

Making all injections safe



World Health
Organization

All of us, at some point in our lives, have had or will have an injection to retain or restore good health.

But sometimes injections that are intended to promote health do the opposite. This happens when they are given in an unsafe way - using the same needle or syringe to give injections to more than one person. Practices like this can lead to the transmission of life-threatening infections. For these reasons, the World Health Organization (WHO) is launching a new policy on injection safety to help countries tackle the pervasive issue of unsafe injections

A 2014 study found that in 2010 as many as 33 800 people became infected with HIV, up to 1.7 million were infected with hepatitis B virus and up to 315 000 with hepatitis C virus through an unsafe injection. Usually infections are transmitted from one patient to another, but health workers are also at risk of becoming infected through needle injury.

Towards Safe Injections For All

WHO and partners – including the Safe Injection Global Network (SIGN), UNICEF and Gavi, the Vaccine Alliance – have been working actively together for more than a decade to promote safe injection practices by educating policy makers on making sterile equipment available and educating health workers on the critical importance of using only sterile material. The initial push focused strongly on spurring countries to use only auto-disable syringes for vaccinating children. This kind of syringe has an internal mechanism that blocks the barrel after a single use so that the syringe cannot be used again.

Now the spotlight is on the risks associated with injections into muscle (intramuscular) or skin (subcutaneous or intradermal) to treat medical conditions; and how to make them safer through education on safe procedures, elimination of unnecessary injections and better design of equipment.

The New Smart Syringes

The surest way to protect against unsafe injections is to use devices for injections that have been engineered so they cannot be re-used and don't lead to accidental needle stick injuries among health workers.

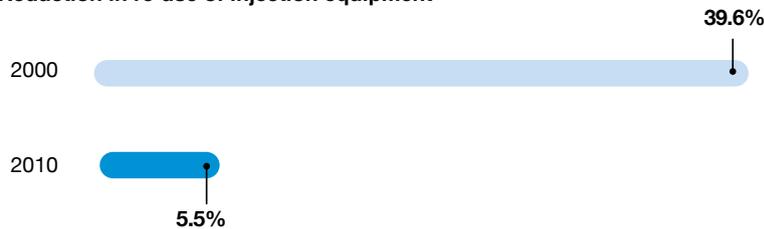
Re-use prevention features are essentially the same as the auto-disable features designed for immunization of a single child. The main difference is that syringes designed for delivering medicines allow the health worker to adjust the dose as needed and to move the plunger twice when it is necessary to mix two different medicines in one syringe or reconstitute vaccines and medicines if necessary. Some models include a weak spot in the plunger that causes it to break if the user attempts to pull back on the plunger after the injection. Others have a metal clip that blocks the plunger so it cannot be moved back while in others the needle retracts into the syringe barrel at the end of the injection. Syringes are also being engineered with features to protect health workers from "needle stick" injuries and resulting infections. A sheath or hood slides over the needle after the injection is completed to protect the user from being injured accidentally by the needle. These syringes also generally have a re-use prevention feature.

PROGRESS ON INJECTION SAFETY

Between 2000 and 2010, in developing countries worldwide, re-use of injection equipment decreased from 39.6% to 5.5%

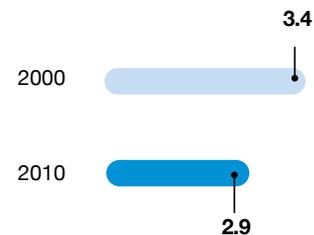
86%

Reduction in re-use of injection equipment



Over the same period, unnecessary injections also fell

Average number of injections per person in developing countries



In 2009 Gavi, which follows WHO and UNICEF recommendations on the use of auto-disable syringes for immunization injections, reported that 66 of the 71 countries to which it provided support for injection safety were exclusively using auto-disable syringes.

