Full Committee Hearing Notice - Solutions to the problem of Health Care Transmission of HIV/AIDS in Africa

Bill Number: Oversight

Hearing Date: July 31, 2003 - 10:00 AM

Witness:

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Medilinks

Testimony:

Senators, thank you for affording me the honor and privilege to address this Senate Hearing Committee on the very important subject of Safe Health Care. My name is John Kiwanuka Ssemakula a Ugandan Doctor currently working as a Public Health Consultant with the Africa-America Institute (AAI), where I am the Programme Manager and Advisor on the AAI HIV/AIDS Initiative. I trained as a Doctor at Ibadan University Medical School, Nigeria, and Makerere University, Kampala in Uganda where I received my medical degree. I subsequently took a Masters Degree in Public Health at Dundee University Medical School in Scotland, for which my Masters thesis was titled "HIV/AIDS and the Healthcare system in Uganda." I also co-founded Medilinks with my colleague Dayo Ogunyemi. I run the Medilinks website that provides health information about Africa. In 2004 Medilinks is co-hosting Africa Health Day with the WHO at the UN to promote issues on health in Africa including HIV/AIDS.

I have had a professional and personal relationship with HIV/AIDS throughout my tertiary education, both in medical school, and then my on-the-ground experiences as a young physician first undertaking a medical internship, and as a medical officer 1990/91, during the peak period of the HIV/AIDS crisis in Uganda. But my interest in HIV/AIDS is not just professional, it is also on an intensely personal level. I have lost several cousins, who were like brothers and sisters to me over the years. One was a doctor, another was an engineer doing a masters, others were in university. I have also lost aunts and uncles who left behind orphaned children that our family have helped educate and bring up over the last 15 years.

The issue of unsafe medical practices and re-use of needles is a subject that I as a Doctor have always had in my mind, but in Africa the focus in the fight against HIV/AIDS has always been on sexual transmission and prevention methods primarily by behavioural changes. Nonetheless over the years myself and many of my colleagues have discussed what was it that led to HIV spreading so fast in Africa, why Africa and not elsewhere in the world. Many researchers from the West attributed it to the promiscuity of Africans, but for those of us who have and do live in the West, nothing compares to Western Europe and the US, places like Ibiza, or Summer break in places like Cancun where "Girls gone wild" is filmed.

My interest in other routes of transmission rose in me again when I was doing research for an article on new and emerging infections and whether African nations were adequately prepared to identify early enough the emergence of a new epidemic like the AIDS epidemic. In the course of my research I came across a paper called the "The injection century: massive unsterile injections and the emergence of human pathogens" by Drucker E., Alcabes P. Marx P. (December 2001) published in the Lancet Medical Journal in 2001, which drew a link between the rapid rise in injection use in the world and the emergence of HIV/AIDS. Shortly after publishing my article I received an email from David Gisselquist asking if I was interested in looking at risks for HIV transmission through unsafe health care in Africa. He went to tell me he had been working with some people to estimate proportions of HIV from health care and from sexual transmission and that they'd found a lot of evidence that unsafe health care may be an important factor. In this same email he also added an attachment that included a draft of his ground-breaking paper "HIV infections in sub-Sahara Africa not explained by sexual or vertical transmission" that was soon to be published in the International Journal of STD AIDS.

The paper seemed to contain all the information in terms of HIV/AIDS that had been missing. As soon as the article came out in October 2002, the paper proved and has continued to be controversial I was moved to write an article commenting on this very possibility and I was invited to write a letter for the International Journal of STD & AIDS special issue on the subject of unsafe medical practices contributing to the spread of HIV/AIDS which was entitled "The Missing Link? "The Spread of HIV/AIDS in Africa through Unsafe Medical Care" and was published in the March 2003 edition of the International Journal of STD & AIDS. The article resonated so strongly with me because it seemed to explain so much of what had been mysterious about the spread of HIV/AIDS in Africa. I also published extracts and comments on a number of international listservs such as Afronets that deal with African Health.

Why did I believe that HIV inadvertently spread through needles in Africa to be the case? Quite simply, it makes sense. Working as a clinical doctor I often had to rely on my gut instinct to diagnose cases that did not meet any clear clinical parameter mentioned in the books. In this I was always reminded of a statement that one of my lecturers said "diseases do not read books". What he meant was as a doctor one must always be vigilant of a disease not presenting with common accepted symptoms but in an unusual manner that was not in the books. As soon as I saw the article I knew this could entirely be the missing link.

