Mapping the implementation of the rapid HIV test in the Family Health Strategy: the nurses' perspective

Objective: To analyze the implementation of the rapid HIV test in the Family Health Strategy (FHS) from the perspective of nurses.

Method: A qualitative study was performed with 13 FHS nurses between March and June 2015 using a semi-structured interview. The data were analyzed by symbolic cartography and Bardin’s thematic analysis.

Results: The nurses projected to the center of the map: lack of test kits, insufficient time for training, speed of the test result and excessive activities. In the periphery, they placed aspects related to the physical space, the lack of participation of other professionals in the training, the ease of performing the test and breaking the news of positive HIV diagnoses.

Conclusion and implications for practice: An adequate supply of test kits, tests more widely available to the entire population and training of other members of the FHS team are required. This study supports improvements in the nursing practice of rapid HIV testing.

Keywords: Nursing; HIV; Family Health Strategy.

Corresponding author: Cecília Nogueira Valença.
E-mail: cecilia_valenca@yahoo.com.br

Submitted on 02/10/2017. Accepted on 07/31/2017.

INTRODUCTION

The incidence of human immunodeficiency virus (HIV) infection has caused concern worldwide ever since the first cases of AIDS diagnosed in the early 1980s. Today, it is characterized as a pandemic. HIV is important because of the changes it causes in the individual's life, especially when the AIDS progresses. This syndrome affects the immune system and can lead to opportunistic infections that not infrequently result in death.1

Despite the difficulties in coping with the pandemic, undeniable advances have been achieved resulting in more knowledge, and better treatment and prevention of HIV infection and AIDS. As a result of successful experiences, current policies focus on challenges such as achieving control and ending the pandemic by 2030, which will produce major benefits to global health and the economy.2

In this context, the goal of the 90-90-90 target is to intensify treatment in people with HIV. This goal means that by 2020, 90% of all people living with HIV will know they have the virus, 90% of all people with diagnosed HIV infection will receive antiretroviral therapy without interruption and 90% of all people receiving treatment will have viral suppression.3

One of the most important aspects for the implementation of this action is the early diagnosis of HIV infection, which highlights the need to expand coverage of HIV testing and the need for continuity of testing services.4 In Brazil, testing and counseling practices are paramount in prevention programs, and rapid tests are used to increase the population's access to the diagnosis of HIV infection.5

These diagnostic tests can be carried out in different locations, including within the Family Health Strategy (FHS) as an initiative of the Ministry of Health to redirect the care model of primary health care provided by the Brazilian National Health Service (SUS).6 The Brazilian HIV/AIDS control policy prioritizes the FHS as the coordinator and provider of care and stimulates the decentralization process of care for people living with HIV/AIDS to this level of care, in order to increase access to both the diagnosis and treatment related to the virus in family health units (FHUs).7

These units are characterized as the entry point of individuals into the public health system; they should receive the patients and are responsible for diagnosis and treatment, as well as providing referrals to specialist centers, when necessary. The HIV test should be offered in the FHUs in accordance with the principles of universality and accessibility of health care, and performed with the consent of the individual.8

Although the FHS is conducted by multiprofessional health teams, nurses are considered an important member for the consolidation of the strategy as a health policy, acting as the protagonist in the actions of planning, organization and operationalization of this service.9 The implementation of rapid HIV testing in the FHS is an opportunity for the nurse to assist subjects by clarifying doubts, identifying and reducing vulnerabilities, as well as deconstructing prejudiced beliefs about HIV/AIDS.10

It should be noted that rapid HIV testing within the FHS is an action that contributes to the identification of the serological status so that treatment with antiretroviral drugs can be started immediately, thus helping people living with HIV/AIDS to achieve undetectable viral loads, thereby reducing the risk of virus transmission in the population.