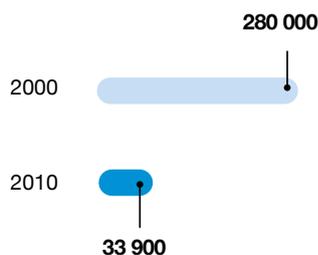
66/71

Countries exclusively using auto-disable syringes for immunization

Infection safety has played a crucial role in progress on reducing the global burden of HIV and hepatitis

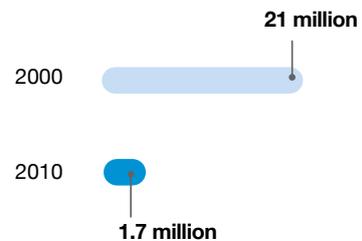
87%

Reduction in HIV infections due to unsafe injections



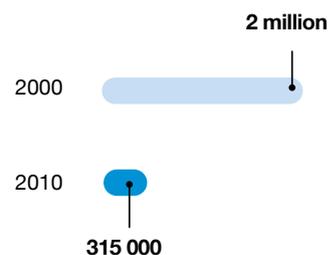
83%

reduction in hepatitis B infections due to unsafe injections



91%

reduction in hepatitis C infections due to unsafe injections



Every year at least 16 billion injections are administered worldwide

About 90% of these injections are given in curative care. A great many of these injections are unnecessary or could be replaced by an oral formulation. WHO urges reduction in the number of unnecessary injections as an urgent and critical strategy for reducing transmission of viral infections.

Other injection devices are still needed – and need to be used safely

Syringes engineered to prevent re-use are not suitable for certain medical procedures, including the following:

Administering multiple medicines: Health workers need to use disposable syringes that do not block or break if the plunger is moved when they mix more than two different medicines into the same syringe for treatment of a single patient.

Maintenance of intravenous lines: Health workers need standard disposable syringes (equipped with plungers that will not block) to flush out intravenous lines and keep them flowing.

Local anaesthesia: This type of anaesthesia, which requires injections to multiple sites, requires a standard disposable syringe.

Nasal feeding: A large disposable syringe is needed to push nutrients through a feeding tube. Standard safety procedures are critical in all these situations. That is why education of both health workers and patients on injection safety represent a crucial part of WHO's policy recommendations.



What needs to happen, who needs to do it

Governments

By 2020 transition to the exclusive use, where appropriate, of safety-engineered injection devices with re-use prevention and sharps (needle) injury prevention. These devices should meet WHO quality standards.

Set health-system-wide policies and standards for procurement, use and safe disposal of disposable syringes in situations where they remain necessary, including in syringe programmes for people who inject drugs.

Develop an implementation strategy for procurement of safety-engineered syringes, training and education of health workers and sound waste management. Establish a targeted communications programme and a framework for evaluating overall progress.

Donors and development partners

Only fund procurement of safety-engineered injection devices in all projects that include administration of injectable medicines.

Provide funding for ancillary needs, including appropriate quantities of single-dose diluents and safety boxes, sharps waste management and health worker training.

Manufacturers

Begin or expand production as soon as possible of safety-engineered injection devices while maintaining sufficient production of single-use disposable syringes.

Seek WHO Performance, Quality and Safety prequalification for their products.

Recent Examples From Countries

A 2007 hepatitis C outbreak in the state of Nevada, United States of America, was eventually traced to the practices of a single physician who injected an anaesthetic to a patient who had hepatitis C. The doctor then used the same syringe to withdraw additional doses of the anaesthetic from the same vial – which had become contaminated with hepatitis C virus –and gave injections to a number of other patients.

In Cambodia, a group of more than 200 children and adults living near the country's second largest city, Battambang, tested positive for HIV in December 2014. The outbreak has been attributed to unsafe injection practices.

In 2007 and 2008, in Kyrgyzstan, dozens of children became infected with HIV because of unsafe injections and other medical procedures.

In 2009, in Gujarat, India, more than 400 people became ill with hepatitis B as a direct result of unsafe injection practices.

In Egypt, the rate of hepatitis C infection – which is the highest in the world – has been tied to re-use of needles and administration of unnecessary injections.