Over the next few months as the controversy surrounding the article erupted, I discussed the implications with many of African colleagues in the USA and in Africa by email. I was struck by the similarity of opinions and views held by people who had grown up and worked in African nations for any length of time and those who worked in international organizations such as the WHO, CDC and the UN. Many people in Africa had similar experiences that they could relate about having received immunizations where only one syringe was used and where sometimes blood flowed freely from a particularly difficult injection. Others talked of how they would go to hospitals and only accept injections if they were syringes they had bought and brought themselves. Whenever I explained to them about the issue and the controversy many were surprised because they knew what the conditions were like in hospitals and instantly realized that HIV could very well have been spread in medical settings.

As a medical student and a Junior House Officer in Mulago hospital in Kampala in the late 80's and 90's I witnessed the re-use of needles constantly. Sometimes the needles were so blunt they would actually cause trauma to the patient and blood would flow. We used sterilizers which sometimes did not reach the correct temperature or sometimes power would go out unbeknownst to us ,and the medical equipment we thought had been sterilized were actually still unsterile. We resorted to also putting instruments in a 5% solution "Jik," a type of bleach which at the time was recommended as a method for

sterilizing equipment to kill the HIV virus. Unfortunately, sometimes the bleach solution was not up to strength or the bleach was a batch that was not of the right grade (a practice that still continues today in some hospitals I am told). So concerned were we as junior Doctors doing most of the work and in the frontline, we went on a work to rule demanding equipment such as disposable needles and gloves that would allow us to do our jobs in a safe environment, both for the protection of ourselves and our patients. I worked in surgery department, where we often had multiple victims from major road traffic accidents, people with gunshot wounds, and other traumas. I remember one time a colleague and I decided to do an informal survey of the rate of HIV on our patients. We were shocked to discover that up to 50% of our patients were HIV+ve. I also worked in Paediatrics, which if possible was even more intense than working in surgery. The wards often had 100 in patients and on admission days which was every third day I saw on average 200 patients and often up to 400 patients a day. It was at this time I and my fellow doctor Dr Madewo noticed an unusual phenomenon, we started seeing children presenting as HIV+ve when the mother was not. We also noticed infants presenting with unusual signs, such as necrosis or gangrene of the extremities, with no other presenting symptoms. We discovered most were HIV+ve and we wanted to do research into this, because we thought perhaps this was one more manifestation of HIV that differed from the classical presentation described by the WHO, and we wondered how the children could have become infected when sometimes the mothers were not. One of the possible routes we thought of at the time was perhaps through immunisations or somehow infected by either injections or unsafe blood. Unfortunately we were unable to get the funding to do this and lack of time and other constraints did not allow us to pursue this. We were told that the mother's were very likely in the early stages of HIV infections and would likely sero-convert so that the virus would show up later. I believe this was a missed opportunity to investigate the possibility of HIV being spread in a medical setting. I then worked in Nsambya Hospital an NGO hospital which was then considered one of the best hospitals in Uganda as a Medical Officer in charge of the Casualty Out-patients department. Nsambya also had one of the first AIDS clinics in the country. Even here needles were occasionally still boiled and re-used though practices were much better than at Mulago. At the time HIV had reached such proportions in Uganda, my parents, Aunts and cousins actually feared I'd get infected in hospital. And remember, these were better equipped hospitals in an urban setting.

This is why as soon as I learned of the research being done on unsafe healthcare in Africa, it immediately struck me this could be another way that HIV had been spread in Uganda and other countries in Africa. We corresponded back and forth during which time I also joined the Safe Health Care /HIV Working Group which was started by the Physicians for Human Rights to find ways of getting more attention about the issue. I'd followed the first Senate hearings on the issue as well as the meeting the UN/ WHO had convened to discuss the subject and was quite disappointed at the outcomes. At the beginning of June I received a call from a person called Renuka Gadde who said

she was working for a company called BD, Becton Dickinson. She asked me if I'd heard about them, and I said no. She told me that BD was the biggest manufacturers of needles, syringes and other medical equipment. Until then I'd never really thought about where needles and syringes come from. As a doctor they are just one of these implements that you use all the time, but I'd never really stopped to think about who made them. On the Wednesday of that same week I was in DC being interviewed as a potential witness to testify in the senate hearings. During the course of this process I was asked if I was being paid by BD and I said until two days ago I'd never heard of them! I thank Edwina Rogers and Senator Sessions for having the confidence to give me this rare honor to testify before the senate.