In this sense, rapid HIV testing strengthens the treatment strategy as prevention against HIV/AIDS, which is considered one of the most important factors in the current health policy to combat the epidemic in Brazil.7 An analysis of the implementation of the test in the FHS from the nurses’ perspective is essential to verify if there is an alignment between what was planned by the Department of Sexually Transmitted Diseases, AIDS and Viral Hepatitis and what is being achieved in the health services, thus justifying the present study.

Hence, analysis will support discussions regarding possible interventions and adaptations that will improve the performance of rapid HIV testing within the scope of the FHS. Therefore, this study aims to analyze the implementation of rapid HIV testing in the FHS from the nurses’ perspective.

METHOD

This is a descriptive and exploratory study with a qualitative approach. The location for the development of the research were the FHUs of the rural and urban zones of twelve municipalities of the Fourth Regional Health Management District of the State of Paraíba, Northeastern Brazil. This region covers the following municipalities: Baraúna, Barra de Santa Rosa, Cubatí, Cuité, Damião, Frei Martinho, Nova Floresta, Nova Palmeira, Pedra Lavrada, Picuí, Seridó and Sossego.11 This region was chosen to carry out the research because it was a pioneer in the implementation of rapid HIV testing in FHUs in the State of Paraíba.

The study participants were FHU nurses. The strategy was to use complete data collection12 from all the FHUs, so that all the nurses who perform the rapid HIV tests in the FHS of these municipalities, a total of 16 professionals, would be enrolled in the study.

The inclusion criteria were as follows: nurses who were performing rapid HIV tests in the FHS and worked in the municipalities of the Fourth Regional Health Management District of Paraíba. The sample was limited by the exclusion criterion: nurses who were away from work due to medical leave or vacations, during the period in which the data collection was performed. Thus, thirteen professionals from nine municipalities were interviewed.

Data collection took place from April to June 2015 using a semi-structured interview script that enabled the general data of the participants to be obtained, such as gender, age, marital status, time of service and experience performing HIV testing in the FHS. The guiding questions were focused on the facilities and difficulties experienced by these professional to perform rapid HIV testing, the structural aspects of the service (physical space to carry out the tests, the storage space of the test kits,
availability of test kits) and training to perform the rapid HIV test. The interviews were recorded and transcribed.

The data were analyzed using the method of symbolic cartography of Boaventura de Sousa Santos, and maps (modes of imagining and representing real space) were constructed in the form of frames using scale, projection and symbolization mechanisms.13

A scale expresses the degree of detail of the representation and delimits the social space that is being analyzed. The larger the scale, the greater the degree of detail.13 In this study a large scale was used, represented by the municipalities where the FHUs were located. With respect to projection, all maps have a center, a place to which a privileged position is assigned with the remaining spaces (periphery) being dispersed around the center.13 In symbolization, the symbols were represented by the respondents' statements.13

The thematic analysis of Bardin was used in the construction phase of the cartographic projection. This thematic analysis identifies nuclei of meaning in a communication by analyzing meanings that verify the significance of the presence or frequency of these nuclei in respect to the object being analyzed.14 In this sense, the organization of the content was carried out from the codification of the data, categorization of data and interaction of thematic nuclei.14

Thus, the most frequently mentioned elements, that is, those mentioned by more than 50% of respondents, were placed in the center of the map13 in the form of categories. These categories were insufficient rapid HIV tests (100%), insufficient time for training (84.61%), speed of the test result (100%), lack of test kits to operationize the testing process (100%), and excessive activities (92.30%).

On the other hand, the less common elements, i.e. mentioned by less than 50% of the respondents, were placed in the periphery.13 These were a room to perform the test and storage space for the test (38.46%), lack of participation of other types of professionals in training (30.76%), the simplicity of the test (38.46%), fewer patients refused to take the test (23.07%), and breaking the news of positive HIV test results (38.46%).

To guarantee anonymity, participants names were replaced by the letter I (interviewee) followed by a number corresponding to the sequence of the interviews (I1, I2 ... I13). In a similar way, the names of the municipalities were replaced by the letter M (municipality) followed by a randomly chosen number (M1, M2 ... M9).

