

Male Circumcision For better health, hygiene considerations

(inflammation of the penis and the fore skin), chronic Urinary Tract Infections (UTIs); it is contraindicated in cases of certain genital structure abnormalities.

Analysis study done on sexually active heterosexual males in Africa found that circumcision reduces their risk of contracting HIV/AIDS. The WHO recommends considering the procedure as part of a comprehensive holistic approach to lessening of the spread of the disease. It is cost effective, though it is not 100% preventive. According to Dr. Leon Ngeruka, General Surgeon at Rwanda Military Hospital, Kanombe, voluntary male circumcision is a one-time, low cost intervention shown to reduce a man's risk of contracting HIV/AIDS by up to 70%. The medical procedure has the potential to save big sums of money in projected HIV/AIDS treatment.

Types/ methods

The most important aspect with circumcision is that it is a safe health procedure once it is performed carefully by a trained and experienced practitioner, using strict aseptic (sterile) techniques. It is also important that infant circumcision is done to healthy and stable infants.

“The type and method to be used when electing the procedure basically depends on the physician, not on which one is more painful or less. It is also dependent on which method is more user-friendly to the medical practitioner,” Ngeruka explains. There are basically two methods of circumcision employed in Rwanda; surgical, and PrePex.

(1) Surgical procedure

Circumcision can be carried out using special surgical devices like the circumplast, Gomco clamp, plastbell and the Mogen clamp. All using the same method and having same results. After examining the foreskin, the practitioner opens it via the orifice to expose the glans and also ensures that it is normal. The inner lining of the skin is then cut from its attachment to the glans. The device used is left holding to the glans until blood flow is stopped before finally removing the foreskin.

(2) PrePex circumcision procedure

PrePex was developed in 2009 shortly after the World Health Organization (WHO) published substantial research evidencing that men in the sub-Saharan Africa can significantly reduce their risks of contracting HIV by applying a painless and cheaper method of circumcision.



- **Over 700,000 medical male circumcisions by mid-2015**
- **Youths appreciate circumcision**

BY GEOFFREY WAKIBI

Male circumcision, (circumcidere in Latin) is the “cut around” health safety system which involves the removal of the foreskin of the male genital organ (penis). The outer skin is separated from the glans using a circumcision device after administering an anesthesia to help the body lose sensation and reduce pain and physiologic stress.

Scientists (RBC) have established that male circumcision has got fewer risks involved than the advantages associated with it. According to

specialists from the Rwanda Ministry of Health, circumcision is one of the effective tools in the fight against HIV spread. Because of its effectiveness, the Rwandan government has been prompted to set an ambitious goal of circumcising at least 2 million male infants, adolescents and adults.

The World Health Organization (WHO) approves circumcision for all male infants and recommends that after consultation with their pediatricians, parents make what is seen to be the best health safety system for their sons. The choice of this medical procedure may be based on their religions, culture, or

personal preferences, each of which is acknowledged.

Health benefits

There is clear evidence that circumcision has health benefits; reduces sexually transmitted diseases in men, protects against penile cancer, and reduces risks of cervical cancer in female partners.

RBC approved the procedure as a recommended management for compulsive (uncontrollable) phimosis (a condition of failure of the fore skin to withdraw over the glans), refractory balanoposthitis

PrePex study at Rwanda Military Hospital, Kigali



PrePex was designed and developed in 2009 in response to the need for the scale-up of Voluntary Medical Male Circumcision (VMMC) using limited resources. The Rwanda government developed interest in this modern device triggered by results brought in by Dr. Jean Paul Bitega, who later became the head of the PrePex study, and now Director General Military Medical Insurance (MMI), when he attended a Conference on Retroviruses and opportunistic infections (CROI) in Boston Massachusetts in 2011, where the male circumcision device was among the topics discussed where over 4,000 leading researchers and clinicians around the world participated.

The conference on the new technology was timely as Rwanda was implementing strategies to reduce the rate of HIV spread by 50% by circumcising 2 million men in two years as part of the comprehensive HIV prevention campaign. Experts picked particular interest in the study which demonstrated the safety and efficiency



of the PrePex device, a procedure carried out without bleeding, sutures or anesthesia.

