capture their insight to couples testing for HIV infection. A semi-structured interview allowed the introduction of categories and topics known from the literature to be potential factors that
influence provider’s perception of CHTC. The interview guide itself allowed for the spontaneous emergence of new factors and content not previously considered through the use of probes to follow-up on these new factors (Qu & Dumay, 2011). All interviews were conducted by the lead author. Interviews lasted approximately 30 to 90 minutes. All participants were offered a $15 gift card, however two of the clinical providers refused to accept the gift card. Interviews were audio recorded and dictated using an online speech recognition application (Online Dictation, n.d.) Each transcribed interview was individually copied and pasted into a word document and saved in a password protected file on a password protected computer. The audio and dictation files were cross-checked and reviewed for accuracy.

Data collection and analysis were concurrent processes; therefore, as the first 3 - 5 interviews were conducted any consistently emerging topics not originally captured in the guide were included in subsequent interviews. When the same phrases and issues consistently emerged in the narratives and redundancy became apparent, it was perceived that data saturation was achieved. (Munhall, 2012). Data collection commenced until data saturation was achieved at approximately interview number seven and there was a balance of clinical and non-clinical provider participants.

Analysis

Content and thematic analyses are approaches used in qualitative description which involves a level of interpretation of the narratives while remaining near to the data (Sandelowski, 2010). The data analysis process for this study was guided in part by the qualitative phase of the data transformation continuum (Sandelowski & Barroso, 2003), which provides a typology of qualitative data from description to interpretation. The data
analysis process was an iterative one which began with a content analysis and morphed into a thematic analysis.

Content analysis is an exploratory technique described as a thematic survey by Sandelowski and Barroso’s (2003) in their description of qualitative finding typologies (Sandelowski, 2010). This analysis involved critically reading of the interviews for the manifestation of categories, their meanings and to identify patterns to help with the development of codes. A thematic analysis then ensued to describe the more latent patterns in the data which warranted greater interpretation. This phase of the analysis depicts the conceptual/thematic typology as described by Sandelowski and Barroso (2003). This part of the analysis involved an assessment, description and integration of the findings to capture the nuances, shape the narrative across the interviews and to provide a more systematic perspective of the phenomenon (Polit & Beck, 2012; Sandelowski & Barroso, 2003; Vaismoradi, Turunen & Bondas, 2013). The content and thematic analysis processes proceed with the same approach by reading the narratives, developing categories via 3 levels of coding for trends and assessing patterns within the narratives. The processes depart in the manifesting of themes, whereby in this study the content analysis process entailed the development of the categories and manifest themes. The thematic analysis dominated the remainder of the analytical process with the integration of the latent themes with the manifest content (Vaismoradi, Turunen & Bondas, 2013). MAXqDA (Verbi Gmbh, Berlin), a qualitative data analysis software was used to analyze the transcription of the interviews (Hsieh & Shannon, 2005).
Study Rigor

There were several attempts to ensure that this study is rigorous and maintained its trustworthiness (credibility, transferability, dependability and confirmability) in its production of findings that are representative of the phenomenon (Thomas & Magilvy, 2011). First, the in-depth, semi-structured interview guide was based on the study aims and informed by the literature on individual voluntary counseling and testing, and dyadic approaches to HIV prevention.

Credibility in qualitative research is established when study findings are recognizable and representative across a majority of participants’ experiences and interviews (Polit & Beck, 2010; Thomas & Magilvy, 2011). To establish credibility, a broad range of providers’ perceptions were captured by seeking providers from different specialties in different settings. The interview guide questions are open ended which allowed for providers to express in their own words and without any known verbal constraint their perceptions about this phenomenon. The emergent themes within each interview were assessed across all of the narratives to ensure that collectively the data was representative (Ritchie & Lewis, 2003). Patterns and themes were discussed among the co-authors to ensure consistency in findings and interpretations.

Transferability and dependability are additional considerations to uphold study rigor. As far as we are aware, this study is the first of its kind in gaining in-depth perspectives on CHCT from US healthcare providers. Therefore transfer of methods and the analytic approach used is important to document. The documentation and publication of these methods would help guide the implementation of future studies on this or similar topics. The ability to describe the data collection and analytical processes establishes
dependability of the methods employed to solicit the narratives which reveal the reality and actual perspectives of the providers. Dependability is ascertained by a detailed audit trail and the ability to account for the credibility of the narrative (Thomas & Magilvy, 2011).

The data analysis approach requires repeated in-depth critique of the narratives to ensure that the issues and topics raised are understood and appropriately interpreted. Establishing credibility along with probing and follow-up questions to clarify any part of the narratives which may not be clear will assist in the establishment of confirmability. Providers were contacted post-interview if any areas of the individual narratives required further clarity (i.e. current practices with PEP, number of couples screened etc.).

Results

Knowledge of CHCT

Healthcare providers (HCP) who had possessed some knowledge (N = 11) of couples’ HIV counseling and testing (CHCT) included those who attended or were involved in the health department CHCT training to those who were versed in the global HIV testing literature. None of those involved in the training reported being aware of the origins of couples’ HIV testing in sub-Saharan Africa among heterosexual couples. Likewise, other providers who reported being well aware of the strategy were not aware of the CHCT pilot in Miami-Dade County (MDC).

Response to training and strategy protocol. Of the healthcare providers participating in this study, five attended the CHCT training hosted by the MDC health department. Generally, these providers reported some initial skepticism, especially regarding the management of a couple’s reaction to a seropositive result. All providers
reported that those concerns were allayed post-training, however, general disagreement with certain aspects of the training and focus of the strategy in Miami remained. One provider noted that he and others felt that although they supported the strategy, there was a feeling it was imposed on them to implement. Another sentiment was that they should have been consulted for their insight during the planning of the pilot in the county, as summarized by this participant:

When people present something new, they should be more willing to do a little bit more of brainstorming and hear people out, don't cut them off...because once you do that people are going to feel like you're telling me something but you don't want to listen, even if you don't agree…do not cut people off, it is not good.

Three providers reported having the opportunity to execute the CHCT protocol and noted that although they felt the training was adequate, there was some discordance between the protocol and how their facility actually implements HIV screening. These providers reported utilizing rapid testing which allows for same day results. Whereas providers perceived that the CDC protocol indicates a standard HIV test and a wait period between test administration and a couple’s receipt of results. These providers perceived a discrepancy in the testing technology used as an important one because it warranted adaptations to implementation.

Lastly, providers identified the paperwork to document a CHCT session as being cumbersome and time consuming. It was perceived that since the protocol does not aim to focus on past sexual behavior of either partner in the couple, then it was unnecessary for them to collect information about the couples’ past sexual or risk behavior. Despite these concerns with the protocol, the providers reported favorable experiences with CHCT. However, they all voiced some concerns with sustainability and creating a
demand for the strategy. This concern was especially poignant given they were not receiving pilot funding and were responsible for their own advertisement within the county, as this participant shared: “…a lot of people don't even know we provide those services. So sometimes we still have to you know, put it in our newspaper.”

**Provider’s Perception of CHCT**

A content analysis of the narratives revealed healthcare provider’s perceptions of CHCT were informed by their knowledge of the study setting and the population they serve, reflection of their practice and personal ethos, and their experiences as a provider (Figure 4.1). Provider’s knowledge of the high HIV seroprevalence in Miami and having an understanding of context of the patient population’s vulnerabilities to HIV infection shaped perceptions of CHCT.

Patient vulnerabilities were not exclusive to HIV acquisition, but included psycho-social vulnerabilities such as drug use, poor coping skills and mental health problems that provide a context of behaviors which heighten risk. These vulnerabilities also entailed partner based risk and other social vulnerabilities such as being from a historically marginalized ethnic, racial, or immigrant group, being a sexual minority, as well as being impoverished, medically indigent and having low educational attainment. One participant stated: “…the challenges we have here in Miami-Dade County is there is generally lower socioeconomic, lower educated, not like San Francisco.”

Perceptions were also driven by provider’s sentiments regarding broader, structural and policy issues as it relates to the context of HIV prevention in Florida and healthcare in general, particularly in Miami. A few providers expressed that CHCT addressed the failures of routinized testing, conceding that if it was successful CHCT
would actually be unnecessary. Overall couples’ HIV counseling and testing was perceived to be an evolution from current HIV testing approaches, as one participant offered:

I think it is a good thing, I think any way to offer some different iteration of testing that is just going to get more people tested is better. You know the more people that know their status and they get some information and education, I am all for that.

The perception of couple testing for HIV infection was also driven by provider’s ethos regarding HIV screening. Providers believed that as a relatively accessible primary prevention measure, HIV screening should be a part of one’s sexual health practice. This ethos also included provider’s belief that HIV testing should be adopted by individuals before engaging in sex with new partners and should include mutual awareness of each other’s serostatus via disclosure. Couples testing was also perceived as a way to increase HIV screening among those who would not pursue HIV testing otherwise.

Across narratives provider’s perceptions of the strategy in relation to the aims of the strategy as outlined by the CDC CHCT (CDC, 2012), as well as considerations of risk among couples. Once briefed on CHCT, all but one provider had a favorable attitude about CHCT. One other provider was in favor of the strategy but not within a clinical setting. Three categories emerged in the context of provider’s attitudes which included: response to training and strategy protocol, couples’ considerations and practice considerations (Figure 4.2).

**Latent Themes**

A thematic analysis revealed four latent themes which undergirded HCP perceptions of CHCT. These themes emerged from the categories developed from the content analysis, a more in-depth investigation of the context providers are working
within and the identification of nuances across the narratives. These four themes are: 1) For whom is this strategy for?, 2) Balanced engagement, 3) Provider experiences, practices and preferences, and 4) The model of care and the health problem.

**For Whom is This Strategy For?**

Providers reflecting on the various types of partnerships they observe among their patient population, in conjunction with the what they perceive to be the benefits of CHCT rendered them to question, ‘for whom is this strategy for?’ Many of the provider’s narratives reveal that these partnerships juxtapose what is perceived to be heteronormative behaviors around coupling. A few providers reported that among their populations, partnerships were not truly monogamous because some of the patient’s partners or the patient themselves were actual polyamorous. In addition, some providers shared that some of their male patients were men who had sex with other men (MSM) where some were in a relationship with another man, but many were also polyamorous. This led some providers to question “who or what is a couple anyway?” and expressed that the term ‘couple’ itself was nuanced.