I jumped at the chance to testify because I'd been disappointed at the outcomes of previous official hearings on the subject. As far as I was concerned people who were discussing the issue were missing the point. It was not about the percent of HIV/AIDS that was transmitted via the unsafe use of needles. It was about safe health care, the first and most basic thing as a health worker one should do, "Do no harm to the patient." The WHO's figures stated 2.5%, other figures were saying 8-10%, some figures were as high as 40%. I said even if it were only 2.5%, it is 2.5% too much, if should be 0%. Saying 2.5% is acceptable goes against all the premises of tackling the HIV/AIDS problem. At the meeting with BD I was shown some remarkable technology that they had developed, auto-disable syringes for developing countries. I was amazed. I said to them if this exists why is it not made available, it at least gives a tangible way of preventing the spread of AIDS and not just AIDS, other blood borne diseases such as Hepatitis B and C. This strengthened my resolve to find a way of participating in the process, to raise awareness about the issue and make sure this technology became available.

As far as I was concerned, there was no controversy, it was a simple black and white issue, that of providing safe health care. I said, "Can I honestly go into my home village in Uganda and tell my relatives there they should not have access to safe health care. They trust me for this. The arguments that if people thought HIV was spread through needles would encourage them to go and practice unsafe sex were absurd. Were all these officials saying that African's should have a choice between practicing safe sex or getting safe health care, but not both?" I was astonished at such assertions.

I pointed out that the UN/WHO already appreciated the risk of spread of AIDS in medical and health settings, specifically to children. Which was why they had made the use of auto-disable syringes the standard for the UNEPI immunization programme, which has been extremely successful. Why then I asked could they not do the same for curative services? Did it make sense to give a child life saving immunizations on a Monday, only for them to come back ill with malaria the next day and possibly receive unsafe injections? Were people who received injections for curative purposes not allowed the same standards?

The clincher for me was when the SARS epidemic started. The response by the WHO and public health officials around the world to contain the epidemic was unprecedented dramatic and ultimately successful. But it was while reading an article discussing the SARS epidemic and how it was spread that I came across the term "superspreader". One of the more unusual features of this virus that emerged from the research of Asra Ghani of the Department of Infectious Disease Epidemiology at Imperial College, London. She found that most people who get SARS do not infect anyone else, but some individuals appeared to be responsible for transmitting the disease to dozens and sometimes hundreds of others. Such individuals are known as "superspreaders", and these superspreaders have some role in transmission of the disease. Another disease that exhibits this kind of classic transmission heterogeneity is HIV. In the case of HIV most people have just a few sexual partners and so transmit the virus to one or two other individuals, but a small number of people have a large number of partners, and spread the virus widely. I theorized that this could have been how HIV was spread widely through needles and injections. It only needed to happen a few times, cases where perhaps through some kind of vaccination campaign or an outbreak a large number of people received contaminated injections, thus ensuring there was a large enough pool of people to spread the disease in the general community. Perhaps this could be one explanation for the rapid spread of AIDS.

I have just come back from a 10 day visit to Uganda to see my family. I also took the opportunity to visit health clinics in Rakai district, almost all the way to the Tanzanian border, and Luwero district, a rural area about 50 miles from Kampala. I went to Rakai, because it was the area that was first and hardest hit by AIDS in Uganda, it was also the area my mother's family comes from. I wanted to see how they had been coping with AIDS and perhaps at the same time to get their views on the issue of re-use of needles and provision of safe health care. I went on the Monday, two days after I'd arrived in Uganda. In my first visit, I met the LC 5 Chairman and the District Commissioner at Rakai District HQ. They told me about the work they are doing in Rakai. The Chairman told me how the HIV prevalence rate which had reached up to 40% was now down to 12% in some areas, and as low as 6% in other areas. They had done tremendous work on sensitizing and informing people about the need for behaviour change but there was still a lot of work to do. He said the most important thing. He also acknowledged the need for safe healthcare practices. There was no issue of controversy for him.