A study was later administered at Rwanda military hospital with the help of Dr. Bitega who shared study results

with world researchers in a bid to extend efforts towards understanding prevention, treatment of HIV/AIDS and its complications. In a bid to increase the number of medical persons who are able to use new circumcision method (PrePex), MINISANTE

organized a workshop which took place at Rwamagana hospital, Eastern province where 8 people (4 doctors and 4 nurses) from Gihundwe, Gisenyi, Ruhengeri, and Nyamata hospitals, acquired skills on how to perform the PrePex circumcision procedure.

Dr. Ngeruka says meticulous planning led to the development of a safe, simple and scalable device to meet the demands of medical male circumcision needs. "It is ideal for use even in the most rural setting," he explains. The application of a PrePex device requires a relatively short training and supervision period and a significantly reduced time of election compared to surgical circumcision procedure.

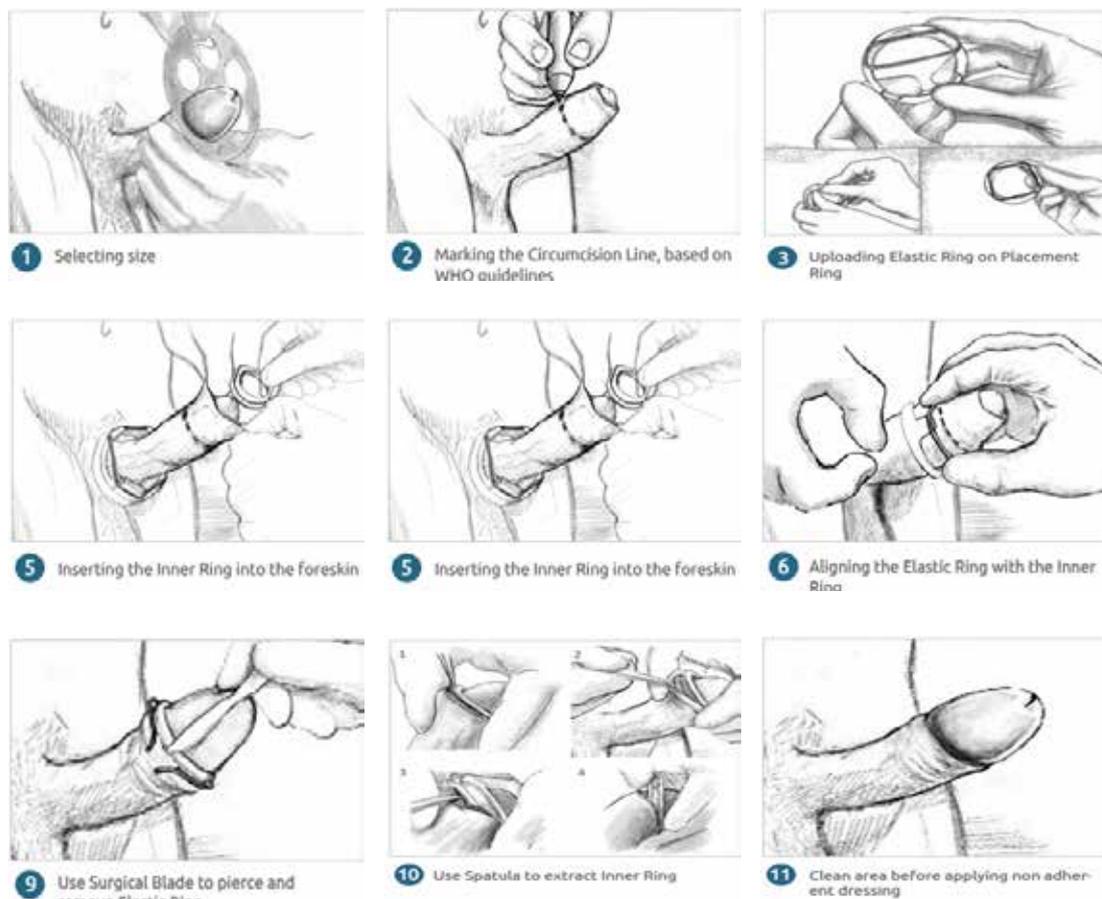
Why PrePex

Prepex option is developed to facilitate nonsurgical medical male circumcision as part of a comprehensive HIV prevention strategy in Rwanda. The PrePex device was introduced in Rwanda by Tzamaret Fuerst; the CEO



The PrePex procedure outcomes indicate high rate of patient satisfaction with a final cosmetic result; lower rates of pain compared to the surgical circumcision; more men volunteered for a PrePex procedure than ever before.