**What is a Couple Anyway?** Some providers noted that the concept of a couple has changed to manifest differently from what is perceived to be traditional heteronormative unions (i.e. marriage, monogamy), as described by one participant:

I wonder how many real relationships there are any more, you have hookups and baby daddies…I am not sure what kind of relationships are even out there anymore…Couples should get tested, once they decide to be couples, but you see I don't know what a couple is anymore. I mean, I really, really don't know what a couple is. I don’t even know if a traditional relationship is even out there anymore. I see a majority of I think non-traditional relationships, they're not living together. I don't know maybe those are traditional now.
The perceived common practice of polyamorous unions among his patient population was a source of one provider’s attitude towards CHCT as a strategy:

I am not sure if I'm a person who thinks that couples should come in together because different people are with people for different reasons and I don't think that is something that they want someone else to experience with them.

A few providers struggled to reconcile this potential discord between the perceived patient population coupling practices and the need for couples based strategies. Other providers were comfortable with couples defining themselves and did not impose traditional norms, as explained by one participant:

I define a couple by the person who you are talking to. So it is not my definition that I go by. I define it by whether a person believes that they are a couple.

**Perceived Benefit and Motivation.** The theme of “whom is this strategy for?” also embodied provider narratives about the type of couples they could see benefiting from CHCT and what they perceive to be the motivation for such couples. Some provider narratives revealed experiences of having to address past demands from patients to undergo joint screening with their partners. The provision of a protocol was perceived as a mechanism for agencies to facilitate this request and meet patient demands:

We had a couple of cases in the past where people are saying we want to get tested together and the protocol of the health department back then was, “no, it had to be individual, it has to be separate” and people actually got upset about that. Sometimes people did not understand why and often times to be honest, the counselor did not know what to say. So when that came about I was happy because I was like you know this is going to give that opportunity for those who really want it.

Perceptions were also influenced by particulars of what provider’s perceived to be the strategy protocol. For example, many providers disagreed that the strategy should solely target male couples as many perceived the CDC protocol to suggest. Some
providers felt due to their expertise and knowledge of their patient population, the
strategy needed to focus on all couples, not just male couples. The most common reason
was due to the observed common risks among their patient population at large,
irrespective of sexual orientation (i.e. polyamorous liaisons without condom use or non-
disclosure to the main partner of extra-dyadic sexual behavior). Further, despite some
patient’s polyamorous behavior, many providers felt that due to the nature of most
heterosexual couples they encountered, the strategy lent itself more to those couples, a
sentiment shared by one provider:

Even though this is catered for MSM I don’t know why it is not catered to
heterosexual women as well because there is a need and there is a risk
from the male partner. Heterosexual relationships we see are more stable
and not as versatile or volatile as male couples and therefore if you are
establishing relationship goals, it seems that it would make sense with
couples who have a more long term mind set and not a casual set-up.

Favorable perceptions of CHCT were in the context of benefits to couples and
couple’s motivation among those who would consider themselves a couple. Couples HIV
testing was previewed to be an opportunity for partners to establish and/or re-affirm
commitment to one another. Many providers spoke about CHCT in the context of honesty
and the establishment of truth in the relationship:

    The benefit that I will always assume is the peace of mind, there is no
deception through the process, there’s no lies, there’s really no room for
that. So people get the benefit of truth being established.

Providers who had experience implementing the strategy ($N = 3$) reported that
couples who sought and were provided CHCT were a mix of heterosexual and male
couples. These couples were primarily established couples in that the partners had been
together for a few months to a few years and were attempting monogamy. Therefore, it
was perceived that regardless of sexual orientation, the motivation was to confirm commitment to the relationship.

For some people I think it’s maybe trying to reinforce that they may have made the right decision...Like okay we decided to be together and you told me that everything is fine and this is going to prove that you are right or that you are wrong, you know? Like, if this comes out good, then it’s alright and I trust you.

The underlying sentiment which was that CHCT is a strategy for couples who have the intention of being monogamous and/or committed and thus utilizing the strategy to work towards that type of relationship.

It is an opportunity for couples, I would not say just for two people who are having sex or hooking up, but people who are in a relationship to establish goals and common goals on how they will make sure that they will remain negative...or how they would deal with a potential infection if anything happens.

Sometimes they need a jumping off point for trust to be developed...and you know where they stand before or as they’re going to enter this relationship, as they’re going to try to be monogamous now they know where each other stands beforehand.

Providers also perceived CHCT as a way to address heterosexual couple’s desire for children by potentially incorporating a pregnancy plan as part of the sexual agreement. In addition, CHCT was seen as a mechanism for incorporating the use of PrEP (pre-exposure prophylaxis) achieve fertility goals within couples who were serodiscordant. Couples testing was also perceived to potentially address the mental health aspects surrounding stigma associated with HIV infection. Some providers recognized that people may use CHCT as a mechanism for disclosure of known HIV seropositivity and perceived couples HIV testing as a remedy for alleviating underlying mental health problems associated with non-disclosure, as articulated by one provider:
Release of stress, helping with the post-traumatic stress disorder. There is always a relief...in not keeping a secret, in not hiding something, in not hiding your health...I mean you don't have to be open with the world...but with the person that you are intimate with. It would only help the relationship one would think, I mean you know, assuming it is a good relationship.

Motivation to engage in CHCT was perceived to be an attribute of a couple who had a good relationship. Good relationships were expressed as those in which the maturity level of the couple would influence engagement in the strategy:

The issues are valid, I know too many people who have become infected by their steady partner because their steady partner did not tell them or was afraid to tell them. But if I got a couple who were willing to discuss this and they're not afraid to tell...I would think it would be easier...of course having mature rational people it's always easier to deal with.

Mature couples were considered those that possessed communication skills that allowed them to see a benefit in considering the health of their partner as related to their own. These couples were also capable of using CHCT as an opportunity for couples to decide on and commit to an agreement. Adoption of CHCT by couples indicated for some providers not only an evolution in HIV screening approaches, but in how individuals perceived personal well-being tied to the health of another person that they are involved with sexually and emotionally. The attitude of CHCT was not just about partner based disease risk, but health promotion within the couple. Therefore, CHCT was perceived to potentially allow for a reconceptualization of health that involves an interpersonal relationship:

I think it is a great thing because me personally, if I was single and I was going to go into a relationship and my partner said, my partner being male or female or transgender said, “nah, I am not into that,” then I am not into you because that’s telling me, I don’t really matter.

It could be like an issue for the couple themselves like if one person wants to do it and the other person does not, then what happens? Then this thing
is left up in the air. This could be an issue in a relationship. How much do you care about me? How much do you care about my health? How much do you care about our health? That's a new concept, not like how healthy are you, how healthy are you or me, but how healthy are we?

**Balanced Engagement**

Providers perceived CHCT as a way to balance engagement between themselves and the individual patient(s) and between partners within the couple. Additionally, this theme speaks to the nature of provider’s perceptions regarding anticipated or experienced engagement with a couple or potential bias towards the individuals within the couple.

**Re-conceptualizing Personal Health.** Balanced engagement depicts what providers described as the strategy being one that allows the couple to receive the same health information together in order to avoid any confusion regarding joint results and mitigate any anxiety or potential blame regarding the couple’s diagnosis. This sub-theme embodies provider’s perceptions that CHCT is an opportunity for couple’s to consider their collective health by re-conceptualizing individual personal health. Adoption of CHCT by couples indicated for some providers not only an evolution in HIV screening approaches, but in how individuals perceived personal well-being. Some providers perceived that CHCT allowed patients/clients to understand how their behavior is tied to the health of another person they are involved with sexually and emotionally. The attitude of CHCT was not just about partner based disease risk, but health promotion within the couple. Therefore, CHCT was perceived to potentially allow for a reconceptualization of health that involves an interpersonal relationship by couples asking: “how healthy are we?”
I think it is a great thing because me personally, if I was single and I was going to go into a relationship and my partner said, my partner being male or female or transgender said, “nah, I am not into that”, then I am not into you because that’s telling me, I don’t really matter.

**Provider Approach to Mitigating Bias.** The strategy was perceived as a way to diffuse individual anxiety concerning HIV testing and blame towards partners should one or both screen HIV seropositive. Balanced engagement represented the healthcare provider’s interaction with the couples in the provision of information to ensure accurate and balanced health education about HIV infection to members of a couple simultaneously. This joint session was perceived to be an opportunity for partners to receive information simultaneously in order to eliminate confusion irrespective of the testing outcome.

It is important when you can educate two people at the same time, so that they both will have the same information, the same training and can do the testing together.

Some providers believed CHCT also allowed for a more balanced engagement in mitigating potential provider bias. For example, one HCP reflected on her experience with a newly diagnosed young mother she screened for HIV infection. This provider recognized the biases she held against the male partner who was aware of his HIV infection and transmission to the index patient. The provider believed that the bias and anger she possessed toward the male partner would have been tempered and the betrayal her index patient felt would not have manifested if CHCT had been available. Furthermore, linkage to care for the couple, especially for the patient would not have been delayed. The provider stated that she would not have known the partner’s serostatus and would have entered the CHCT session blinded to the male partner’s HIV infection.
This HCP acknowledged that this would have been a benefit not only to her, but for the index patient, as well as the male partner who had not disclosed:

I wonder you know, how he would have reacted knowing that she’s tested positive. I don’t think it would have been violent. I could have just counseled them because not knowing what the situation was, it would have been a totally different…I would have tested them [together] because I would not have known he was already positive and he infected her. It would have been new to me as well. My compassion would have been going out to both of them, to get them linked into care and get them help.

Another provider recognized her inherent biased against the partner in a couple who was not her existing patient. Therefore, this HCP expressed being willing to offer and implement CHCT among couples in which both parties were new clients of hers, otherwise she would not be able to be present as a provider and not be able to engage with the couple in a balanced way. Yet another provider spoke of achieving a balanced engagement in terms of determining which one within the couple is the more progressive thinker as a way of engaging couples in joint health behavior. One other provider spoke of his current strategy when working with couples in his drug treatment work. This personal strategy involved capitalizing on the imbalance within a couple as a way to engage the couple in joint health promoting behavior as well:

You have to find the strong one in the relationship and through strong one in the relationship will pull the weak one in and hopefully through the intervention they would agree…the emotionally strong one tends to create situations and to be the caretaker who tends to be the one who organizes things, within the field it is called culpability and codependency.

A few providers noted that some patients may not want to engage with their partner in certain health conversations with one provider noting that engaging couples is too invasive for him to be comfortable to offer CHCT. This provider later recognizes that
he would need more education about the strategy in order to be motivated to offer the service.