"Of course, we must continue with our messages to continue practicing safe sex as our priority" he said "but it is also important that we use whatever means to fight AIDS. We know AIDS can be spread by needles. If there are syringes like these available, please, please bring them to us. Here in Rakai we are constantly thinking about the future of AIDS, how do we just keep it at the level it is now, or even reduce it to lower levels. We were very happy President Bush came to visit Uganda and has promised this money on the Bush AIDS bill. If there is money to give us safe needles, please give them to us. But also tell them we need other things such as anti-retrovirals and medicines for the people."

Following the meeting with the at the District HQ, I then went to Kakuto Health Centre accompanied by Sister Judith Namperwa, a senior Public Health Nurse. Kakuto Health Centre which is some 40km from Rakai District HQ is a health centre 4, rural referral facility. It was originally designed to serve 23,000 people, but its catchment area in reality is four times greater than that, because people come from neighbouring districts and even from across the border in Tanzania.

We were met by Michael Kaweze the Health Management Information Systems Officer (HMIS) who took us round with Sister Namperwa as well as the duty nurse. The health centre is well designed and has a staff of 45, which is not enough one considers they work in shifts, some go for training, and others are on holiday. They provide a comprehensive range of services, including out patient and in-patient, ANC and maternity, family planning, Dental and Eye clinic, TB, leprosy, immunization, VCT and lab facilities. They see on average 80-100 out patients a day, the commonest conditions are malaria, URTI's and LRTI's, GIT and STI's and of course HIV/AIDS. The difficulties the health centre has include lack of drugs especially ARV's especially since

they have been very successful on sensitizing the local population to come in for VCT and mothers to register for the MTCT programs, lack of equipment. Sister Namperwa said "we still have a problem of lack of equipment, and the abasawo "doctors" are just worn out with dealing with HIV/AIDS day in day out!"

I asked Sister Namperwa if re-use of needles was a problem. She retorted, "That is pre-AIDS, here we use auto-disable syringes especially in immunization. Re-use is not done." But when I talked to her in more details about the issue of safe health care and how I was going to testify before senate. She conceded that there was an issue in the curative services.

Sister Namperwa said to me " If you have these auto-disable syringes and you can bring them to Uganda it will be good. It will help Doctors because for those in clinics further up country, they are just stuck. This is a problem they have no means to deal with!" The duty nurse and HMIS also agreed that this was an issue, but there was nothing to be done about it.

I got the impression from my visit and the replies given that the all staff recognized them issue of re-use as a problem and potentially a big problem, but it just was not their priority and moreover until now, there was little they could do about it anyway. Even if they recognized it as a problem that needed some intervention, it was not seen as such a huge priority as such.

That evening I was sitting with my brother Paul Kiwanuka Mukiibi, also a physician and consultant working in Uganda discussing what I'd seen that day. He told me when he'd first heard of the subject, he was mystified as to why there was any controversy, saying "This is just an issue of basic health care, the most basic things we as doctors do. How can people see this as controversial in anyway". Like me he was angry that the whole subject was being treated in what appeared such a dismissive way. Later we were joined by a former classmate of mine in medical school, who was now a Surgeon at Mulago Hospital in Uganda. We started discussing the issue, unsurprisingly he agreed with our views. He said "It is time we started looking at AIDS in a bigger way. This issue is a real problem especially in up country clinics where equipment is hard to come by." As an aside he complained that "Quite often when we go for conferences and presentations abroad, because we African's do not have such big entourages or as much visibility as our counterparts in the West, no one listens to us when we start talking about AIDS in a different way, to the way people outside view it." Both Paul and I agreed, that this is indeed part of the problem, an African perspective of AIDS and what to do about it were not often given enough due consideration.

In the Tuesday, while taking a relative to the hospital, I also had the opportunity to visit Mulago hospital, where I trained as an Medical student and Intern and where ten years ago, we had complained of lack of facilities including access to gloves and needles. There was no evidence of any sterilizers in use which was very encouraging. I discussed the issue of re-use of needles with a consultant Dr Myers Lugemwa and he also agreed that despite the fact that it did not appear to be an issue in Mulago, did not mean it was not a problem elsewhere, especially the rural areas and these were the places where HIV was increasing most rapidly. He told me while working in Northern Uganda, he had seen needles and syringes soaked in buckets of "Jik" bleach for re-use later. He said "I have seen people just soaking needles in Jik , but there have been problems with Jik in the past

which is not up to the required strength, and this means that the syringes won't even be sterilized at all!"

