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HIV/AIDS Surveillance Systems: A Case Study of Egypt

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Abstract

Current estimates of HIV/AIDS incidences are thought to be inaccurate according to external organizations such as WHO and UNAIDS. It is important to maintain an accurate estimate of prevalence to avoid an unexpected outbreak of a high-level epidemic. Our method of analyzing Egypt's surveillance system comes primarily from comparisons to other Eastern Mediterranean countries. Research on these regional HIV/AIDS surveillance systems was conducted by studying publications printed by organizations that deal with these issues. To gain primary perspectives on the systems in Egypt, interviews were conducted with representatives of the organizations World Health Organization (WHO) and Family Health International (FHI) in Egypt.

Our research has shown that Egypt's current HIV/AIDS surveillance system is not operating effectively. Instead, it is in a transitional state to an improved and updated system that, if implemented correctly, could provide accurate surveillance.

The area that was found to need the largest amount of improvement was the awareness of the general population and high risk groups about HIV/AIDS. Without the presence of this awareness, a surveillance system would not be successful.

Introduction

An Eastern Mediterranean country, Egypt is one of many nations currently experiencing the emergence of HIV/AIDS in their populations. Statistics from summary articles written about the Eastern Mediterranean by several organizations such as the US Agency for International Development (USAID), United Nations Program on HIV/AIDS (UNAIDS), and the World Health Organization (WHO) state that the occurrence of the disease in the region is very low (7). Regardless of this, however, the same organizations – in addition to the United Nations in conjunction with the Ministry of Health and Population of Egypt - have published papers arguing that the surveillance system is very weak and that the statistics are not reliable and do not represent the Egyptian population. To Egypt's disadvantage, all the above-mentioned organizations suggest that the percentage of the illness should be much higher than currently stated (3).

There are several research papers that have been published concerning the need to obtain more accurate statistics. Written by the WHO, UNAIDS, and Family Health International (FHI) on ways to improve existing surveillance systems, the papers provide an outline on steps that should be taken in order to tackle current complications being faced and to avoid causing additional problems in the system (8). It is important to note,

however, that these papers examine the problem across the Eastern Mediterranean region and that, despite the large quantity of our research, no works written specifically about Egypt – and that included accurate statistics - were found.

With such absences in the published literature as those mentioned above, and without an accurate HIV/AIDS surveillance system, it is impossible to determine prevalence of HIV/AIDS and the risk of an epidemic occurring in countries like Egypt. Thus, the goal of this research is to determine the current surveillance system in Egypt, and to assess its effectiveness and efficiency.

Methodology

Both primary and secondary sources were examined in undertaking the research. Background information about surveillance systems in general was obtained from reading secondary sources while interviews were conducted with the FHI and WHO to gather information about Egypt's systems specifically.

Background

HIV/AIDS Surveillance Systems

The purpose of establishing an HIV/AIDS surveillance system is to obtain data that can be used in increasing HIV prevention awareness, and providing efficient voluntary testing centers and counseling for patients and treatment centers. Currently, there are two types of surveillance systems – ‘first generation’ and ‘second generation’ – that are used to further these aims. A first generation system is one that relies primarily on reporting cases. These cases are reported from facilities such as hospitals, Sexually Transmitted Infection (STI) clinics, blood banks, and emigrant facilities where the individual's blood undergoes testing and screening for diseases. All results that test positive for HIV/AIDS are reported anonymously. Second generation systems, on the other hand, rely more heavily on the histories and behaviors of HIV positive patients, in order to identify trends of disease transmission and to relate the transition of the disease to its prevalence (4).

Depending on whether a particular system is designated as first or second generation, there are five main types of surveillance systems that can be used: core, incidence, behavioral, morbidity, and perinatal (where each type has a set of criteria to follow and goals to achieve) (5). Core surveillance is used for a first generation system where the primary source of information is taken from population-data and is concerned with reporting the number of cases that are HIV positive. The goals of this system are establishing the prevalence of HIV/AIDS in relation to the total mortality rates from the disease, increasing the involvement of health departments and community-based planning groups in forming helpful resources for HIV positive patients, and collecting reliable data on prevalence in order to set up a suitable amount of public treatment, care, and testing centers. Incidence surveillance is also used for first generation surveillance systems where valid estimates of newly acquired HIV infections are found