**Provider Experiences, Practices and Preferences**

Healthcare providers were perceived to be influential in the adoption of CHCT. Provider experiences, practices and preferences recognizes that provider’s current practices and ethos with regard to certain populations may impede or compliment CHCT. Provider ethos as mentioned previously is concerned with provider’s pragmatic views about HIV screening and the need to increase people’s knowledge of their serostatus and that of their sexual partner(s). Most providers reported that their current practices and preferences of colleagues either could address or compliment interpersonal risks among their patient/client population.

**Concurrence with the Health Problem.** Many providers spoke of having high levels of comfortability to engage patients in HIV screening, and conversations regarding sexual health. In addition, some of these providers reported experiences engaging couples in a wellness or health visit, or facilitating disclosure between their HIV infected patient/client and their sexual partner. Therefore, to engage a couple to test for HIV is simply the next step in their personal practice.

I know there are some clinicians who do not like having other people in the room when they are seeing one particular patient. So that may be an issue, but for me personally it is not.

Overall HCP either directly stated or alluded to the current use of a team based approach to facilitate disclosure as being indicative of their ability to implement CHTC. Others identified the need of such an approach to facilitate CHTC in their setting.
We can discuss it together we can talk about the issues associated …I am not a therapist from that perspective, at least clinical wise I may have expectations, where I can assist in that process, but I am not a complete clinical psychologist or therapist or psychiatrist I mean to officially guide people directly when it comes to that.

**Potential Barriers to CHCT.** Although overall clinical providers reported a willingness to engage couples, some noted that some of their colleagues may not be capable or willing to do so. Some providers reported that the prospect of having a seropositive patient or a serodiscordant couple may be a deterrent. Others perceived some provider’s lack of knowledge, training and ultimately capacity to even manage a couple and/or HIV infected patients would make them unwilling to adopt the practice of offering CHCT. Related to capacity is the provider’s ability to successfully interact with certain vulnerable populations, as described by one participant:

> Testing is the easy part if you will, but if it is where somebody becomes positive or shown to become positive that may be a little bit more of a challenge for the clinician because basically you are taking care of now two patients instead of one of the same time um so we would just need people who would be open to wanting to do that.

It was also believed that some providers are not amendable to having frank and sensitive conversations with patients about their sexual health. One provider noted that conversations regarding partners may not be appropriate to initiate in a clinical setting because the conversation would be deemed invasive. In addition to the perception that the clinical provider would not be the appropriate person to facilitate (or capable of) initiating sexual health conversations.

> What you are talking about is not medical, not physical, not biological, not physiological. We are talking about feelings and trust…[they] are not the things that I look to for a physician to give me advice on.
There was also a sentiment that sexual health and offering CHCT as a clinical provider was seen as invasive and that it is not the place for HCP to have this conversation or to offer CHCT.

Never have I told a patient to bring your partner in because I think that is very personal and to some degree a bit invasive you know, for me to tell them about bringing their partner in.

Provider’s preference for working with individual patients rather than families or couples was another potential barrier. However, some providers believed that medical doctors recommending a patient to participate in CHCT would be a greater facilitator because of the respect the profession garners among the population. Non-clinical providers specified the need for clinical providers to offer CHCT because of what they perceive to be the level of reverence clinical providers command from patients. There was also the perception that patients would be more adherent to clinical provider’s recommendations for CHCT.

Provider induced stigma was identified and reported as an important problem. Healthcare providers reported that certain clinical providers possess biases against and can be judgmental toward certain patient populations. This stigma was demonstrated through implicit or explicit biases which potentially deterred patients from screening and engaging into subsequent HIV care for those in which it’s indicated.

Providers still believe that HIV is for a population that is either deviant or engaging in deviant behavior it's a cliche that this is a disease that goes to the gay community, towards a drug using community, for a promiscuous lifestyle community and this is not something we have to talk about in a family medicine kind of setting you know, that is the stigma.

Some providers also spoke about patient attributes as potential barriers to CHCT. Salient patient’s attributes identified were that of denial and subsequent fear of a reactive
result, lack of basic HIV knowledge, low perceived risk of self and partner, and/or distrust of the government and healthcare systems. Certain sub-population groups were identified for example, sexual behaviors combined with illicit drug using behaviors among young MSM that would impede engagement in CHCT. Among men, providers perceived there exists a level of privilege that disallows men to reflect on their behavior and contribution to community HIV risk. Regarding immigrants especially adolescents and women, HCP perceived a lack of formal education, lack of basic knowledge about HIV infections and the lack of knowledge about the availability of resources for non-U.S. citizens irrespective of immigration status if one tested sero-positive to be potential barriers to CHCT. The contexts of patients’ lives were also perceived to be potential barriers to uptake. These contexts include concerns regarding insurance, lack of time and transportation or lack of partner willingness to engage in the strategy. Underlying mental health issues and poor coping skills were salient concerns regarding vulnerability of patients. These concerns dominated all populations discussed in the narratives and by extension perceived to be an important consideration for CHCT, as articulated by one HCP:

We do rapid testing on labor and delivery…and we’ve had more than one post-partum suicide in the hospital, so do not underestimate the power of a positive test on someone’s mental health.

Despite this context, prior patient demands and current inquires for the strategy among the patient population and the community were perceived as facilitators to begin offering CHCT at primary care facilities.
The Model of Care and the Health Problem

This theme emerged in narratives that described the organizational setting and program policies which would facilitate CHCT (concordance between) or was perceived to be potential barriers (discordance between) to CHCT.

The Discordance Between. Providers perceived that the current healthcare system does not adequately support HIV primary prevention and therefore may be a barrier to include partners in HIV screening in a clinical setting. One provider pointed out that much of her patient population are women who are coupled with low-income and/or unemployed men. The lack of health insurance among these men was identified coupled with provider commitment to the index patient as a perceived barrier. Providers reported that the clinical provider has to be able to bill for their services and delineate who is the patient, in addition to whether the partner of the index patient is registered at the facility.

The provider can't see a patient that is not in the room to be seen without financial screening, accessibility, insurance approval. So I mean they need to come for that and present. It's just not the patient is like, 'hey my partner is here, let's do it.' Before they even make the appointment they need to say, 'they're both are there for couples testing'.

Lastly, some providers perceived that some patients simply dislike and distrust the health care system in general and the clinical space, which were identified as a potential challenge to CHCT uptake.

The Concordance Between. Providers in favor of clinic based CHCT (N = 20) noted that FQHC’s and primary care clinics would be best suited to implement this strategy because of the population they tend to serve, and the belief that these settings were more family/community oriented. A few providers addressed the fact that they have the space to accommodate another person in a consultation room to get screened and to
implement the strategy. These same settings also provide free HIV screening on-site and have personnel who can conduct the rapid tests in the event that a patient is uninsured.

Other providers used their workplace setting as an example of the type of setting that could implement CHCT. These providers spoke about their workplace as one whose model of care already incorporates routinized HIV screening as part of an existing patient’s annual visit or within wellness health packages for newly enrolled patients. The current routinization of HIV screening in certain settings could facilitate implementation of CHCT. Providers identified that the scope of practice within their facility allowed for partners to be screened for sexually transmitted diseases including HIV infection and hence can logistically facilitate CHCT, as one provider stated: “We have room here and there is space and we encourage testing anyway.”

**What are Provider’s Recommendations for Implementation?**

Healthcare providers shared a variety of recommendations for the implementation of CHCT and offered suggestions for enhancing the CDC CHCT protocol and other elements of the strategy. These recommendations included needs for: greater population and provider education, refinement of specific elements of the strategy, and streamlining of existing services.

**Patient and Provider Education.** Healthcare providers noted that to offer CHCT would require a community which is informed about interpersonal risk and educated about the strategy. In addition, health facilities must be aware the strategy even exists and are comfortable providing it. Provider willingness to offer and implement CHCT, and facility administrators to support adoption of the strategy were seen as paramount in the adoption of CHCT. Therefore, providers recommended comprehensive
education in the community and within schools to better inform populations of HIV transmission, benefits of testing and availability of health insurance for HIV infected individuals and mental health services. In addition, there is a need for immigrants in South Florida to understand that these resources extend to non-U.S. citizens. Likewise, some clinical providers mentioned that junior clinical staff and clinicians in training must be better equipped during their academic programs, to engage patients in sensitive topics and to address some of the inherent biases that they perceive many possess towards vulnerable populations. Other providers recommended that clinical and non-clinical health staff in facilities are a diverse representation of the population being served. They also recommended that providers in training are sensitized to working with transgender persons, men who have sex with men and people who may possess cultural norms or engage in non-traditional or non-heteronormative behaviors (i.e. polyamorous).

Refine Strategy Protocol. Several providers had specific recommendations for particular elements of the CHCT strategy protocol. Some providers recommended the inclusion of pregnancy planning as part of this agreement. This recommendation was in response to some HCP’s experiences with couples whereby pregnancy intention was the sole motivation for an individual to pursue a relationship. Additionally, providers recommended CHCT included incorporating the promotion of PrEP among couples.

Lastly, other HCP believed the protocols’ emphasis on focusing on moving forward and potentially not addressing past sexual, drug using or other risky behavior among partners within a couple may not be best practice. This was specifically evident among those providers who incorporated a mental health paradigm to patient care. The sentiment was if past infidelity or current drug using behavior or underlying depression,
for example, are not addressed, the couple cannot successfully develop nor sustain an agreement.

If you don't address your past you're due to repeat it…you are forming a couple and … he doesn't know your past and you don't know his past, so you don't know what you're getting yourself into. So in order to [move forward], let's lay it all out on the table, this is where I come from, this is where I’ve been, and this is where I am at today. Are you okay with that? Now we can make an agreement…See if you don't identify the thing, how are you going to change?

In contrast, a few of the more clinically based providers noted that if they do not have to spend clinical time addressing sexual history implementing the strategy may be deemed more favorably.

**Streamline Existing Services.** Providers identified barriers related to insurance, service billing and/or patient registration protocols which disallowed partner-based HIV screening. Solutions identified reflected that cross training is needed where varying facility staff (i.e. medical assistants) are capable of providing rapid tests and for facilities to assess and adopt varying billing streams to cover the cost of HIV screening, even within HIV care clinics that tend not to incorporate HIV screening its scope of practice. Current ICD-10-CM diagnosis codes can be used to bill for HIV and other STI’s screening among populations who may be HIV negative, but at risk.

**Develop Concordance Between the Model of Care and the Health Problem.** The overarching theme implicitly and explicitly expressed by providers was the need for a multi-level paradigm shift so that the model of care addresses the health problem. On one level, this paradigm shift involved a need for more cross-training of skills among non-clinical providers and a model of healthcare that was more interdisciplinary to address patient needs:
That helps when another person is involved and supports the information that we give or before we talk with them. Sometimes RNs or case managers, social workers, that help, that they know very well about the situation and they have training and support for our patients to do the right thing, to do the testing, to take the medications, to be compliant… I notice that it is really worth it to have somebody else to give support, to reinforce the information that we give to the patient and follow up.