This article is part of a master's dissertation, which was approved by the Research Ethics Committee of the Federal University of Rio Grande do Norte (nº 39639314.7.0000.5537; Decision No 977,003).

RESULTS

Twelve female professionals and one male professional were enrolled in this research. The ages of the nurses ranged from 26 to 55 years, the time in the service ranged from one to 29 years, and their experience performing rapid HIV tests in the FHS ranged from less than one year to three years.

The analysis of the interviews allowed the construction of four maps. The nuclei of meaning that appeared most frequently in the respondents' discourses were projected to the center of the map in the form of categories while the less frequent nuclei were projected to the periphery. The nurses' statements about the basic infrastructure (physical space to perform the tests, storage space for the test kits and the availability of tests) used for rapid HIV testing in the FHS resulted in the construction of Map 1.

All professionals interviewed reported having received training to perform rapid HIV tests in presential situations. Map 2 shows the quality of this training.

Insufficient time for training produces weaknesses in the approach to the patient undergoing the test. Some aspects go beyond the technique, such as preparing the professional for counseling, especially in cases of patients with positive results, and in respect to referring patients to a specialist center. Also notable is the participation of nurses in training and the absence of other types of professionals, especially as testing is characterized as a multiprofessional procedure.

Regarding the facilities experienced by nurses in HIV testing within the context of the FHS, the respondents' statements enabled the construction of Map 3.

In addition to the facilities, the nurses had trouble to implement the rapid HIV test in the FHS, as can be observed in Map 4.

According to Map 4, several factors make it difficult to implement rapid HIV testing under the FHS in the region. There are situations where testing is not performed because of the nurse's fault, or because there are too few test kits to meet the demand. In addition, the excess of activities is worrying in that it causes a nurse to stop divulging the rapid HIV test to the population because of lack of time related to the excess of other activities carried out within the FHS.

DISCUSSION

Regarding infrastructural aspects, not all municipalities have a specific place to store the tests and so they are stored in non-exclusive refrigerators, which is contrary to the legal recommendation, which proposes that rapid HIV test kits should be stored in refrigerators or in an air-conditioned room, thus respecting the manufacturers' temperature guidelines of between 2°C and 30°C.15 This setting makes it difficult to monitor the storage temperature of the test and may affect the reliability of the test, indicating that structural problems may negatively interfere with the performance of the test.

Regarding the room, there is no need for it to be just for rapid HIV testing, but the patient's privacy should be guaranteed. Thus, the place where the procedure is performed must have the minimum facilities to provide a comfortable environment and ensure the wellbeing of both the user and the professional.16

The interviewed nurses state that the lack of test kits significantly interferes with the operationalization of the service. In mapping, the insufficiency of the rapid test kits involves two aspects, namely: too few test kits and the absence of test kits from
**Map 1.** Mapping of the basic infrastructure used to implement rapid HIV testing in the FHS according to the nurses (Paraíba, 2015)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Symbolization</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>I do not have a room to perform the test. I do not have the storage space. I get the test kits from only one lab at a time. It is rare to see tests from different laboratories at the same time. The correct would be this. At the moment, I work with only one kind of test. So, if there is a positive result, I repeat with the same test. I have no choice (I10).</td>
</tr>
<tr>
<td>M2</td>
<td>I have no problems with the room. I have privacy. I stay in the room alone with the patient. The tests are stored in the pharmacy refrigerator. In the refrigerator that only has insulin. The biggest problem in the structure is the lack of tests. We sent worksheets to management every month, but I have not received any tests for five months (I8).</td>
</tr>
</tbody>
</table>

**Projection**

<table>
<thead>
<tr>
<th>Center</th>
<th>Periphery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two few rapid HIV test kits</td>
<td>A room to perform the test and storage space for the test</td>
</tr>
</tbody>
</table>