on all levels of the country (national, local, territorial etc.). This type of information is needed for organizations that are responsible for funding and planning the system as a whole and for projects that deal with drug-resistance surveillance of the antiretroviral drugs for treatment. Incidence report aim to monitor HIV strains that become resistant to the antiretroviral drugs, to collect and diagnose blood specimens for newly acquired infections, and to calculate reliable population-based statistics on the HIV incidences collected. As for behavioral surveillance which is used in second generation systems, the primary information relies on examining behaviors that aid in transmitting the disease. This is accomplished by investigating high risk behavior and factors that apply to high risk groups of the population. Other information sought out from this type of surveillance is the amount of voluntary HIV testing, the degree of exposure to prevention programs, measuring the effectiveness of the prevention programs and identifying glitches in the services being provided in high risk areas of the population. The targets to be achieved by this type of surveillance are developing an ongoing surveillance system that is specific for discovering the prevalence of high risk behavior in high risk groups for HIV infections, engaging community based programs in designing questionnaire and research development of the high risk groups, working with HIV/AIDS prevention programs and assessing the effectiveness of the programs, and distributing information collected on behavioral risks that aid in transmitting the disease and how to prevent transmission. Morbidity monitoring is a surveillance system that can be used in collaboration with another system, mainly the core surveillance system. Morbidity monitoring is a project that is being developed to be used in determining the percentage of HIV positive patients that are receiving medical care. Patients are chosen at random in order to obtain nationally representative, unbiased results. The aim of this system is to increase the core surveillance system's data to include information about medical records and patient history, to provide information about the quality of care being provided to risk groups, and HIV/AIDS positive patients, to identify unmet needs of both groups, and to determine population-based information for further policy planning, resources allocation and evaluation rubrics for prevention and treatment. The fifth type, perinatal surveillance, focuses on the progress of reducing the transmission of the disease to fetuses, which is known as perinatal transmission. The purpose of this type of surveillance system is to measure the effectiveness of antiretroviral medication and infected/noninfected children, determine the incidence of HIV/AIDS and death before birth, and to measure the effectiveness of antiretroviral medications in preventing transmission of the disease. (5) Not all surveillance systems can be used at once, and the implementation of the systems depends on the country's abilities and the amount of funding provided in order to plan and implement the system effectively. (5)

The Case of Egypt

Currently, Egypt's HIV/AIDS surveillance system is in a transitional phase, where it is in between a first generation and a second generation system. The first generation system that was in place is what is known as a "passive" system, wherein the number of cases of HIV/AIDS are estimated by relying on reports filed by physicians, sexually transmitted infection (STI) clinics, blood screening organizations, etc... (1). According to FHI, a nongovernmental organization that is in charge of HIV/AIDS surveillance systems in

general, the passive system that is in place is not effective for several reasons, one of which is that there are no protocols on who should be tested for HIV/AIDS and no penalties for failing to report cases. Because of this, the amount of cases that are reported greatly under-represent the actual number of cases thought to be in the population. In addition, this type of surveillance also fails to indicate the prevalence level of HIV/AIDS; rather it is simply a measure of incidence. FHI's solution to the above problems is the initiation of a second generation system (6). A second generation surveillance system is more active than first generation ones, and incorporates behavioral data with HIV/AIDS testing, allowing patterns of transmission and prevalence levels HIV to be obtained (1).

As stated by the WHO and FHI, countries that have a low prevalence of HIV/AIDS, such as Egypt, find it important to concentrate surveillance efforts on high risk groups of the populations. In Egypt, these high risk groups include sex workers, homosexuals, and injecting drug users to name just a few (4, 6). These groups serve as a reservoir for HIV, where the prevalence of HIV/AIDS is higher than in the general population. The danger is that as the prevalence of the disease in these groups increases, the chances of the virus rapidly spreading to the general population greatly increases as well. The infection can be transmitted to the general population by way of "bridges" (6). For example, if a taxi driver visits a HIV positive prostitute (a member of a high risk group), becomes infected, and then returns home and infects his wife, the taxi driver is acting as a bridge between the high risk groups and the general population. Therefore, by increasing the surveillance in these high risk groups, the prevalence of HIV and the chances of it spreading to the general population can be more accurately estimated.