The device has been well tested and revised in the region and study has established it as the most effective and suitable since it doesn't involve physical pain, stress and less costly



of it. The foreskin is then trapped under the elastic ring stopping the flow of blood to the foreskin. During the time the device is fixed onto the penis, radial elastic pressure gently compresses the foreskin, inhibiting blood supply which causes the foreskin to die (ischemic necrosis). After a week the PrePex device is safely removed with blunted devices that can not harm the glans or the penis in any way after seven days. "It is advised that men avoid any sexual activities for a period of 6 weeks after the device has been removed, to enable complete healing," notes Dr. Ngeruka.

Comparing surgical and PrePex procedures

The ministry of health continues to strengthen its strategy of circumcising more Rwandan males and reaffirms that prepep circumcision procedure is crucial to reducing the rate of the spread of HIV in the country and is an important alternative to men who fear the surgical procedure.

PrePex is much easier to implement, with less requirements needed. Many people can benefit from it than the surgical procedure. A practitioner can perform only 15 surgical circumcisions per day compared to 60 for prepep procedure during the same period.

Officials from RBC establish that prepep has been well received in Rwanda, since it does not require anesthesia, no blood loss involved and is painless. However after electing the circumcision, one is not advised to put on tight and fitting under wears in order to allow for quick healing. RBC cautions people intending to undergo the PrePex procedure to seek services of a trained prepep provider, who usually carry out extensive counseling.

PrePex is scalable solution in that it is fast, cost effective and can easily increase the demand for voluntary medical male circumcision programs. It enables a rapid countrywide coverage of the male circumcision program, complimenting the HIV/AIDS prevention method.

Use of PrePex involves minimal set up of infrastructure requirements which reduce financial strain on the local healthcare system. The PrePex procedure outcomes indicate high rate of patient

of Circ Meditech Ltd .It was launched on 26th November 2013 at Rwanda Military Hospital Kanombe by the minister of health, Hon Dr. Agnes Binagwaho. It is the only circumcision device on market that doesn't need anesthetic measures.

The device has been well tested and revised in the region and study has established it as the most effective and suitable since it doesn't involve physical pain, stress and less costly. Tzamaret commends that Prepep can conduct male circumcision without need of blades, knives, or needles, safe and very simple.

Procedure

The device works on a very simple principal where the flow of blood is essentially stopped from being accessed by the unwanted tissue (foreskin). In a course of a week, the

foreskin will dry up. It will be very dry and after the one week the dry foreskin will be cut off easily as one may cut his finger nails. "The exposed skin becomes tougher and accesses a stronger barrier as regards HIV," says Dr. Bitega. He explains by comparing the healed hard skin on the forehead of the glans with the hard skin of the feet of a person who goes without wearing shoes. "Once you remove the foreskin the possibility of getting bruises during sexual intercourse is less." he says.

In Rwanda, a country where there are about 300 doctors to serve a population of 10 million people, the surgeon commends that the prepep device is very valuable when used exclusively for male circumcision.

PrePex's simplicity makes it possible for doctors to be replaced by nurses after a training of only two weeks. The first task of nurses is to check and



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choose the size of the device to be used by comparing with the size of the penis. After marking the circumcision line fitting the device becomes easy.