The other level of this paradigm shift involves training of provider’s, especially clinical and specifically medical doctors. The clinical training of providers was recommended not only for them to adopt practices that influenced engagement with patients on sensitive topic issues, but that allowed for patients to be empowered in their own care. This self-empowerment represents the third level of this paradigm shift which entails building a more holistic concept of health and wellness among populations. Cumulatively these elements would represent a paradigm shift towards a more preventative health orientation.

**Discussion**

The World Health Organization guidelines (2012) suggests it is imperative that as clinical settings consider to incorporate CHCT into their HIV prevention programs, they assess provider attitude and readiness to implement CHCT. The guidelines also suggest that challenges or reservations about CHTC may be more a reflection of HIV testing within a health system that is perceived not to be wholly oriented toward preventative health. These perspectives were also reflected among the provider’s perceptions in this study.

Overall provider narratives in this study demonstrated support for CHCT as a strategy. However, the perceptions toward CHCT uncovered current barriers to HIV testing and patient engagement into HIV care as subsequent potential barriers to CHCT.
Efforts to incorporate CHCT into community-based or clinical settings must consider the current multi-level factors to engaging patients along the HIV care continuum. These efforts must also aim to optimize and enhance provider education and training.

To the author’s best knowledge, there is only one other study to explore U.S. healthcare provider perceptions of a CHCT protocol, including providers who were trained and who implemented this specific strategy (Sullivan et al., 2014). Those perceptions were based on efforts to adapt the African-based CHCT protocol to service a US-based MSM population. The incorporation of this strategy in a US based clinical setting was not explored. Therefore, this current study is believed to be the first of its kind to include U.S. healthcare provider perception of the training and elements of the CDC protocol within a clinical setting. Lastly, the significance of the study setting is one which currently holds the highest rate of the HIV infection and has one of the most unique patient populations in the country (FDOH, 2014). Given the uniqueness of the sample, setting and in-depth exploration of the phenomenon, this study has implications for practice, policy and future research.

Providers reported that historically they were required to refuse patients demands for couples HIV testing, often citing local health department restrictions. Some seemed pleased there is a protocol that can give some guidelines on how to implement this strategy. Although there were some aspects of the protocol that were incongruent with their perception of the purpose of such a strategy, providers seem to believe that demand for CHCT and by extension a paradigm shift in health will emerge with community’s demand.
Some HCP attributed South Florida’s large diverse immigrant population to the fact that many residents may hold antiquated beliefs about HIV transmission and care. Public health education should not only address the availability of CHCT, nor focus exclusively on partner risk which may exacerbate tensions and instability in less mature couples; but also include basic HIV 101. Education should also reflect the proposed paradigm shift in healthcare of how health could be conceptualized to encompass joint health attainment. Health promotion would reflect the concept of the couples or partner health as an extension of family health. This perspective could complement or reinforce existing cultural norms and perspectives common in Caribbean and Latino/Hispanic communities regarding family cohesion and traditional family values (Schwartz et al., 2010). Patient populations require empowerment through knowledge to prevent HIV transmission from their intimate partner(s) and to demand such strategies to mitigate risks within their communities. Innovative approaches need to be assessed and utilized to ensure populations have adequate information they can act upon. Lastly, advertisement would require collaboration with entities who specialize in health communication to ensure these culturally-laden family/couple based elements are captured and that different forms of media are used.

Healthcare providers in this study identified the need for providers who are non-biased, skilled and interpersonally savvy to promote a strategy like CHCT in the U.S. Medical and nursing schools were identified as tasked with ensuring that providers graduate with the skills necessary to engage patients, their partners and their families in discussions regarding sexual health. However medical doctors and advanced practice nursing utilize a medical model approach to patient care which emphasizes care for the
individual. Further nursing theories on provider patient relationships like Peplau’s *Theory of Interpersonal Relations* (1959/1997) establish context, however they too focus on the individual patient, not necessarily accounting for interpersonal relationships dominating individuals risk for disease.

Institutions of higher learning are tasked with ensuring that providers understand, participate and can initiate interdisciplinary approaches within health settings to provide a holistic perspective. The use of such approaches can assist in shifting the care paradigm so that the individual patient in addition to other persons involved in their well-being are considered when creating discharge and treatment plans.

Healthcare providers reported that they are unable to conduct HIV testing either within an HIV care clinic or for the partner of an index patient due to structural barriers that impede their scope of practice. Many providers identified broader systematic concerns such as an under or uninsured patient population, billing for services and registration of index patient partners as perceived challenges to couples’ HIV testing. Given the barriers identified, providers alluded to a need for healthcare facilities to streamline HIV screening processes in order to enhance provider’s ability to offer and conduct CHCT. To address these broader issues, it would require at the facility level a multi-disciplinary team which may include representatives from billing, both clinical and nonclinical health provider staff, and administration to convene and troubleshoot, brainstorm and commit to eliminating this barrier.

The affordable care act (ACA) in tandem with the national HIV/AIDS strategy demonstrates a national effort to address the perceived broader systemic challenges identified by providers. It also aims to address access across the HIV continuum which
includes HIV testing, a preventative service (Wagner, Wu & Sood, 2014). Only two providers mentioned the affordable care act (ACA) in their narrative. One provider spoke of the new policy in the context of her patients not knowing how to even enroll and perceived to be too poor or unemployed to even participate and benefit from the ACA marketplace. For the uninsured, one option is for facilities to develop funding streams that can provide free testing for the uninsured or underinsured partner. Another option is to collaborate with community based agencies who may receive funding to provide HIV screening and utilize their efforts to screen partners within the clinical setting.

The findings of this study can guide and influence these potential areas of research. This study identified further needs for research on the topic of interpersonal risk, systemic barriers to patient care, and couples’ HIV testing implementation and protocol development. The CDC CHCT protocol (CDC, 2012) appears best suited for community based agencies that conduct HIV screening. The protocol could use adaptation for implementation within a U.S. based clinical setting. The efficacy of such a protocol would need to be tested. Other research possibilities can include ascertaining knowledge and attitude quantitatively from a larger sample to capture cross-country variation. This could provide additional guidance for existing protocol refinement and the scope of the health problem.
Limitations

The rigor of the design and its implementation demonstrated in this study aligns with existing standards and expectations for qualitative studies (Creswell, 2013; Thomas & Magilvy, 2011). Despite these efforts potential limitations may be present in the sampling of facilities and providers. Providers were self-selected and represented those with a vested interested in the topic and hence provided a perspective that may be biased. These limitations are eclipsed by the fact that most of the providers possessed up to 20 plus years of experience in HIV screening and care, as well as represented a variety of disciplines. Hence collectively they brought significant insight and expertise to this perspective which may resonate in other settings or sub-populations. The experience and reflection of such a group of providers are a benefit for entities considering CHCT. Another potential limitation is that although the focus was on providers, two of the facilities represented were involved in the county pilot. This may have biased the sample in that reflection and perspectives may have been colored by experiences of the training and the actual implementation. A small number of providers included in the sample actually participated in the training or had experience with the pilot.

Conclusion

This study aims to ascertain and examine healthcare provider’s perceptions, and attitudes regarding couples testing for HIV infection. Collectively providers indicated that CHCT is an extension of current HIV testing approaches but unique in that it represents a mechanism for reducing transmission within couples. CHCT represents a way to facilitate disclosure, to keep HIV negative people uninfected, to initiate and sustain engagement in care among HIV infected people and allows for the provider to use
known tools for HIV prevention within a couple. Undergirding themes identified in this study indicate that current healthcare structure requires a shift in approach so that the model of care is congruent with the health problem. Providers overall expressed support for CHCT and stated/alluded to a need for a paradigm shift in healthcare and medicine toward an integrative, interdisciplinary, personalized, more holistic and preventative approach to disease prevention and health promotion. This paradigm shift would ensure a preventative orientation that aligns the model of care and scope of practice in settings and among varying provider types (especially advanced nurse practitioners) to the population health problem of partner-based HIV transmission.
Chapter 5

Conclusion

Historically HIV prevention focused on individual behaviors and implementing interventions that isolated individual agency as the target for change. There was little emphasis or attention on the social ecological context or the role of interpersonal processes on HIV transmission (Kippax et al. 2015). This is despite early studies in the U.S. clearly demonstrating that place mattered in the role of HIV transmission, that health and social justice policy mattered, and that the nature and presence of interpersonal relationships among those at risk also mattered (Lutfi et al., 2015; Wyatt et al., 2015). The epidemics concentration among historically marginalized populations in the U.S. (injection drug users, gay men, women of color) led those who could have facilitated large scale prevention and health policies to address transmission to be inactive.

Clinicians and health researchers responded to the epidemic in accordance to their expertise, which included the development of biomedical technologies to refine HIV screening and the introduction of HIV treatment among those who were infected. The introduction of these biomedical interventions coupled with the development of a variety of modalities to enhance HIV screening and treatment, drastically increased survivorship among those infected (Kippax, 2013). It also subsequently altered the perception of the disease. The World Health Organization (WHO) reports that since the introduction of provider initiated HIV testing, screening for HIV increased by one-third (WHO, 2012). Despite these successes in HIV testing and treatment, challenges remain including stigma of persons who are infected which has resulted in people globally not wanting to know
their status (Young & Zhu, 2012). The neglect of the contextual nature that facilitates HIV transmission and impedes uptake of testing as well as adherence to treatment until recently remained largely ignored (Kippax et al, 2013; Rhodes et al., 2005).

Increasingly the HIV prevention efforts to address the contextual nature of HIV transmission is being appreciated (Karney et al., 2010; Kippax & Stephenson, 2012; El-Bassel et al., 2010). The introduction of the CDC routine HIV screening guidelines in 2006, the National HIV/AIDS Strategy and the Affordable Care Act in the United States in 2010 demonstrates an understanding that larger ecological influences must be present to ensure that the engagement of people in the HIV care continuum is optimized (Centers for Disease Control and Prevention, 2015; The Affordable Care Act, 2016; The National HIV/AIDS Strategy of the United States, 2010).