According to FHI, there are many obstacles that were, and are being, encountered by the organization in the implementation of the second generation surveillance system. Because the second generation system involves collecting data about behavior of high risk groups, its successful implementation must include a cooperative effort on the part of the communities most at risk. In Egypt, however, it is difficult to work with these high risk groups both because of the lack of awareness amongst them of the importance of disease surveillance, and due to more practical considerations such as their fear of imprisonment (1). In order to work with the various high risk groups in Egypt, the FHI is working in collaboration with NGOs that have previously established relationships of trust with these groups (for instance, "Freedom" works with sex workers and IDUs, CARITAS, located in Alexandria, works with homosexual males, and "Hope Village" works with street children) (6). Behavioral data is collected from members of these groups through surveys and questionnaires written by the FHI, specifically tailored to the individual groups (FHI, 2004). The subjects for the majority of the groups are chosen by response driven sampling where each test subject is asked to bring back three people for testing, and each of those three people are asked to bring back three more and so on. This method ensures that the subjects represent a wide range of the population and helps to eliminate bias in the selection (6). As well as outreaching to high risk groups through NGOs, the FHI is also setting up Voluntary Counseling and Testing Centers (VCTs) across Egypt so there are places where people may go to voluntarily be anonymously tested for HIV. Currently, there are eight operating VCTs

and six mobile VCTs, with an additional VCT in each governorate, and six more mobile VCTs expected to be operational in the next few years (6).

Other obstacles encountered revolved around the amount of time and effort needed to prepare for the transition. Initially, a pre-surveillance survey needed to be conducted, which entailed defining the high risk groups, locating them, and making contact. In addition, staff had to be trained in the proper methods of counseling and interviewing patients, collecting blood samples, and lab work. Finally, before the surveillance system could be implemented, stake holder meetings had to be conducted and all governmental offices involved had to be notified (1). As an initial step, the FHI has published a “National HIV/AIDS and STI Surveillance Plan” in which they put forth their guidelines for the new surveillance system. In it, they summarize an analysis of the situation (known HIV/AIDS cases by gender, age group, etc...), establish the high risk groups that will be studied, define what data will be collected (serological and behavioral), and set a time frame for the frequency of data collection (FHI, 2004). In addition to the published plan for the surveillance plan, FHI has also been actively establishing the system.

With a solid plan, cooperating NGOs, and established VCTs, the HIV/AIDS surveillance system should be operational and effective. However, there are other problems that are encountered that prevent the system from being fully efficient. In Egypt, there is a general lack of awareness about the specificity of HIV/AIDS. In addition, people fear discovering they have contracted the disease because of the stigma attached it. Because of this, the amount of voluntary testing is extremely low. People are also reluctant to be tested because they believe there is nothing to be done to treat the disease. There is a cocktail treatment that is provided for free to a limited amount of HIV positive individuals (about 250), however, for the majority of other patients, treatment is either unavailable or unaffordable (6). In addition, there are logistical problems with the surveillance plan. In many of the testing clinics and sites, a lack of staff can make efficient operation difficult (and training new staff requires a significant amount of time and money, which is not always available) and issues with the quality control of samples can lead to contamination of samples and, thus, inaccurate reported results (1).

Conclusion/Suggested Improvements

Without an accurate HIV/AIDS surveillance system in place, it is impossible to gauge Egypt’s risk of an HIV/AIDS epidemic. At present, the surveillance system that is in place is not accurate or reliable enough to provide a usable estimate of the prevalence and rate of transmission of HIV/AIDS. Family Health International has been making impressive improvements to the current system, but there remains a lot to be done before the transition to the second generation system is complete. The area that appears to need the greatest amount of improvements is the awareness of both the general population and of the high risk groups.

Raising awareness about HIV/AIDS in the high risk groups of the population is especially important because these are the groups where HIV/AIDS would be most

prevalent. By raising awareness in the high risk groups, and as people become more knowledgeable about the dangers of HIV/AIDS, they will understand the methods in which it is transmitted, and thus understand the importance of having an effective surveillance system. This will help the issue of HIV/AIDS in two main ways: in teaching people ways to alter their behavior and lifestyle in order to help slow the spread of the virus, and in encouraging them to assist in the surveillance program by volunteering to be tested.

While the focus of the second generation system is on the high risk groups, it is also essential to have an understanding of the prevalence of HIV/AIDS in the general population. Raising awareness in the general population will help to remove the fear and stigma that is associated with HIV/AIDS and would be beneficial to the high risk groups as well, because as the stigma in the general population is reduced, the stigma in the high risk groups would be reduced as well.