An elastic ring is placed at the base of the penis, and another ring is then introduced under the foreskin such that the skin is completely covering the ring. The elastic ring at the base of the penis is moved forward to get in touch with the second ring right on top

Took me one week to heal: Arnold Kamanzi Mugabo

Arnold Kamanzi, 32, a Kigali businessman and father of two, explains how the procedure was administered to him. "The doctor used two rubber rings, one fixed under the foreskin and the other outside to block the blood from getting to the foreskin. After one week, the foreskin then scraped off slowly. To my

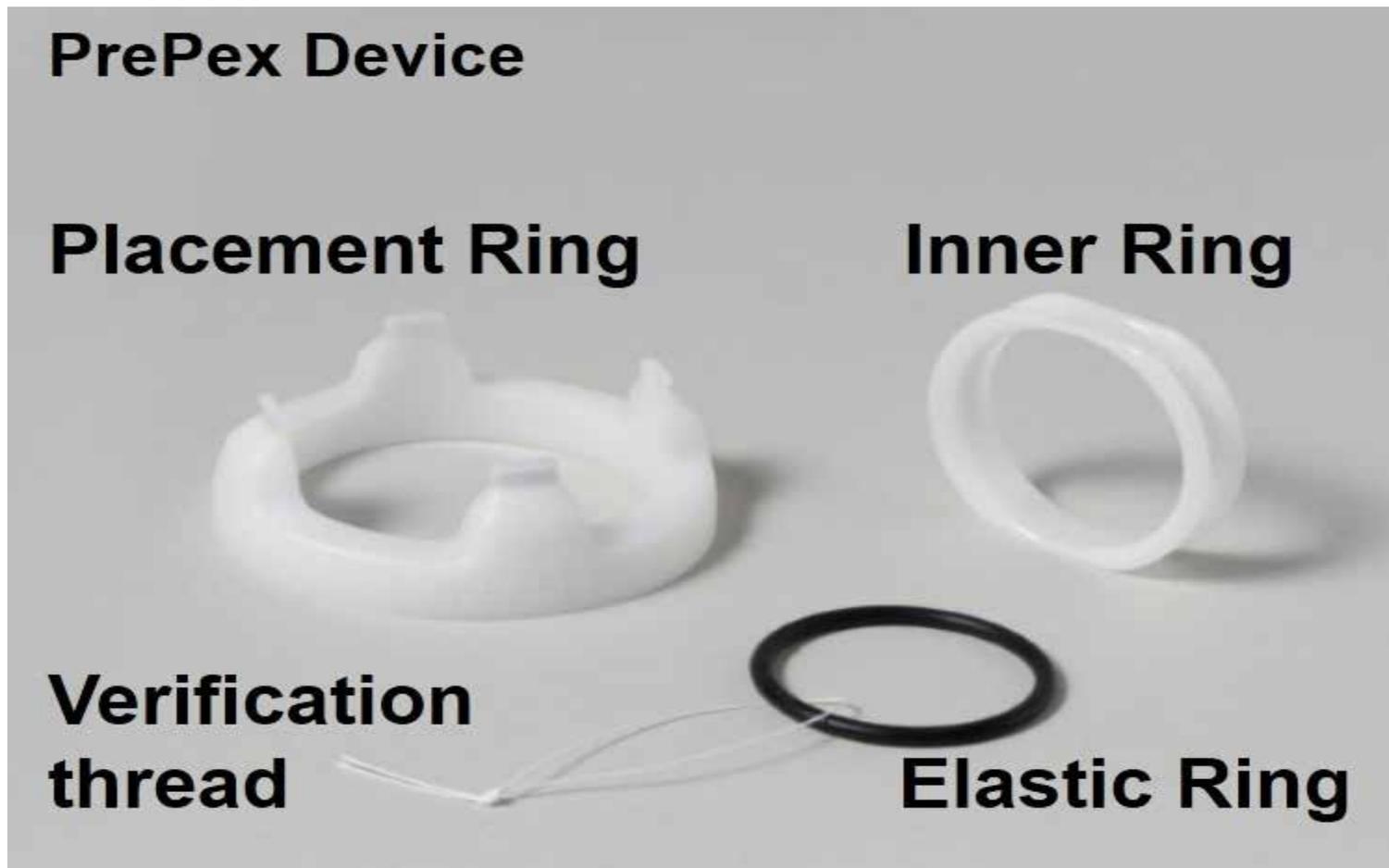
delight, it took me only one week for the wound to dry up," he enthuses. "When the foreskin dried, the rubber ring was detached. Fixing and removing the device took only three minutes and there I was eagerly waiting to heal. Great thanks to the experts who invented the PrePex male circumcision device."

satisfaction with a final cosmetic result; lower rates of pain compared to the surgical circumcision; more men volunteered for a PrePex procedure than ever before.