**Map 2.** Mapping of the training received to perform rapid HIV tests in the FHS according to the nurses (Paraíba, 2015)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Symbolization</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3</td>
<td>I thought the time of training was too short. It should have been longer. A lack of attention paid to the counseling part of training. On how to talk to the patient with positive or negative test results. There was also a lack of discussion about patient referral in the case of a positive result. I do not know the procedure that should be followed; I do not know where to send the patient (I2).</td>
</tr>
<tr>
<td>M4</td>
<td>The training was satisfactory about testing, about the technique itself. But, related to counseling, it was not enough. I was the only one from my municipality to participate in the training. I think they should have sent other professionals to participate such as the social worker and the psychologist to give support (I5).</td>
</tr>
</tbody>
</table>

**Projection**

<table>
<thead>
<tr>
<th>Center</th>
<th>Periphery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient time for training</td>
<td>Lack of participation of other types of professionals in the training</td>
</tr>
</tbody>
</table>

different manufacturers in stock at the same time. This situation has serious implications for timely access to HIV diagnoses for populations in the FHS of the region, as a single test is not sufficient to confirm a diagnosis. In this situation, the test functions as a screening test, losing one of its main advantages: to provide the diagnosis of HIV almost immediately without the need for serology.

The reduced quantity of tests makes it difficult for the population to have access. Currently, there is an increase in the number of HIV cases among heterosexuals, women and the low-income population. However, there are high rates of the disease among social groups historically affected by the epidemic, such as men who have sex with men, drug users and sex workers, pointing to the need for FHS to incorporate universal access to diagnosis, in addition to ensuring equity in the care provided to the most vulnerable populations. The provision of rapid HIV testing in community-based services contributes to the early detection of the virus, especially in populations that have more difficulties to access healthcare.

In this sense, the importance of management in the process of implementing the rapid HIV test in the FHS is clear, particularly regarding the establishment of an adequate infrastructure to make all those who seek the service feel relaxed, taking into account privacy, ethical aspects and respect for the different demands required by users. The advantages provided by the rapid HIV test requires a minimum structure such as adequate storage space, kits of different brands and in sufficient quantity.

The statements of the interviewees also highlight problems related to the training received for rapid HIV testing. It can be seen that the time for training was not enough to leave the professional prepared to deal with the other stages involved in the testing process, such as counseling and the referral of the patient with a positive HIV result.

In general, specific training to care for drug users who have HIV is restricted to specialized centers. This situation and the professionals’ lack of preparation regarding stigma associated with the infection leads to the discontinuation of care when these patients are treated in other SUS services. One study found that
Mapping of the rapid anti-HIV test
Silva ITS, Valença CN, Silva RAR

Map 3. Mapping of facilities experienced by nurses in the development of rapid HIV testing (Paraíba, 2015)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Symbolization (Voices of the respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M5</td>
<td>Not every municipality provides a laboratory to perform the HIV test. We, for example, send them to another city and there is a demand from other municipalities in that city. When will the exam [results] arrive? The simplicity is this: you identify something in time. This enables early interventions. That’s the purpose of quick tests. Otherwise, it would not be a rapid test (I6).</td>
</tr>
<tr>
<td>M6</td>
<td>The simplicity is that there is no more rejection among the patients. When I offer, they already ask me: what day can I do it? So this I think is important because I have 22 years of experience and I’ve never seen this before. Today they no longer have any resistance to take the test (I11).</td>
</tr>
</tbody>
</table>

Projection

<table>
<thead>
<tr>
<th>Center</th>
<th>Periphery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast exam results</td>
<td>Easy to perform the test</td>
</tr>
<tr>
<td>Less refusal by the patient to take the test</td>
<td></td>
</tr>
</tbody>
</table>