There are several ways to raise awareness about HIV/AIDS. FHI has produced many brochures that help explain what the disease is, how HIV is transmitted, what to do if you are HIV positive etc... There have also been work-related awareness programs developed by some companies such as Coca-Cola that attempt to raise awareness of HIV/AIDS in the workplace, and offer anonymous and voluntary testing services (2).

If more efforts to raise awareness in both the general population and in high risk groups are undertaken, the chances of the surveillance system being effective greatly increase. It is vital to have an effective surveillance system because without one, there is no way to evaluate the level of risk of an HIV/AIDS epidemic in the country. Having an efficient surveillance system will also help slow the spread of HIV/AIDS by identifying what the primary behaviors are in Egypt that contribute to its spread.

References:

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- 3) Combat HIV/AIDS, Malaria, and Other Major Diseases. Millennium Development Goals. (2004). United Nations, Ministry of Planning. Retrieved February 27th, 2006, from <http://www.un.org.eg/Documents/MDGREnglish.pdf>
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Annotated Bibliography

Berkelman RL, Bryan RT, Osterholm MT, LeDuc JW, and Hughes JM. Infectious Disease Surveillance: A Crumbling Foundation. Science 1994 Apr;264(5157):368-70

While this article does not focus on HIV/AIDS or Egypt in particular, it explains the importance of infectious disease surveillance in preventing epidemics, and some problems that surveillance systems encounter that prevents them from functioning effectively and efficiently. One major problem discussed is the lack of funding that programs often receive, making it difficult for them to have the ability to collect enough data and analyze it in order to come to an applicable solution. Another issue which is caused by this lack of funding is that surveillance organizations are very hesitant to add a new infectious disease to their surveillance list, making it likely that an epidemic could easily occur without any sort of warning. These issues could be applied to the surveillance system in Egypt to help explain why its success is so lacking.

Boerma JT, Holt E, and Black R. Measurement of Biomarkers in Surveys in Developing Countries: Opportunities and Problems. Population and Development Review 2001 June;27:303-14

The authors of this article begin by explaining how often in developing country there is very little reliable data available on monitoring disease levels, trends, and patterns; and when the data is available, it is often out-of-date or incomplete, leading to inaccurate analysis. However, the authors believe that with many technological advances in the ability to easily collect samples, it is becoming more possible for these developing countries to affordably and efficiently collect accurate data that would help to provide a useful analysis of public health in their country. There are still obstacles for them to overcome though, such as the ability to analyze collected samples affordably, and what to do with the information that they gather from these surveys.

Brookmeyer R. AIDS, Epidemics, and Statistics. Biometrics 1996 Sep;52:781-96

Dr. Ron Brookmeyer, a professor in the department of biostatistics at Johns Hopkins University, discusses the difficulty of the surveillance of the epidemic of HIV/AIDS worldwide. The World Health Organization has a surveillance system that monitors this disease, however, the numbers that it has for the spread of HIV/AIDS is thought to be greatly underestimated. Brookmeyer attributes two primary sources to this underestimation; an under-reporting of cases, and a delay in the reporting of cases. He explains that the fact that the incubation period of the disease is very long, sometimes more than 10 years, and that often, cases are not reported until up to a year after they are discovered, can lead to a misrepresentation of the status of the spread of the virus today. Some techniques used by statisticians and public health officials to more accurately gauge the prevalence of the epidemic are also discussed.

Coca-Cola Africa Foundation. Our 2004-2005 HIV/AIDS Initiatives in Africa. [Report on Internet]. 2004. [Cited 2006 Mar 10]. [860 KB]. Available from: http://www2.coca-cola.com/citizenship/TCCAF_HIVAIDS_report.pdf

This brochure, published by the Coca-Cola Africa Foundation, is an excellent example of how corporations are making an effort to help spread awareness and knowledge about HIV/AIDS. The Coca-Cola Company in Egypt was awarded the Business Excellence in the Community Award in 2004 for its programs to help fight HIV/AIDS in the workplace and community. The Coca-Cola Company holds high standards when it comes to HIV/AIDS in the workplace. According to their charter in this brochure, they are non-discriminate to workers with HIV/AIDS, they support voluntary testing, and to encourage workers to disclose that they have HIV/AIDS, they have set up social and medical programs to help them deal with the infection. These programs, while they do not directly assist in the surveillance of HIV/AIDS, they greatly encourage people to learn more about the disease and help to remove the stigma associated with it. If more programs such as this one become present, it could greatly improve the accuracy of HIV/AIDS surveillance.