The following day, I visited a private clinic and here I saw disposable needles and what was possibly a sterilizer. I could not confirm whether it was also used in re-use of needles, but I counted it as a strong possibility. While discussing this with my brother, he reminded me that more than 50% of all spending on health in Uganda was in the private health sector. I also recalled how working as a junior house officer an a medical officer, quite often the patients that I saw at out patients had already visited a "musawo" who could have been anyone from a real doctor to nursing aide posing as a doctor. More often that not they had already received initial treatment that included an injection. The most dramatic testimony concerning the hazards and dangers of re-use of needles came in my up country visit to the Luwero District Health HQ Centre which is about 50 miles from Kampala. I first met up with Dr. Joseph Okware, the District Director of Health for Luwero and explained to him the purpose of my trip, how I wanted to see have a tour and see another example of a health clinic in Uganda. I told him a little about what I had been doing in the US, how I had an opportunity to testify before the US Senate on an issue that concerned HIV/AIDS. He instantly grasped the importance of the subject and directed me to one of the Doctors on duty, Dr Umaru Ssekabira, who explained that the Luwero health centre was a referral centre (much like the Kakuto clinic in Rakai) designated a Health Centre 4. The health centre provided similar services including inpatient and out-patient services, maternity and ante-natal services, a disability clinic and orthopaedic workshop, an eye clinic and theatre services. We started off at the immunization centre where they had just concluded immunizing children as part of the UNEPI program. There were some syringes on the table which were quite clearly autodisable syringes. Next to the immunization table was the PMTCT clinic which was adjoined to the maternity wing.

They were just signing up the first 10 people for the VCT/PMTCT counseling including the first couple. The program had in fact just started, training of the first few counselors had only concluded in June. As we went around the maternity clinic, we were joined by Sister Margaret Serunjoji the In Charge of the maternity ward. She explained there were 10 maternity beds, and one delivery bed. ANC and immunization services were offered and they were soon going to add the VCT and PMTCT to the services.

I asked Sr. Serunjoji if there was a problem with the re-use of needles. She said in immunization there was no problem, except when they were running low on supplies. Dr. Ssekabira agreed saying "At the moment we are running low on supplies, we may have to resort to obsolete technology." But in general they used disposable needles which were disposed of in SHARPS boxes that were provided by the UNEPI program. Dr Ssekabira said "We are a happy that UNEPI agreed otherwise we would have had difficulties" I asked them if they used any similar technology in curative services. They said they had nothing, but if anything existed it would be very useful. I explained part of the purpose of my visit they become very interested that it was partly to see about providing auto-disable syringes and needles for curative services.

Sr. Serunjoji said "This is just what we need. Even though we do not re-use needles here because the supply is generally good, sometimes we run out. When that happens patients are forced to buy syringes. But the problem is even at 300 shs it is still too expensive for most villagers. So when a patient comes with their own syringe they will tell the doctor to

give them their needle so they can go back and boil it and re-use it. They do not want to buy a syringe every time because it cost too much. "

I remarked "Isn't it particularly dangerous especially with the danger of HIV/AIDS in Uganda, isn't there the possibility of it being spread this way?"

Dr. Ssekabira replied "This is a very real problem. It is even more urgent if one realizes that when the patient buys a needle sometimes they share one needle among their family, using it over and over again or may even share with their neighbours. Auto-disable syringes that were cheap enough and supplied in enough quantities would prevent this. This is not just an issue of health, but also of poverty."

I said "If that is the case, doesn't it make sense to do something about this? Why are we teaching and preaching to people about practicing safe sex and behavioural changes yet they can still get infected by this other route." Sr Serunjoji and Dr Ssekabira agreed saying "That is why if this technology exists we should use it"

I also attended the Uganda Bishops Council where they were taking landmark decisions on Adolescent and Youth Sexual and Reproductive Health. They were very excited to hear that I was testifying before the senate. All agreed that the issue of re-use of needles was very important. "We are sending you as our emissary to USA. We are trusting you to tell the Senators about us. Tell the Senators, we are also working very hard. We appreciate any and all help you can give us in our fight against HIV/AIDS"

You may notice that I have not talked about the issue of re-use in terms of the "controversy" about what proportion it has played in the spread of AIDS, be it 2.5%, 10% or 30%, because as far as I'm concerned there is no controversy. It is a question about providing safe healthcare to people who seek it, the most basic tenet of healthcare provision. Do no harm to the patient. It is not just an issue of protecting people from getting HIV which is very important, but also at protecting them from the risk of getting other blood borne diseases, such as hepatitis B and C or Ebola.