The collective findings of these chapters in this dissertation are aligned with these greater efforts to shift HIV prevention from solely address individual risk behaviors to a focus on greater ecological and interpersonal influences on behavior and engagement in health promotion and disease prevention. One of the most salient findings of this dissertation is the influence of broader contextual patterns and interpersonal processes on engaging individuals to screen for HIV infection. The second most salient finding is the recommendations of healthcare providers as it relates to their perception of and willingness to engage patient populations into an interpersonal process, such as couples’ HIV counseling and testing (CHCT). Underlying these findings are the greater contexts and the goal of integrating disease prevention and health promotion approaches into clinical practice.
Chapter Four’s study perceived these individual attributes, namely patient vulnerabilities such as depression and substance use, as potential barriers to CHCT adoption due to their influence on existing HIV prevention strategies. Despite the role of individual attributes, interpersonal ones and broader patterns of influence, such as patients having health insurance and organizational attributes, were greater factors that influenced provider perception of couple’s HIV screening. Further recent meta-analysis indicated that couple based HIV prevention approaches when compared to individually based ones significantly in increased HIV prevention outcomes. It demonstrated that couples based HIV prevention approaches were significant in increasing outcomes such as HIV screening, ART uptake and safer sex practices (Crepaz, Tungol-Ashmon, Vosburgh, Baack, & Mullins, 2015).

**Interpersonal Processes**

**Couples-based.** Chapter Two is a metasynthesis that explored the factors associated with the engagement of HIV infected individuals into the HIV/AIDS care continuum (Gardner, McLees, Steiner, del Rio, & Burman, 2011), otherwise known as the HIV treatment cascade. This chapter specifically focused on the first two parts of the HIV treatment cascade: (1) screening uptake - people screening for HIV infection, and (2) receipt of test results or serostatus awareness. Findings revealed that individual attributes spoke to the emotional and psychological states of individuals among other factors, which influenced HIV screening. Results of this synthesis also revealed that a globally-based broader framework both facilitates and impedes HIV screening. Using Bronfrenbrenner’s ecological framework (1979), it was demonstrated that factors associated with an individual screening for HIV infection were multifactorial and
ecological in nature. These factors had more to do with the context in which people live and how they interact with others rather than individual attributes alone. The synthesis established that interpersonal attributes in the context of HIV screening are those that engage the individual with other people, such as a spouse or main partner, or engage the individual within a setting that influences screening, such as a healthcare provider. Interpersonal attributes were those factors that were comprised of partner-based considerations and provider-patient relationships.

Chapter Three is an integrative literature review examining the components of negotiated safety among male couples and exploring the interpersonal process and contexts resulting in the development of this specific type of sexual agreement. The findings of this integrative literature review revealed that a sexual agreement is a population’s attempt to manage their risk for HIV within their context of knowledge and behavior. Negotiated safety is a type of sexual agreement that is comprised of established components (i.e. HIV seroconcordant negative) that provide parameters for gay couples to mitigate HIV transmission (Kippax et al., 1997). Among gay men establishing negotiated safety agreements, individual attributes regarding HIV screening and relationship goals were found to greatly influence their development. The health goals of negotiated safety included joint testing and mutual disclosure of serostatus as well as relationship rules regarding condom use and extra dyadic partnerships. The theory of interdependence proposes a framework for understanding processes toward joint outcomes as a result of interactions within a dyad (Kelley and Thibault, 1959/1978). These interactions are governed by the context of a situation (i.e. relationship development and sexual behavior), individual characteristics (i.e. condom use and
monogamy preferences) and the environment (i.e. same sex couples are socially recognized). The outcome is also derived by dyadic interaction and individual influence on the joint outcome in which sexual agreements is an important one. It is this leverage that individuals have within a dyad on the potentially shared interests that has influenced the introduction of dyadic based health interventions (Burton, et al. 2010, El-Bassel & Weschsberg, 2010).

The establishment of negotiated safety was demonstrated to be a result of men in relationships utilizing a self-conceptualized strategy that reflects a premise that either or both members of the dyad fundamentally endorse mutual efforts to address a health threat. They achieve this through communication and cooperative action to attain this health goal. The couple's role is to undergo a process of ‘transformation of motivation’ so that they can get to a place where they become cognizant of the influence of one’s health on the other and to subsequently engage in joint testing (Lewis, McBride, Pollack et al., 2006). Of greatest importance to joint health attainment is the transformative processes individuals within a couple must undergo to attain the desired outcome (Lewis, Gladstone, Schman & Darbes, 2006). The individual transformation of motivation is one of the tenets of communal coping and is a result of self-appraisal and the risk environment (Folkman & Lazarus, 1984). Within couples, transformation of motivation defines the mechanisms from a self-centered orientation to a dyadic orientation, by which the dyad cognitively and emotionally merges to address a potential health threat. In order for a health outcome to be achieved, the couple must undergo a transformation from self-centeredness to cognitively and emotionally believing in the mutual need to think collectively about the health behavior (or risk) that affects each person. This
transformation is motivated by the realization of a mutual threat; the potential health threat influences the health of one partner and/or the integrity of the relationship. Therefore, the motivation has moved beyond the individual and individual theories of health perception and behavioral change to joint motivators of change (Montgomery et al., 2012).

**Patient-Provider Dyad.** Rubio-Valera and colleagues (2014) metasynthesis revealed that the interpersonal relationship between the patient and provider is an important one that most providers attempt to maintain in the adoption of primary prevention strategies. They found that threats to this relationship such as a patient not being willing or able to participate in the provider’s recommendation dissuaded providers to adopt health promotion/preventative approaches in their clinical practice. Interpersonal attributes examined in this dissertation also concern the interpersonal component of HIV screening within the interpersonal process between a healthcare provider and their patient or client.

The interpersonal process has historically been a central concept in nursing to describe aspects of the nursing discipline. The nursing perspective realizes that the patient or client interacts with the environment and other people as a way of being in the world. Likewise, this nursing perspective also recognizes that the nurse and more broadly the healthcare provider uses the interpersonal process to best assess, identify and serve the patients’ needs (Alli, Maharaj, & Vawda, 2013; Meleis, 2012, pg. 102). In establishing trust and communication within the provider-patient relationship, the provider may adopt certain roles to facilitate the process, which requires the patient and provider to cooperatively engage with one another to address the health problem and
reach the health goal (Peplau, 1997). In the context of couples testing (CHTC), the provider’s role facilitates a process that produces a health outcome whereby the couple or partners would have jointly tested for HIV infection, disclosed their status to one another, and agreed on a plan to minimize risk for HIV transmission in the future. The provider’s role is contingent upon the perceived need of the patient(s), in tandem with the provider’s self-awareness of their capability of how they can meet the patient’s need.

The perception of CHCT among providers was based on knowledge of the local HIV context which included patient vulnerabilities, but also their experience and ethos concerning HIV screening. Findings among providers in Chapter Four identified that their experience and relationship with patients to facilitate patient engagement in the HIV continuum of care shaped their perception about CHCT. Overall, providers support for the strategy based on their relationships and interface with the patient population.

**Ecological/structural Considerations**

Although identified as a factors in other studies (DeMarco et al., 2012; Korthius et al., 2011; Mumma & Suffoletto, 2011), Chapter Two revealed that the greater ecological and socio-political factors influencing how to get people to test for HIV infection was rarely discussed in the qualitative literature. This greater level of influence on the uptake of HIV screening identified was labeled the broader patterns of influence. It involved the structural influences posed by a particular setting, strategy or policy at a local or national level that facilitated or impeded testing uptake. Other literature on the barriers and facilitators for the implementation of primary prevention in primary care also used an ecological framework to describe these factors (Gombachika et al., 2012; Prado, Lightfoot, & Brown, 2013). The broader context was identified in one study as the
community, policy and institutional factors that influenced barriers and facilitators in the implementation of primary prevention approaches in primary care (Rubio-Valera et al., 2014). Other studies have documented the need for adopting a preventative medicine health promotion paradigm in order to address the greater context of HIV risk and need for prevention (Luquis & Paz, 2015).

Chapter Four demonstrated that providers identified broader structural factors as impediments to the scope of practice in their efforts to engage patients in care or to screen partners for HIV infection and other STIs. These findings support providers’ perceived potential challenges to CHCT which were based on existing barriers and facilitators for individualized and routinized HIV screening. These issues included organizational policies lack of insurance, provider time, patient vulnerabilities and provider self-concept to implement CHCT in their practice. As a result of these broader patterns of influence, providers offered recommendations for the adoption of CHCT.

Rubio-Valera et al. (2014) identified interdisciplinary healthcare teams to be facilitators in the adoption of health promotion practice among physicians. This finding is aligned with those in Chapter Four whereby providers overall recommended that an interdisciplinary, cross-trained teams be available to address patient’s specific health needs and to promote CHCT. Provider’s recommended that for this kind of approach to be successful, patients require a multi-provider approach given in the form of an interdisciplinary team. In other studies, the concept of care coordination or interdisciplinary approaches were identified as an important component of the provider’s motivation to implement primary prevention strategies in clinical settings (Allen, 2014).
These recommendations comprised the second salient finding of this dissertation - healthcare provider’s recommendation for a shift in the HIV prevention paradigm. This paradigm shift would address the structural factors that were identified as impediments to practice in meeting the needs of their patient population. Providers perspectives are significant because they are able to identify patient vulnerabilities and needs as well as identify the structural barriers, which not only were perceived to impede their full scope of practice, but act as barriers to patient maximizing engagement in the HIV/AIDS continuum of care. Unlike the findings of Rubio-Valera et al. (2014) whereby larger systems issues were not specifically identified as a factor among the providers in their meta-ethnography (more so due to its absence in the literature); provider’s participating in Chapter Four’s study identified clearly that the model of care did not align with the health problem (i.e. low HIV screening, partner-based risk). Therefore, the perceived discordance in the model of care and the health problem was identified as a potential challenge to the adoption of CHCT. Rubio-Valera and colleagues (2014) work also did not identify whether primary care was an appropriate setting for implementing prevention activities. Chapter Four demonstrated that overall, providers perceived that the clinical space was indeed an appropriate setting for CHCT given that HIV screening is already commonplace and routinized within some provider’s personal practice.

Translation of Primary Prevention into Primary Care

HIV screening is a primary prevention health promotion strategy that remains to be the gateway to engage in the HIV/AIDS continuum of care. It is the entry to lifelong treatment and an enhanced quality of life, if one remains engaged in care (Heffelfinger et al., 2011). To reduce the prevalence of HIV infection among varying populations and
specific communities, individuals must be aware of their status but collectively attain viral load suppression. National U.S. estimates have shown that 85% of HIV screening in the United States occurs in clinical settings (Centers for Disease Control and Prevention [CDC], 2013). However, translating or incorporating primary prevention approaches like HIV screening into clinical practice remains to be a challenge for many diseases including HIV infection (Luquis & Paz, 2014; Rubio-Valera et al., 2014). The metasynthesis literature suggests that research on barriers and facilitators to uptake and primary prevention approaches is warranted to ensure that these factors are considered and addressed in implementation (Leblanc et al., 2015; Rubio-Valera et al., 2014).