Map 4. Mapping of the difficulties experienced by nurses in the development of rapid HIV testing (Paraíba, 2015)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Symbolization (Voices of the respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M8</td>
<td>The difficulty is that the nurse is alone to perform the test. There is a high demand for few professionals. In addition, the number of tests is limited. It is not possible to contemplate a larger number of vulnerable patients (I13).</td>
</tr>
<tr>
<td>M9</td>
<td>The difficulty is the short time we have because of the other activities carried out in the FHS. Therefore, here in the municipality, we just test pregnant women. They asked us to tell the public that the unit has a quick test, but we do not because we do not have time to do it. It’s too much, the demand is great. In addition, the number of tests is small (I4).</td>
</tr>
<tr>
<td>M2</td>
<td>The difficulty I think is telling the patient that he has HIV. Most people think it’s the end. That there’s no way (E8).</td>
</tr>
</tbody>
</table>

Projection

<table>
<thead>
<tr>
<th>Center</th>
<th>Periphery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too few tests to operationalize the testing process</td>
<td></td>
</tr>
<tr>
<td>Breaking the news of HIV positive test results</td>
<td></td>
</tr>
<tr>
<td>Too many activities</td>
<td></td>
</tr>
</tbody>
</table>

health professionals have difficulty dealing with the subjectivity of the health-disease process and assuming a reflexive practice with the patient. Faced with this situation, they sometimes transfer the responsibility of informing the diagnosis of HIV to the psychologist. Thus, a policy of permanent education in the health service that addresses not only the technical procedures of testing, but also the psychological, emotional and social aspects, which permeate HIV/AIDS is necessary. This education model seeks to construct critical-reflexive and participatory actions in the teaching and learning processes. It also enables the restructuring of professionals’ knowledge based on problematization and internal demands of their work practices.

In addition, the participation of other professional categories in the training to perform rapid HIV testing in order to contribute to an effective implementation of the test in the service through teamwork should be seen as important. A study carried out in a Government Health Clinic in Rio de Janeiro showed that teamwork in the FHS context allows a better communicative and collaborative practice in which different professionals value each other's work and share common goals.

Regarding the facilities for the implementation of the rapid HIV test in the FHS, the reduction in the delay for HIV results represents a significant advance in the fight against the HIV/AIDS epidemic, since the lack of agility in giving the test results using conventional methodologies is common in many parts of Brazil. In Rio de Janeiro, the time to deliver test results attained using the laboratory method ranged from 7-40 days, while with the rapid HIV test the delay is 15 minutes.

Thus, rapid HIV testing has brought significant changes in time management, and in respect to the uncertainties and anxieties arising from risk behaviors. This has given citizens almost immediate access to their serostatus, the possibility of prompt drug treatment and improved follow-up of seropositive individuals, which has had positive impacts in the fight against HIV/AIDS.
In shelters for female victims of domestic violence in the United States of America, it was found important for these women that the results were given within a few minutes after completing the test; the necessity to wait for several weeks for a result causes stress. Access to early diagnosis improves the survival expectations of the seropositive individual, with delayed testing, in many cases, resulting in missed opportunities to prevent comorbidities, which may culminate in the death of the patient.

A survey conducted in the USA showed high mortality rates in over 50-year-old adults most of which were associated with late diagnosis. In addition, the importance of screening the entire population was found to be an effective way to promote the early detection of HIV/AIDS. Of the strategies considered to ensure the timely identification of seropositive patients is providing HIV testing in the routine of all health services, including primary health care services.

The space of the FHS favors a reduction in the refusal of patient to perform the test, as was found in the current research. The FHS, as a way to reorganize the health care model, signals a social intervention approach, no longer focused on medical treatment knowledge, but focused on education, and the promotion and protection of health.

Another facility pointed out by nurses in the study region was that the rapid HIV testing was easy to perform. The simple method is one of the aspects that characterize it as a good alternative in the diagnosis of HIV, since conventional laboratory tests are operationally complex, requiring specialized professionals and an appropriate laboratory infrastructure. On the other hand, rapid HIV testing does not require a specialized laboratory or professionals, or specialized collection and transportation, which facilitates the individual's access to the test.