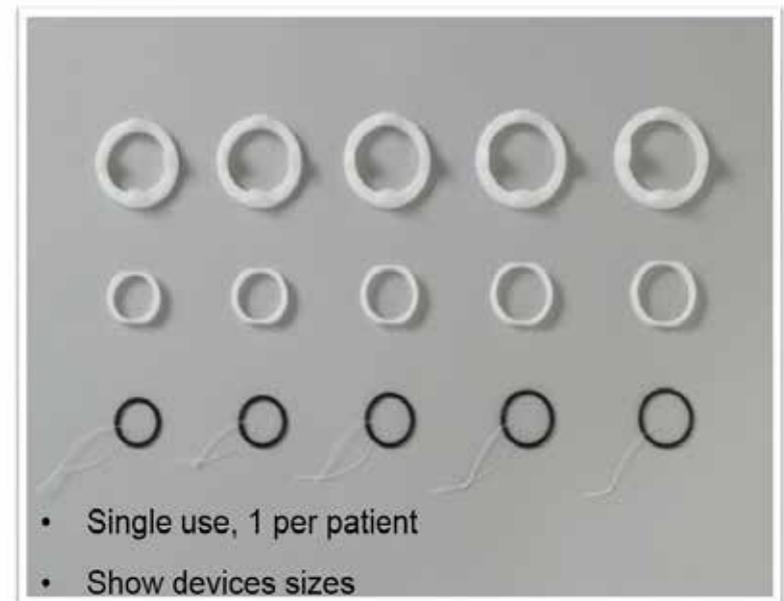
The procedure doesn't distract one's daily activities which has been very attractive to men and has been seen to have the potential to significantly increase the demand for male circumcision.

Study on PrePex device on infant males

The study, whose main objective was to assess the safety of PrePex to infants, was conducted in Masaka District Hospital, Kigali-Rwanda between March and August 2014, and according to statistical analysis, 95% confidence is claimed that cases that had adverse events did not go higher than 5.82%, which implies that the efficacy of the procedure in terms of device safety was not compromised. It included two study arms: Early infant aged 5-33 days and children aged 4-10 years. Patients were hospitalized for observation for a period between 24 and 48 hours and followed up every 2 days after discharge until complete healing was achieved.



5 PrePex sizes: A (smallest), B, C, D, E (largest)



During the study, a PrePex device was used to clamp the foreskin as it is done usually during the standard PrePex procedure in adults. Blood was blocked from flowing to the unwanted part of the skin, initiating ischemic necrosis. The unique clamping mechanism is based on a controlled radial elastic pressure applied by an elastic ring which is placed over a rigid inner ring. The diameter of the inner ring was scientifically measured to be larger than that of the elastic ring to create the desired pressure range that is strong enough to initiate ischemic necrosis, but "soft enough" not to cause pain upon device fixing.

The procedure did not need active device removal as performed during the standard PrePex circumcision in adults; it was left until natural detachment took place. The research established that the PrePex procedure in infants does not require sterile setting, injecting anesthesia nor sutures.

Twenty nine infants (5-33 days) and thirty one children (4-10 years) were enrolled. There were two adverse events in the infant arm and one in the children arm. "However the adverse events were not the severe type that could not be dealt with," says Dr. Ngeruka.

Table: Percentage of men circumcised vs. HIV prevalence in women and in circumcised and uncircumcised men

Countries	% men circumcised	% HIV prevalence in		
		Women	Circumcised men	Uncircumcised men
Ghana	95	2.7	1.6	1.4
Cameroon	93	6.8	4.1	1.1
Ethiopia	91	1.9	0.9	1.1
Burkina Faso	88	1.8	1.8	2.9
Kenya	83	8.7	3.0	12.6
Tanzania	69	7.7	6.5	5.6
Lesotho	49	26.4	22.6	15.2
Uganda	25	7.3	3.8	5.6
Malawi	20	13.3	13.2	9.5
Rwanda	9	3.6	3.5	2.1

Source: Demographic and Health Surveys available at <http://www.measuredhs.com/countries/start.cfm>

Implementing medical male circumcision in rural Rwanda

in the fight against the spread of HIV.