One of the many barriers to integration of health prevention approaches into primary care is that providers may perceive health promotion as a non-clinical effort (Williams et al., 2004). However, this was not the findings from Chapter Four in which participants overall perceived the clinical setting to be an appropriate one to promote HIV screening including CHCT. The very few participants who demonstrated some hesitation toward the implementation of CHCT in a clinical setting either had some general concerns about the strategy or were not amenable to clinicians providing this service. There was a belief among these few providers that clinicians were not well trained to engage patients regarding sexual health. This sentiment was not unique in this study given that other literature has acknowledged that provider perception of their capacity to adopt primary prevention approaches influences perception and actual implementation of such approaches (Harmon et al., 2012; Korthius et al., 2011; Sison et al., 2013).

The significance of Chapter Four is that it demonstrates the views and attitudes of healthcare providers toward CHCT. This formative work is important when considering
newer approaches and implementation of such approaches. The literature proposes that to amend attitudes towards and facilitate adoption of health promotion approaches within clinical settings, two groups of people need to be informed. One group is involved in policy and the other are clinicians or healthcare providers who would be tasked with implementation (Rubio-Valera et al., 2014). Another consideration consistently offered is that healthcare education must incorporate a disease prevention framework. This framework would not only entail skills in engaging populations to participate in health promotion activities but also to enhance providers “self-concept” or confidence that they can actually engage patients (Rubio-Valera et al., 2014). This insight resonates with one of the main recommendations healthcare providers in Chapter Four offered, which included the education of all types of healthcare providers to enter their fields equipped to engage patient populations in disease prevention and health promotion, specifically concerning sexual health and partner-based risk.

Rubio-Valera and colleagues (2014) proposed a biopsychosocial model of care to facilitate provider’s ability to implement prevention approaches. This approach considers the population at risk and the context of risk in implementing health promotion approaches which were deemed motivating factors for providers in their willingness to adopt primary prevention in their practice. Such an approach would facilitate the translation of a primary prevention approach to HIV infection, like CHCT in the healthcare setting and address the health problem of partner-based risk in HIV transmission.
Summary

Collectively Chapters Two through Four have demonstrated that HIV screening, a primary prevention strategy requires understanding that interpersonal attributes and system considerations are just as or more important than the individual attributes in the uptake of HIV screening. The interpersonal process is important in the consideration of risk but also in the potential to address that risk, as in joint testing and counseling HIV. Chapter Three demonstrated that such interpersonal processes can organically form within an intimate couple if they are knowledgeable and have certain qualities that foster communication and joint health attainment through NS. Chapter Four addresses the perception of the couples’ HIV testing and offers providers perceptions of the perceived potential facilitators and barriers to CHCT. This particular chapter addresses one of three gaps in translational science in healthcare that has been identified – exploring the problem or the unknown (Pearson, Jordan & Munn, 2014).

Providers in Chapter Four identified existing factors in their current practice with engaging populations in the HIV care continuum, especially HIV screening. The perception of the clinical space in promoting health promotion efforts is significant given the expectation that the primary care setting is one where these efforts would be most optimized (IOM [Institute of Medicine, 2012). However, the perception of providers working within the clinical settings may not be in accordance with the expectation of the role of primary care to include disease screening – a primary health strategy (Williams et al., 2004).

The factors identified as those which would impact the adoption of CHCT specifically in a clinical setting were concerned with provider capability and
organizational capacity. This finding is a significant one because it calls for the need for quality improvement of existing HIV services. Furthermore, this finding provides a foundation for future efforts to strengthen and expand current CHCT piloting efforts. These efforts could entail placement of CHCT within community organizations, pilots for clinical settings as well as development of a protocol for integration of CHCT into clinical settings. Such efforts would be informed by established translational research approaches and signify a move toward patient-centered care (Grady, 2010; Pearson, Jordan & Munn, 2012) As health policy continues to undergo refinement in the United States that includes improving engagement of those infected with HIV into the HIV care continuum (National HIV/AIDS Strategy), and enhancing the affordability of healthcare and increasing the number of primary care facilities through the Affordable Care Act (ACA) opportunities are forever emerging to integrate health promotion within primary care. These efforts will hopefully help to ensure that the burden of disease on the overall U.S. population is mitigated and that health disparities in diseases are eliminated.
Reference


Bonello, K., & Cross, M. C. (2009). Gay monogamy: I love you but I can't have sex with only you. *Journal of Homosexuality, 57*(1), 117-139. doi: 10.1080/00918360903445962


doi:10.1080/10911359.2011.615673


Marks, G., Crepaz, N., & Janssen, R. S. (2006). Estimating sexual transmission of HIV from persons aware and unaware that they are infected with the virus in the USA. *AIDS, 20*(10), 1447-1450.


Munhall, P. (2012). *Nursing research: A qualitative perspective*. Miami: Jones & Bartlett Learning, LLC


Figure 2.1 Flow Diagram of Articles Selected for the Qualitative Metasynthesis

- Records identified through database search, $n=4640$
- Duplicate articles removed, $n = 1580$
- Articles screened, $n=3060$
- Total articles reviewed and included in synthesis, $n=285$
- Total articles reviewed for HIV testing and counseling, $n=128$
Figure 2.2 Ecological Model of Facilitators and Barriers to HIV Screening
Figure 3.1 Flow Diagram of Articles Selected for Integrative Literature Review

Articles identified through electronic databases, \( n = 84 \)

Articles identified through other sources, \( n = 10 \)

Duplicate articles removed, \( n = 22 \)

Total articles reviewed, \( n = 48 \)
Figure 3.2 Conceptual Model of Negotiated Safety Components
Figure 4.1. Influences on Provider’s Perceptions of Couples HIV Counseling and Testing
Figure 4.2. Content Analysis Framework: Provider’s Attitudes Towards Couples HIV Counseling and Testing
Figure 4.3 Thematic Analysis Findings Framework
Table 2. Sample Process of Data Abstraction and Synthesis

<table>
<thead>
<tr>
<th>Findings</th>
<th>Notes</th>
<th>Code/content category</th>
<th>Theme/ ecological category</th>
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<td>“One young woman said she got tested every time she had ‘symptoms down there [genital area]’… an older man, said he was tested because he had a friend who died from AIDS. One of the older men said he had no need to be tested because he did not have a partner, and the other older man said he did not need a test because he and his wife had been in a monogamous relationship for 30 years.”</td>
<td>Motivations to test or not test were based on perceptions of the disease or general health, what appeared as symptoms and assumptions about the screening process.</td>
<td>Symptomology risk perception</td>
<td>Individual attributes</td>
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<tr>
<td>“The most common reason for testing given by all women and older men was the assumption they had been tested with other health services…..Many women assumed an HIV test was included with a routine Pap test. Some men assumed they were tested every time they went to the health clinic or whenever blood was drawn.”</td>
<td></td>
<td>Lack of awareness</td>
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<td>“The main barrier to HIV/STI testing identified by clients was fear of a positive result and lack of knowledge of where to access free and anonymous testing.”</td>
<td>Fear of a test result, of the anticipated stigma and perhaps of what a positive diagnosis means – lifelong treatment is too overwhelming and prevents people to seek HIV screening. Also fear is fueled by perception of risk and preferring ignorance over knowledge.</td>
<td>Fear</td>
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<td>“Several men and one woman expressed distrust of the rapid test. Women did not talk as much as men about distrust of providers or health services.”</td>
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<td>“Apprehension about the potentially negative outcome or the result of an HIV test was the most prevalent theme identified in women’s reasons for individuals not undergoing HIV testing….. persons refused testing because they do not want to be informed of their HIV status. Many</td>
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respondents associated negative feelings, especially fear and anxiety, with knowing the results.”

“All claimed to be too scared to have an HIV-test because of the risks they might have taken in the past. Many expressed that it is better to be unaware of your HIV status, so that you just can go on with your life and do not have to face the fact that you will die young. Many participants mentioned that life is easier when you ignore the disease and the risks you are running.”

“A 22-year-old Latina heterosexual woman who tested positive for HIV at age 16 years believed her former boyfriend, the father of her child, had infected her. She began to suspect him of lying to her about his HIV status when he would not get tested with her. This suspicion led her to get an HIV test.”

“Some participants said they did not seek (routine) testing because they were in a long-term relationship or because they and their partner trusted each other. Participants said that their emotional connection to a partner would affect their decision about testing with that partner (i.e., testing was a denial of the emotional bond that they held with their partner).”

“An African American woman tested positive for HIV when she was 17 years old. She went for a pregnancy test and agreed to take an HIV test when the provider suggested it. Her pregnancy test was negative, but her HIV test was positive. She was surprised by the results but attributed her infection to her first and only boyfriend whom she had dated in high school for 8 months.”

Young women reported that a health care provider recommendation facilitated screening. Most shared their experience with a partner who they either suspected was HIV infected or who engaged them in sexual behaviors they were ambivalent with agreeing to. The authors note, that women perceived their partner’s agreement towards joint testing as indication of commitment and their refusal as indication of infidelity. Men also used their partner’s status as proxy for their status and this became a barrier to testing. Healthcare provider’s biases and perceived abilities can either motivate or pose as a barrier to screening for HIV.
Table 3.1a, b, c, d - Reported Negotiated Safety Components

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Table 3.1a,b,c,d - Reported Negotiated Safety Components