However, the limited number of tests, identified as one difficulty experienced by the nurses in this study, leads to many professionals not attending the spontaneous demand and to prioritizing certain groups, such as pregnant women. The diagnosis of HIV during pregnancy is one of the strategies of the Ministry of Health to reduce vertical transmission, since it allows interventions to be established during this phase and during childbirth. However, other population groups are excluded due to lack of testing in the FHU of the region.

The discourses also project the excess of activities carried out in the FHU to the center. In this health service, the work of nurses is planned according to actions pre-established by the Ministry of Health in the area of child health, women's health, control of hypertension and diabetes mellitus, control of tuberculosis, among others.

Moreover, activities involving bureaucratic coordination and service management, meetings in the Health Department, and training community health agents and nursing assistants are also carried out. In this sense, the flexibility of the FHS work process to incorporate other demands that go beyond nationally delimited priorities is still a challenge.

The insertion of the rapid HIV test in the routine of the FHS implies a reorganization of the work process of the team and of the service as a whole, since this practice requires paying attention to the time of service, and reviewing the demand, functions and activities within the service. It is also worth noting that few rapid HIV tests are performed in the study region because it consists of twelve municipalities and only 13 nurses perform the rapid HIV test; this impairs the effectiveness of the decentralization of testing in the area.

In this region, the communication of a positive HIV result to the patient causes difficulties in the implementation process of rapid HIV testing in the FHS. Despite all the advances in coping with the epidemic, people with AIDS experience a complex reality, because the disease is still seen by the population as a death threat, causing fear, stigma, and discrimination and, in many countries, marginalization.

Behavior of denial are often observed in people with HIV/AIDS as a reflection of the fear of revealing to society the condition of being HIV positive. This picture is associated with the representations of a contagious and lethal disease that were constructed at the beginning of the epidemic and that continue until today.

Thus, the outcome of a positive test result produces significant repercussions in the person's life and produces specific health care demands. Disclosure of the diagnosis requires trained counseling to help the HIV-positive person find a way to address the news.

This study presents the fact that it interviewed only nurses as a limitation. In this sense, it is necessary to expand knowledge by developing future studies that consider the perspectives of both FHS users and managers, as important structural difficulties were found in the process of implementing the rapid HIV test in the FHS.

CONCLUSION

This study analyzed the implementation of rapid HIV test in the FHS of the Fourth Regional Health Management District of Paraíba. Problems related to the availability of test kits in the region are a barrier to the population's access to testing in FHUs. Thus, it is necessary to plan and work together with the Ministry of Health, and the State and Municipal Health Departments to provide a sufficient number of test kits for these services, in order to avoid the exclusion of certain population groups.

There is a need to expand the offer of the test to the non-pregnant population, in order to favor, through local actions, the global response against the HIV/AIDS epidemic. This requires, in addition to an adequate supply of test kits, training of other team members (nursing assistants, doctors, dentists) through the implementation of a permanent education policy in the FHU and the organization of teamwork, providing the diagnosis of HIV at the first contact with patients.

In addition, through active searches, community health agents can participate in the dissemination and capture of other FHU users to perform the test. The approach to HIV-positive subjects can be improved through the implantation and support of Family Health Support Centers and cooperation with the network of specialized services integrated in a multidisciplinary work centered on the user.
Through this research, it was possible to recognize potentialities and fragilities in the implementation of rapid HIV testing in the FHS, providing support to stimulate reviews and changes in this process, in order to improve the nursing practice and to promote an effective expansion of HIV therapy in primary health care.

REFERENCES


Mapping of the rapid anti-HIV test
Silva ITS, Valença CN, Silva RAR


* Section of the master’s thesis "Mapping the implementation of rapid HIV testing in the Family Health Strategy", defended and approved in the Graduate Program in Nursing of the Federal University of Rio Grande do Norte in 2016 by the first author with tutoring by the last author. The second author contributed intellectually only with the elaboration of this publication.