Rwanda has faced a lot of challenges as she continuously tries to reduce the risk of acquiring HIV by the male citizens. The challenges include simplifying the VMMC procedure, lack of enough health work infrastructures, mobilizing resources, and engaging communities to communicate benefits of male circumcision.

Due to her strong ambitions to have an AIDS-free generation, Rwanda has set and implemented a multi-pronged comprehensive strategy that is mainly targeting both treatment and prevention of HIV. One of the key pillars of achieving this goal is scaling up male circumcision whose innovative approaches have been endorsed by WHO and UNAIDS.

Due to the scientific evidence in support of VMMC and implementation support by the WHO and UNAIDS, the ministry of health has set up a recent strategy of performing over 700,000 medical male circumcisions by mid-2015. The government of Rwanda is promoting VMMC as a back-bone of the comprehensive national HIV strategic plan.

At whatever cost, the government of Rwanda through the ministry of health is out to scale up male circumcision up to 80% of adults and new born males by the end of 2015. This, when achieved, is estimated to avert thousands of adult HIV infections over time.

Addressing challenges Like many countries in Africa, Rwanda struggles with a growing healthcare infrastructure, having few physicians. Simplifying the male circumcision procedure by introducing new methods like the PrePex device, has allowed for the scale-up of the medical procedure. The task has recently been shifted to lower trained health workers through training, especially, nurses.

Building national infrastructure with focus on service providers is a critical task. In a bid to overcome this, the Rwandan government has sought to investigate task shifting solutions through trainings, where all district hospitals in the country sent at least a team of doctors and nurses to be trained at the PrePex device center of excellence in Kigali. These returned to their original health facilities to carry out PrePex VMMC under supervision.

Engaging communities

Rwanda has maintained effective scale-up by including meaningful engagement of communities in the medical benefits of VMMC. Originally, there was concern that the procedure would not be well embraced by men in the region due to the fact that there is no trace of traditional circumcision. However, the published evidence and observation indicate young men have accepted and embraced VMMC. This is geared by use of community mobilization, mass media and the inclusion of women.



Six years ago, Rwanda adopted male circumcision as part of the comprehensive package of HIV prevention strategy. Facilitating the national roll out of male circumcision required a campaign involving training of medical workers which was successfully conducted in Nyanza and Ruhengeri district hospitals together with their affiliated health centers in August and September 2010. This program targeted mainly both adolescents and adults who had been sensitized clearly on the importance of preventing contracting the deadly disease. Male circumcision kits were provided to aid the program by the Center for Treatment and Research on AIDS, Malaria Tuberculosis, and other epidemics (TRAC Plus).

This training program aimed at speeding up the implementation of safe, affordable, and accessible medical male circumcision in a bid to promote the HIV prevention strategy and campaign.

The method of training provided covered both theoretical and practical aspects of medical male circumcision while considering the WHO training modules. 25 Participants (doctors and nurses) were selected under criteria that considered those with minimum surgical skills and were trained by a team of five medical practitioners who included 3 doctors and 2 nurses who successfully did an up-scaling job.

Results show that the training session was well implemented in the two districts and evaluation also carefully done. Among the lessons learnt were mainly on the coordination of medical male circumcision activities as it requires a focal point to facilitate the activity on a conscious basis. The training which lasted 10 days had the trainees embracing both theory and practical skills in male circumcision and AIDS prevention and also how to provide counseling on medical male circumcision to clients before election.

A one-day training of community

health workers on community sensitization was done following a one week practical session. 120 medical male circumcisions were done and communication messages on it and other benefits were provided to the communities. Follow-up visits to people who were circumcised were done and no adverse events were registered.

Rwanda outstanding response

There are a number of countries where HIV/AIDS prevalence is at its peak, especially in the sub-Saharan Africa and yet response to Voluntary Medical Male Circumcision (VMMC) is very low, despite the fact that the procedure has been exclusively demonstrated to curb down the high risk of contraction of HIV by the male population.

Such countries, as Rwanda have been identified as the priority where ambitious strategies need be maintained in order to increase efforts