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<td>Kippax et al. (1993)</td>
<td>“…safety of unprotected anal intercourse between seropositive men...concordant status as a means of preventing the transmission of HIV...for unprotected anal intercourse (or any other sexual practice) that is safe in a particular context...”</td>
<td>To measure the seroconcordant sexual behavior and the presence of an agreement. Yo'examise relapse, lapse and negotiated safety with references to changes in sexual behavior”</td>
<td>Longitudinal; Australia; 145 gay men</td>
<td>Serostatus concordance influenced sexual behavior namely unprotected anal sex with regular partners (87% of seronegative men). Most men (74%), had an explicit agreement, most (81%) did not report a breach.</td>
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<td>Kippax et al. (1997)</td>
<td>“…a strategy where sexual partners in an HIV-seronegative concordant regular relationship agree to dispense with condoms for anal intercourse within their relationship while, at the same time, negotiating an agreement about sex outside the regular relationship.”</td>
<td>To test NS by examining “the frequency of the occurrence of unprotected anal intercourse with casual partners...” among seronegative concordant men</td>
<td>Cross-sectional; Australia; 354 men (92% gay-identified)</td>
<td>Among men in seroconcordant negative primary relationships, less than 9% had UAI with a casual partner. Presence of an agreement that indicated no UAI with casual sex predicted safe sex.</td>
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<td>Elford et al. (1999)</td>
<td>“It rests on the twin principles that two gay men in a regular relationship will: (i) agree to have unprotected and anal intercourse (UAI) only with each other and not with casual partners; and (ii) establish, by having an HIV test, that they are HIV seroconcordant. Sex outside of the relationship may occur, but by mutual agreement this will conform to safer sex practice...two HIV negative men who keep to a negotiated safety agreement can have UAI...”</td>
<td>“…examined sexual risk behavior among gay men...”</td>
<td>Cross-sectional; London; 986 gay men (89% white)</td>
<td>Individual respondent reports. No demographic differences. Coupled men were more likely to report UAI regardless if partner status was known. UAI was most common with a main partner than a casual one (80%). Some men were unaware of their own or their main partners HIV status.</td>
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<td>Davidovich et al. (2000)</td>
<td>“…(i) partners engaged in UAI with each other, (ii) both partners know they are HIV negative based on an HIV test; and (iii) both partners have agreed to be monogamous or have no UAI outside the primary relationship.”</td>
<td>“measure the rate of risky UAI with steady partners...the rates of UAI, HIV-seroconcordance, and sexual agreements among steady partners.”</td>
<td>Cross-sectional; Australia; 435 gay men</td>
<td>Of men in a steady partnership: (1) 40% had UAI, 33% of them were in a seroconcordant negative steady partnership; (2) 31% reported engagement in NS. The rate of non-NS compliance UAI with casual partners was 10%.</td>
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Table 3.2 Negotiated Safety Measurement and Findings

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<th>Definition proposed</th>
<th>Aim</th>
<th>Design; Setting &amp; Sample</th>
<th>Significant Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crawford et al. (2001)</td>
<td>“...agreements between partners in sero-concordant relationships who agreed to have some unprotected anal intercourse within the relationship and no unprotected anal intercourse with casual partners (outside the relationship).”</td>
<td>“...examines the role of the type of agreement as a possible determinant of practice, which risks transmission of HIV.”</td>
<td>Cross-sectional; Australia; 1,070 gay men</td>
<td>Seroconcordant partners were more likely to have NS agreements. NS and seroconcordance were significant correlates of less engagement in risky sexual behavior.</td>
</tr>
<tr>
<td>Monreau-Gruet et al. (2001)</td>
<td>“‘Negotiated safety’ holds that the risk of infection can be managed within a couple, provided specific conditions are met: both partners in the couple have been tested and have been shown to be HIV negative, they have discussed it together, and are monogamous or always use condoms with casual partners or do not practice anal sex with them.”</td>
<td>“...compares the characteristics of respondents in a stable relationship with those in none, and describes the stated means of managing HIV risk within the gay couples” with casual and regular partners.</td>
<td>Cross-sectional; Switzerland; 1097 gay men</td>
<td>One quarter of the men reported a NS agreement and was most popularly used among men who reported a monogamous agreement.</td>
</tr>
<tr>
<td>Flowers et al. (2002)</td>
<td>“...an agreement between partners to have UAI within that relationship while agreeing on the nature of sex that can take place outside the relationship.”</td>
<td>To measure the outcome of a bar-based, peer led community intervention and specific outcome variables among men in two cities.</td>
<td>Longitudinal; Scotland; 2,397 gay men</td>
<td>Among men in both cities, there weren’t any difference in the proportion who reportedly practiced NS. There was an increase in HIV testing and Hep B vaccination among the intervention group.</td>
</tr>
<tr>
<td>Kippax et al. (2003)</td>
<td>“Under certain ‘negotiated safety’ conditions, however, discarding condoms within seroconcordant HIV-negative regular relationships is safe.”</td>
<td>“describe a set of seroconversion events; assess how such understandings may be informed; informing prevailing discourses of risk”</td>
<td>Qualitative. In-depth interviews; Australia; 92 gay men</td>
<td>Breaches in negotiated safety agreements regarding protected extra-dyadic sex, adherence to a monogamy agreement and unsafe sex behavior reportedly resulted in seroconversion.</td>
</tr>
<tr>
<td>Author (Year)</td>
<td>Definition proposed</td>
<td>Aim</td>
<td>Design; Setting &amp; Sample</td>
<td>Significant Findings</td>
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<tr>
<td>Davidovich, et al. (2004)</td>
<td>Negotiated safety relationships were defined as those in which HIV-negative men were in a current seroconcordant primary relationship of at least 6 months duration with another man, had UAI together within the past 3 months and had rules prohibiting UAI with others outside the relationship, although negotiated safety men who have violated these rules.</td>
<td>...investigated characteristics of men practicing NS, how they compared with those of with men adopting other strategies to manage risk within relationships, the details of their NS and disclosure...</td>
<td>Cross-sectional; USA; 554 gay men (75% non-white)</td>
<td>Of the 73 men who reported current NS agreements within their relationship, 29% breached their agreement. Those whose NS agreement included a breach disclosure clause were more likely to not breach the agreement.</td>
</tr>
<tr>
<td>Guzman et al. (2005)</td>
<td>Perceived partner preference for UAI influenced the establishment of NS. However UAI among steady partners without establishing serostatus first was common.</td>
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<tr>
<td>Davidovich et al. (2006)</td>
<td>“Negotiated safety was defined as follows: (a) partners engaged in UAI with each other; (b) both partners knew that they were HIV-negative based on an HIV test; and (c) both partners agreed to be monogamous or to have no UAI outside the primary relationship.”</td>
<td>...investigated whether satisfaction, investment, alternatives, and commitment are associated with risky UAI and with 3 HIV-protective sexual behaviors: no anal intercourse, protected anal intercourse, and NS”</td>
<td>Cross-sectional &amp; longitudinal; Netherlands; 360 gay men</td>
<td>Of the men reportedly in a relationship, 42% were in a negotiated safety relationship. Relationship commitment was related to the existence of a negotiated safety relationship. Higher relationship satisfaction and investment was associated with greater practice of negotiated safety. Relationship investment had the greatest overall influence on the practice of negotiated safety.</td>
</tr>
<tr>
<td>Author (Year)</td>
<td>Table 3.2 Negotiated Safety Measurement and Findings</td>
<td>Design: Setting &amp; Sample</td>
<td>Significant Findings</td>
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<td>Bertens et al. (2008)</td>
<td>“strategy of ‘negotiated safety’—discarding with condoms within a sero-negative steady relationship as long as safe sex agreements are negotiated to cover sexual behavior outside the steady relationship…discarding condoms within steady relationship and clear agreements on safe sex outside the relationship.”</td>
<td>Cross-sectional; Netherlands; 103 Suriname and Dutch Antillean women</td>
<td>NS was defined as condom use with casual partners and monogamy with regular partners. Women with partners of similar ethnic backgrounds were more likely to report safe sex including negotiated safety. Plans to negotiate safe sex.</td>
<td></td>
</tr>
<tr>
<td>Prestage et al. (2008)</td>
<td>“‘Negotiated safety’…between HIV seronegative regular partners: it relies on regular partners knowing their own and their partner’s HIV serostatus, and being able to discuss this to make a reliable agreement between both partners about anal intercourse and condom use both inside the relationship and with respect to any sexual contacts they might have with other men.”</td>
<td>Longitudinal; Australia; 23,424 gay men</td>
<td>Most men who had a sexual agreement of any kind had one regarding both sex outside and with the relationship. Trends show that seroconcordant negative men use serostatus to guide agreement formation and tend to adopt monogamy type agreements.</td>
<td></td>
</tr>
<tr>
<td>Corbett et al. (2009)</td>
<td>“…as a risk assessment and reduction strategy…refers to an explicit agreement between partners about sexual practices that takes into account the HIV status of both. Couples using this approach undergo mutual HIV testing, then decide to discontinue condom use within their primary relationship and commit to monogamy or establish rules for condom use with outside partners…use of negotiated safety among homosexual men is well documented…”</td>
<td>Qualitative in-depth interviews; USA; 4 seroconcordant negative heterosexual couples</td>
<td>Couples used varying approaches to assess HIV risk. All main tenants of NS were not utilized, specifically HIV testing or condom use. Risk was associated with past drug using behavior, not necessarily sexual behavior. Monogamy and non-condom use appeared to be the agreement among these 4 couples.</td>
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<tr>
<td>Author (Year)</td>
<td>Table 3.2 Negotiated Safety Measurement and Findings</td>
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<tr>
<td>Eisenberg et al. (2011)</td>
<td>“(i.e., an agreement between partners to engage in unprotected anal intercourse (UAI) in specific circumstances) and sero-sorting (i.e. selection of sexual partners based on concurrent HIV status)”</td>
<td>To “explore young MSM sexual and romantic experiences” and “to understand their definitions of safety” and threat to HIV infection.</td>
<td>Qualitative Semi-structured interviews; USA; 34 young gay men</td>
<td><strong>Significant Findings</strong></td>
</tr>
<tr>
<td>Mao et al. (2011)</td>
<td>“...reported verbal agreements with their regular partner that allowed UAI within their relationship but no sex or no UAI with other men.”</td>
<td>To explore: 100% condom use; condom use depending on relationship type, HIV status and viral load; relationship patterns and adoption of HIV risk reduction strategies</td>
<td>Cross-sectional; Australia; 14,785 HIV negative gay men</td>
<td><strong>Significant Findings</strong></td>
</tr>
<tr>
<td>Wei et al., (2011)</td>
<td>“…for HIV-negative men only, men who had one main partner of HIV-negative serostatus, with whom he had UAI and also having other non-main partner(s) with whom he used condoms 100% of the time.”</td>
<td>To “explore racial differences in the use of serodaptive sexual behaviors”</td>
<td>Cross-sectional; USA; 1,213 MSM</td>
<td><strong>Significant Findings</strong></td>
</tr>
<tr>
<td>Author (Year)</td>
<td>Table 3.2 Negotiated Safety Measurement and Findings</td>
<td>Design; Setting &amp; Sample</td>
<td>Significant Findings</td>
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<tr>
<td>Grace et al. (2014)</td>
<td>“...negotiated safety, “the strategy of dispensing with condoms within seroconcordant regular sexual relationships and engaging in protected anal intercourse outside of the primary relations and committing to disclose to one’s partner should this agreement be violated.”</td>
<td>Mixed methods; Canada; 33 gay/bisexual men</td>
<td>All men reported goals to remain HIV seronegative and sought seroconcordant partners. UAI with primary partners were not perceived to be an HIV risk. NS agreements were noted by most men and included either monogamy or protected casual sex. Breaches clauses included HIV testing and reconfirmation of seronegative status.</td>
<td></td>
</tr>
<tr>
<td>Hickson et al. (2013)</td>
<td>“...men who are confident they are in HIV-negative-concordant relationships may result in an increase in unprotected intercourse within such relationships, which in conjunction with explicit rules about unprotected intercourse with other partners has been termed ‘negotiated safety’.”</td>
<td>Retrospective; England; 4,899 MSM</td>
<td>There was a reduction in the number of partners among men who reported HIV seronegativity or having unknown status. There was an overall increase in men who were aware of their serostatus.</td>
<td></td>
</tr>
</tbody>
</table>