However if you were to ask me to give an estimate or guestimate of how much unsafe healthcare has contributed in the spread of AIDS I'd have to give it in terms of my own personal experience because I know of no study in Uganda that has investigated this. In my graduating class there were 120 students, I know of at least 12 or 13 of my colleagues who have since died of HIV/AIDS. The significance of this is that of those who died at least five were friends who in know way could be described as leading any sort of promiscuous lifestyle, there was at least one monogamous couple who had been together from high school, through medical school for years and tragically got AIDS. They most likely got it through exposure in medical settings. This would mean that at least 30% of those who have died got AIDS through routes other than sex. And these were not the only ones, we would hear of students who had died of AIDS even though they had been very religious, not just Christians but Muslims also. And when these people died, it was always assumed that they had been lying and practicing unsafe sex which led to a lot of finger pointing and stigmatization. Another consequence was that it perversely encouraged some students to start practicing unsafe sex! Their reasoning was that if their colleagues who were leading a life of practicing safe sex and not indulging in wild behaviour were getting AIDS, why should one bother doing so, if there was a risk of getting it anyway, particularly in the healthcare conditions we were working doing our work in. This also led to some of my colleagues to abandon clinical medicine where there was a danger of exposure to hazards such as getting pricked by

needles, getting splashed by blood for other safer branches of medicine. I recall getting accidental needle pricks on several occasions or getting splashed with blood when doing surgery, because our gloves and needles were so old, they leaked or were blunt through constant re-use.

The issue of re-use of needles and syringes though important has not necessarily been given the as much concern as it deserves, because in recent years it has been sidelined by so many other issues. During my visit I asked several of my colleagues and the people I talked to, "Why is it, if you all agree this is an important subject is know one talking about it? Have you not heard of what is happening outside on this whole subject?" The reply was that "Often we don't have time to look into everything, it is hard enough just dealing with what we are already doing. But even if we wanted to talk about it, if one asked for funding for a research project to investigate the issue, no one is interested. Especially foreign donors, they are just interested in sex and behavioral changes." I was asked one curious question "Are people out there (in the US) open about AIDS, how do they compare to us Ugandans who have been so open about talking about this disease?"

I said "How do you mean open about AIDS, you mean discussing it on TV or in the news? I'm not sure what you mean?" The person replied "Well if they are so open as they claim to be, why aren't they telling us about such things? Why are they not telling us about these dangers so we can do something about them?"

There is no denying that unsafe sex is probably the major route for transmission of AIDS, but other routes such as re-use of needles and other unsafe healthcare practices are just as significant. The message of safe sex and behavioural changes to safe guard people is of paramount importance this is something the individual has control over. But they have no control over what happens in a hospital or a clinic, in this they put their trust in the doctor, nurse of clinical officer to provide the safest possible healthcare.

Knowing this and the dangers of AIDS and other blood borne diseases, should we not then be striving to achieve this? I said it before and I say it again, how in all honesty can I stand in front of the people in rural health clinics, in villages to address them on practicing safe sex, when I know that I am not providing the highest standard of health possible. How can one in all sincerity argue against making the safest healthcare equipment available?

During my visit to Uganda I talked with a quite number of other people where the subject of the spread of HIV/AIDS through needles was discussed either specifically or generally. I was struck by the fact none of the people I talked to saw any controversy. No one jumped to the conclusion that providing safe health care by preventing re-use of needles would lead to more unsafe sex. It was not a case of choice between safe sex or safe health care, it was quite simply the people who have been and continue to be on the frontline of the fight against HIV/AIDS, who despite battling huge difficulties and odds have succeeded in doing tremendous work, simply asking for tools that will help in the fight. It is about the fight for the future and in this there is no controversy, whatever help can be given, should be provided. Can anyone in all honesty give a reason why such help or assistance should not be rendered? If so let them come to these health clinics, look these health workers in the eye and say so.