Combat HIV/AIDS, Malaria, and Other Major Diseases. Millennium Development Goals. (2004). United Nations, Ministry of Planning. Retrieved February 27th, 2006, from <http://www.un.org.eg/Documents/MDGREnglish.pdf>

Both organizations developed the paper on Millennium goals as a way of documenting all issues on the goals that are to be met by the year 2015. There is a lot of information gathered on the status of HIV/AIDS surveillance systems which is at a current standing of weak. The paper can be used as a plan to what needs more research, and on what needs the most improvement. This way no time will be wasted on looking for what needs to be done since it is already listed in the paper, that way more time will be spent on improving the system than on figuring out what the problems are.

Family Health International [FHI]. National Guidelines for Voluntary HIV Counseling and Testing. [Report on the Internet]. 2004 [Cited 2006 Mar 10]. [12.4 MB]. Available from: <http://www.fhi.org>

Family Health International (FHI) is the organization that is in charge of implementing IMPACT, the project for surveillance of HIV/AIDS throughout Egypt. One method of collecting information on the prevalence of HIV/AIDS is to set up centers for voluntary testing. This document is an outline of the guidelines followed when setting up a Voluntary Counseling and Testing center (VCT) in Egypt. It covers areas such as the ethics of such a center (informed consent, anonymity, disclosure of test results etc...), the process of application and testing, record keeping, and the monitoring of the VCT. This document offers important information on the methods used in Egypt to track the spread of HIV/AIDS and may help to find areas in which improvement is needed.

HIV/AIDS: Stand Up for the Challenge. (2005). Retrieved March 10, 2006, from http://www.emro.who.int/asd/pdf/WAC2005_Brochure_En.pdf

This is a brochure for a regional campaign on HIV/AIDS. The brochure was made by the World Health Organization on main areas that are affected by HIV and has a goal of reaching the public in order to get support. The brochure speaks about challenges the organizations are facing when dealing with the disease, it continues with making the public see what roles can be taken in order to help with the campaign. This brochure will help direct the research, since the main problems found in the HIV/AIDS program are stated and it also gives ideas on how to help improve the current situation. The way the brochure is structured makes it a very strong one on influencing the public. This is due to the pictures being used and the simplicity of words chosen to explain the situation to the public.

Initiating Second Generation HIV Surveillance systems: practical guidelines. (2002). Retrieved March 10, 2006, from <http://www.emro.who.int/aiecf/web67.pdf>

This paper is written as a guideline for epidemiologists, social science researchers, program managers, and experts that have a role in developing a second generation HIV surveillance system, in other words it is targeted to the National AIDS Programs (NAPs) and the Ministry of Health. This paper would be a tremendous help in conducting this research since our goal is to improve the already existent surveillance system in Egypt. The way the information is pertained to the audience is in fact form, where studies and previous research has been done to get the facts. The paper is very clear on steps that need to be taken before action and while acting and after acting on improving the surveillance system.

McCormick A. Estimating the Size of the HIV Epidemic by Using Mortality Data. Phil Trans of the RSL 1989 Sep;325(1226):163-73

This article describes methods of using mortality data of both patients that have died from AIDS, and also patients whose cause of death is HIV related, but not AIDS, in order to estimate the prevalence of infection in a community. This technique has several advantages over simple screening surveillance does not. For one, it does not rely on people offering to be tested for HIV. Instead it is up to the doctors to correctly diagnose causes of death, and to determine if patients had HIV. However, this does not help get past the problem of reporting cases, doctors may still take a long time to report cases of HIV to the authorities, and therefore, the estimates for the present most likely would be underestimated.

Shahine, Gihan. Facing up to AIDS. Al-Ahram. 2004 March 4-10. Available from: <http://weekly.ahram.org.eg/2004/680/eg2.htm>

This article in the Al-Ahram newspaper begins by announcing the beginning of a Voluntary Consulting and Testing (VCT) campaign by the Ministry of Health's National

AIDs Control Program (NACP) across Egypt. According to the author, the official estimates for HIV/AIDS cases between the years of 1986-2002 are only around 1,200. Other independent experts believe that the actual figure is closer to around 12,000 cases. There are many reasons why there is such a large discrepancy between these figures, most of the reasons being people's reluctance to be tested. This reluctance stems from unawareness and ignorance about HIV/AIDS and the stigma that is attached to it. For example, the author relates one story a man who lost his business after his partners discovered he was infected. This fear and unawareness must be dealt with in order to have an effect surveillance system put into place.