"...describe patterns of HIV testing and sexual risk behavior in 2001 and in 2008 among men ... and explore evidence from these surveys of changes over time."
Table 4.1. Healthcare Provider Demographics

<table>
<thead>
<tr>
<th>Demographics Variable</th>
<th>Frequency</th>
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</thead>
<tbody>
<tr>
<td><strong>Age (years)</strong></td>
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</tr>
<tr>
<td>30-39</td>
<td>7</td>
</tr>
<tr>
<td>40-49</td>
<td>8</td>
</tr>
<tr>
<td>&gt;50</td>
<td>7</td>
</tr>
<tr>
<td><strong>Race (self-identified)</strong></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>9</td>
</tr>
<tr>
<td>White</td>
<td>11</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>2</td>
</tr>
<tr>
<td><strong>Foreign -born</strong></td>
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<tr>
<td>Yes</td>
<td>8</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
</tr>
<tr>
<td><strong>Nationality (self-identified)</strong></td>
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</tr>
<tr>
<td>American</td>
<td>13</td>
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<tr>
<td>Latino</td>
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</tr>
<tr>
<td>Cuban</td>
<td>3</td>
</tr>
<tr>
<td>Haitian</td>
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</tr>
<tr>
<td>Hispanic</td>
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<tr>
<td><strong>Years in practice</strong></td>
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<tr>
<td>&lt;5</td>
<td>3</td>
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<tr>
<td>6-10</td>
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<td>11-19</td>
<td>9</td>
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<tr>
<td>&gt;20</td>
<td>6</td>
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<tr>
<td><strong>Licensed Practitioner type</strong></td>
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<tr>
<td>Advanced nurse practitioner</td>
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<tr>
<td>Medical doctor</td>
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<tr>
<td>Physician assistant</td>
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</tr>
<tr>
<td>Mental health provider</td>
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</tr>
<tr>
<td><strong>Other non-clinical provider</strong></td>
<td></td>
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<tr>
<td>Program managers</td>
<td>4</td>
</tr>
<tr>
<td>Testers/Counselors</td>
<td>4</td>
</tr>
</tbody>
</table>

Notes: *4 of these providers are PhD’s as well; ** 3 of these provider have graduate training.
Table 4.2. Sample Domains and Sample of Interview Prompts

<table>
<thead>
<tr>
<th>Domains</th>
<th>Sample interview prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge about couples testing for HIV</td>
<td>-Describe anything you know or have heard about couples testing for HIV.</td>
</tr>
<tr>
<td></td>
<td>-How did you get to know about couples testing?</td>
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<tr>
<td>Attitude about couples testing for HIV</td>
<td>-What are your thoughts about couples HIV testing?</td>
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<td></td>
<td>-If you had the opportunity to jointly test sexual partners for HIV, would you and why?</td>
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<td></td>
<td>-What would it take for you to offer couples to test for HIV?</td>
</tr>
<tr>
<td>Perceptions about couples testing for HIV</td>
<td>-Describe what you think of couples testing in a clinical setting?</td>
</tr>
<tr>
<td></td>
<td>-What would you perceive to be motivating factors to couples testing in this setting?</td>
</tr>
<tr>
<td></td>
<td>--What would you perceive to be barriers factors to couples testing in this setting?</td>
</tr>
<tr>
<td></td>
<td>-What preparation would a clinical setting need to provide couples testing?</td>
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<tr>
<td></td>
<td>-What are some recommendations you have for clinical sites considering couples testing? And why?</td>
</tr>
<tr>
<td></td>
<td>-What are some considerations (needs or factors) specific to clinical providers like yourself?</td>
</tr>
</tbody>
</table>
APPENDIX A

BIBLIOGRAPHY OF LITERATURE SYNTHESIZED IN CHAPTER 2


*Donahue, M. C., Dube, Q., Dow, A., Umar, E., & Van Rie, A. (2012). "They have already thrown away their chicken": barriers affecting participation by HIV-infected women in care and treatment programs for their infants in Blantyre, Malawi. AIDS Care. 24(10), 1233-1239. doi: 10.1080/09540121.2012.656570


*Hult, J.R., Maurer, S.A., Moskowitz, J.T. (2009). 'I'm sorry, you're positive': A qualitative study of individual experiences of testing positive for HIV. AIDS Care. 21(2), 185-188.


APPENDIX B

NON-VERBAL CONSENT SCRIPT

Title of research study: Providers’ Perceptions of Couples HIV Counseling and Testing at a Community-based Medical Center in South Florida.

Investigators: Joseph De Santis, Natalie Leblanc

Why am I being invited to take part in a research study?

We invite you to take part in a research study because you are a healthcare provider at a Medical / Health Center in Miami-Dade County and you provide clinical or non-clinical HIV testing/HIV care to patients.

What should I know about a research study?

Someone will explain this research study to you.
Participation is voluntary; whether or not you take part is up to you.
You can choose not to take part.
You can agree to take part and later change your mind.
Your decision will not be held against you and will not affect your employment.
You can ask all the questions you want before you decide.

Who can I talk to?

If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team at Natalie Leblanc at 305-284-4062

This research has been reviewed and approved by an Institutional Review Board (“IRB”). Please contact the University of Miami Human Subject Research Office at (305) 243-3195 if:

- You wish to talk to someone other than the research staff about your rights as a research subject.
- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to provide input concerning the research process.

Why is this research being done?

The HIV epidemic is mainly concentrated among intimate partners among heterosexual people globally and among vulnerable populations (heterosexual persons of color and MSM) in the U.S. Acknowledging the limitations of individualized approaches has led to an emerging interest in dyadic approaches to
HIV prevention. Couples HIV testing and counseling (CHTC) is a dyadic approach to HIV prevention that entails joint testing and immediate disclosure among couples, and the provision of post-test counseling with specific emphasis on prevention among HIV-serodiscordant couples. CHTC may be a strategy that can be used to identify serodiscordant couples and minimize risk within couples in the U.S.

Studies have shown that a healthcare provider at times, is the sole motivator for people to screen for HIV. Due to the influence of clinical providers on the uptake of HIV testing and the incorporation of HIV prevention services in general, there is a need to understand provider perspectives and factors that may enhance or impede CHTC in a U.S. clinical setting.

How many people will be studied?

We expect no more than 40 people to be interviewed for this research study.

What happens if I say yes, I want to be in this research?

- You will be asked to complete an interview, which will be audio taped and transcribed to allow for data analysis.
- The interview may last anywhere from 30 minutes to 1.5 hours.
- The interviews will be conducted at a time and place most convenient to you that allows for the least amount of interruptions.
- As a participant you may be contacted at a later time to clarify discussion items from the interview.
- Should you have any questions, during the interview they will be addressed any time after the interview.

What happens if I do not want to be in this research or change my mind?

No risks are anticipated for your participation in the study. You can leave the research at any time and it will not be held against you.

Will being in this study help me anyway?

We cannot promise any benefits to you or others from your taking part in this research. However, possible benefits include that through the interviews you may be able to think more critically about your practice and approach to engaging couples to test for HIV infection. Lastly, following the interviews from you and your colleagues, collectively the findings will be shared with program and clinical staff and administration to allow for discussion and inform program planning. No individual participants will be identified in the communication of findings.
What happens to the information collected for the research?

Efforts will be made to limit the use and disclosure of your personal information, including research study and medical records, to people who have a need to review this information. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of this organization.

(As relevant) Do you have 1 hour to participate in this research study? Would you like to participate now or at a later time? If at a later time, which day and time would be most convenient to you?

By you answering the survey/interview questions that I will ask, this means you consent to participate in this research project. Do you have any questions?
APPENDIX C

SAMPLE RECRUITMENT LETTER PROVIDED TO CLINICS AND PROVIDERS

Dear Colleagues,

As you may know, several community-based agencies in South Florida have begun offering couples HIV testing and counseling (CHTC) to their clients and patients.

To give insight to this testing strategy, we are inviting clinical and non-clinical healthcare providers to participate in a research study on provider’s perceptions of CHTC. (This study has been approved by the University of Miami IRB).

Your participation is voluntary and a modest gift will be provided as a thank you. Interviews should take approximately 30 minutes to complete.

If you are interested in participating or have any questions, please contact:

Natalie Leblanc, BA, BSN/RN, MPH
PhD candidate
University of Miami, School of Nursing and Health Studies
305-284-4062 or 718-909-4746; n.leblanc@umiami.edu

The eligibility criteria are listed below.

Criteria for clinical providers:

• Has a clinical degree: MD, PA, NP/ APRN, RN, DO
• Represent a variety of relevant specialties (i.e., OB/GYN, primary care, infectious disease, HIV/STI)
• A current provider in Miami-Dade County for more than one year

Sincerely,
APPENDIX D

PROVIDER PERCEPTION INTERVIEW GUIDE

**Professional history with HIV testing**

- Can you describe a time when you had to offer an HIV test to a patient (regardless of the outcome)?

- How did it make you feel? Describe how you felt about that encounter.

- What worked well and what would you have done differently?

- Can you describe a time with a patient who tested seropositive where you may have thought about testing their partner(s)?

- What did you do to facilitate testing of the partner(s)?

Was the partner ever tested? What are your thoughts on this?

**Knowledge about couples testing for HIV**

- Describe anything you know or have heard about couples testing for HIV.

- How did you get to know about couples testing?

**Attitude about couples testing for HIV**

- What are your thoughts about couples HIV testing?

- If you had the opportunity to jointly test sexual partners for HIV would you and why?

- What would it take for you to offer couples to test for HIV?

**Perceptions about couples testing for HIV**

- Describe what you think of couples testing in a clinical setting?

- What would you perceive to be the motivating factors and the barriers to couples testing in this setting?

- What preparation would a clinical setting need to provide couples testing?

- What are some recommendations you have for clinical sites considering couples testing? And why?
-What are some considerations (needs or factors) specific to clinical providers like yourself in the context of CHTC?