Srikameswaran, A. *Egypt Confronting HIV; Like other Muslim cultures with strictures against promiscuity and drug use, Egyptians have been slow to admit a problem.* (2005). Post-Gazette.com, Health, Science, and Environment. Retrieved February 27th, 2006, from <http://www.post-gazette.com/pg/05072/470110.stm>

The author's point to get to the audience is the fact that countries in the Middle East like Egypt have very low statistics on diseases such as HIV/AIDS, for many different reasons. The author states that one of the reasons for such low statistics could be the fact that the tests being made for HIV/AIDS are anonymous to begin with, nothing is being recorded. Another reason which also sounds to stand true is the fact that Egypt is a Muslim country and in many families having a disease like AIDS is a shame to the entire family for religious reasons. The research being conducted would use the information in the article to figure out what are reasons for low statistics and create new ways to deviate away from them and provide a better surveillance system for the disease.

***Statistics and Surveillance of HIV/AIDS.* (2006). Department of Health and Human Resources; Centers for Disease Control and Prevention. Retrieved February 27th, 2006, from <http://www.cdc.gov/hiv/topics/surveillance/index.htm>**

The main topic being discussed in the article is ways that countries all over the world deal with identifying patients that are suffering from either HIV or AIDS. The article can be considered as a summary or as a guideline for countries that are facing problems with obtaining the correct information needed to diagnose patients. It also helps the government identify trends that can help identify areas that might be suffering from either disease. The article, which is found on the CDC website, contains many links that contain helpful information for the researcher doing a project on surveillance systems in a specific country. This article would provide information on how to conduct primary research in Egypt, what to look for as a trend of behavior towards either of the diseases, and statistical information that has already been obtained for the research to build upon. The sources information comes from a collection of statistical work and field work experiments done mainly in the U.S. on both HIV and AIDS, where the site contains a summary of the most important information needed in order to conduct a similar research in other areas, like Egypt. The guidelines would really help a researcher begin such a project, but the site might not be totally appropriate for the country being tested, in other words the resources in the country being tested might not be like the resources

in the U.S which will cause a drawback for researchers since a different approach will be needed.

Strengthening health sector response to HIV/AIDS and sexually transmitted infections in the WHO Eastern Mediterranean Region. (2005). Retrieved March 10, 2006, from http://www.emro.who.int/asd/pdf/Strategy_HIV-AIDS_06-10.pdf

This paper was published by the WHO and focuses on how to improve the response of a country's health sector to diseases like HIV/AIDS and other serious sexually transmitted diseases. The entire paper focuses on the Eastern Mediterranean region which includes Egypt as one of the countries that is facing a problem with HIV/AIDS surveillance and awareness programs. The paper gives feasible solutions to dealing with problems in the country and speaks about goals, targets and strategic actions that should be taking place. The information in the paper has been gathered by doing research with experts on the issue and presents the statistical information on their findings.

The Pre-Surveillance Assessment; Guidelines for planning serosurveillance of HIV, prevalence of sexually transmitted infections, and the behavioral components of second generation surveillance of HIV. (2003). Retrieved March 10, 2006, from <http://www.who.int/hiv/pub/surveillance/psaguidelines.pdf>

This paper was written and published by the WHO and UNAIDS on efficient ways of improving current surveillance systems. It is a continuation of the paper written a couple of years before it, but this paper is aiming more at the technical issues that are to be targeted when strengthening the HIV/AIDS surveillance programs. They portray the surveillance system as a cycle that needs to get updated every couple of years depending on the country's status and the facilities that are available. This paper would also help in guiding the research in the right path were steps are to be taken one at a time in the proper fashion in order to obtain promising results.

United States Agency for International Development (US) [USAID]. Country Profile: Egypt HIV/AIDS. The Synergy Project; 2004 February. 4 p. Available from: <http://www.usaid.gov/pop/aids>

This country profile of HIV/AIDS in Egypt, published by USAID, provides a basic report on the status of surveillance of the disease. According to the report, as of December 2003, the National Aids Program of Egypt had only reported 1,838 HIV/AIDS cases to the ministry of Health and Population. There is a large discrepancy between this estimate, and the estimate of the World Health Organization which was around 8,000 cases. The report then goes on to describe some of the methods used for surveillance and discusses some of the programs in operation such as IMPACT, run by Family Health International, and funded by USAID. Also mentioned, is an agreement between USAID and NAMRU-3 to help track 27 infectious diseases, one of which is HIV/AIDS and to help increase safety and awareness.

United States Agency for International Development (USAID). Health Profile: Egypt HIV/AIDS [report on internet]. [cited 2005 Feb 28]. Available from <http://www.usaid.gov>

This report, produced by the United States Agency for International Development (USAID), provides an up-to-date summary of HIV/AIDS in Egypt. It gives estimates for the number of cases of HIV/AIDS that are present, and the cause of the majority of transmission. The report also informs the reader that the Ministry of Health and Population is the government branch who is in charge of the program for the prevention of HIV/AIDS and describes some of the actions they have taken to combat it. Much of the report is focused on the money that USAID provides, and examples of programs that they have set up; Such as programs for home-based care, counseling and testing, and human capacity development. The report also provides us with contact information for the USAID center in Egypt which could be useful for further research.

What is AIDS? HIV/AIDS Basics. (2006). The Body; The Complete HIV/AIDS Resource (AIDS Infonet). Retrieved February 27th, 2006, from <http://www.thebody.com/nmai/whatisaids.html>

The authors that publish resources on The Body are all experts in the field of HIV/AIDS, where their main goal is to educate all people about HIV/AIDS and help those that have just been recently diagnosed. The specific article on "What is AIDS?" focuses on educating people about what the word AIDS stands for, how a person might acquire AIDS, how to find out whether a person might have AIDS or not, and states that there is no cure for AIDS. This article will be used mainly on defining to our audience what AIDS is in simple terms and at the same time put readers in perspective on how dangerous AIDS is to a population and on simple ways to surveillance AIDS. The nature of the source is totally factual for the reason of educating individuals on what the disease stands for and how a person is affected by it. The article is a very good source for information on the topic of HIV/AIDS where it explains issues on the topic in very simple terms so that the information may reach a wide variety of audience. The only downfall of the article is that there are a couple of terms that make no sense to individuals that have not studied diseases and the immune system, it would be a lot better if there were a small definition or explanation of the terms.

Appendix:

Interview Questions for WHO and FHI.

The current surveillance system's status:

1. What is the current HIV/AIDS surveillance system?
 - a. What type/types of surveillance systems are currently running in Egypt?
2. In your opinion, how effective is Egypt's current surveillance system for HIV/AIDS?
3. Do you think it is necessary to closely monitor HIV/AIDS in Egypt, or is the need to monitor other diseases more pressing?
4. HIV and AIDS are two separate diseases, does the surveillance system take that into account. Or does the system target to the amount of HIV infected individuals and then make an estimate, with laboratory testing, to how many people have developed into AIDS.
 - a. Or is there a separate system for finding out how many people have AIDS?
5. Where the goals of the 1st generation surveillance system met?
6. What motivated the switch to a 2nd generation system?
7. What were the major obstacles faced when creating the 2nd generation surveillance system?
8. What are the major obstacles in the way of implementing the current surveillance system?
9. Do you think the current systems need improvement?
10. If yes, why do you think so?
 - a. What needs to be improved?
11. If no, why are the statistical numbers so low, doesn't look like they are representative of the population.

Awareness:

12. Has HIV/AIDS awareness increased significantly in the last few years?

13. What workplace/community programs are you aware of that are helping to increase awareness about HIV/AIDS?

Government:

14. Is the Egyptian government taking the risk of an HIV/AIDS epidemic seriously?

15. What is HIV/AIDS currently ranked at for priority to the government?

Testing:

16. Is enough being done to encourage people to volunteer to be tested for HIV/AIDS?

17. Do you think it is enough to simply encourage voluntary testing, or should wider mandatory testing be implemented as well?

18. How many Voluntary Counseling and Testing centers are in Egypt, and generally where are they located (large cities, rural areas, etc...)?
 - a. When were they established?

19. Are the personal that work with testing for HIV/AIDS throughout Egypt properly trained?

20. Are samples treated with proper infection control?
 - a. No risks of contamination.

Treatments:

21. What treatments are available to HIV-positive individuals in Egypt, and are any of them truly affordable?

Concluding question:

22. How serious of a threat is an HIV/AIDS epidemic in Egypt? Is it possible for one to occur in the near future?