

New WHO Injection Safety Initiative Focusing on Therapeutic Services

Prof. Benedetta Allegranzi, WHO Service Delivery and Safety Department

Sponsored by the WHO Patient Safety Agency

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New WHO injection safety initiative focusing on therapeutic services

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Hosted by Prof. Nizam Damani
Queen's University, Belfast

www.webbertraining.com
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Overuse of injections and unsafe injection practices worldwide in 2000

- Injections worldwide - 16 billion/year
- 6.6 billion (39.6%) were given with reused equipment
- Unsafe injection practices, annually*
 - 21 million hepatitis B infections (30% of new cases)
 - 2 million hepatitis C infections (41% of new cases)
 - 260 000 HIV/AIDS infections (9 % of new cases)
- Up to **70%** of injections are given with reused syringes and needles in the developing world
- Over **70%** of injections are unnecessary in some regions
- Every year unsafe injections cause **1.3 million early deaths**, a **loss of 26 million years of life**, and direct medical costs of **535 million US dollars**

*Hutin et al. 2003; Hauri et al. 2004

SIGN & WHO IS inception: December 1999

WHO Injection Safety programme established
Safe Injection Global Network (SIGN) launched:

- **Name:** Safe Injection Global Network (SIGN)
- **Secretariat** based at WHO
- **Format:** Secretariat + 120 members + SIGN List serve (1,500 recipients of the weekly electronic newsletter)

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WHO Injection Safety programme/SIGN strategies

- 1. Patient Safety**
 - Reduction of unnecessary injections (Advocacy, IEC, revision of list of essential medicines)
 - Eliminating reuse of injection equipment (ADs, RUPs)
- 2. Health Workers' Safety**
 - NSI prevention (training, SIPs, sharps boxes)
 - Hepatitis B vaccination,
 - Provision of Post Exposure Prophylaxis (PEP)
- 3. Safety of the community**
 - Safe sharps waste management

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WHO/UNICEF/UNFPA joint statement on the use of AD syringes for immunization services

Policy on Injection Safety

All countries should use **only** Auto-Disable (AD) syringes for immunization injections (WHO & UNICEF in favor of AD mechanisms triggered at the start of injection)

Bundling Policy

Ensure sufficient numbers of AD syringes, reuse prevention reconstitution syringes and Safety boxes for each vaccine dose

Reconstitution syringes

UNICEF supplies only syringes with re-use prevention features

Safety of injections

WHO/UNICEF/UNFPA joint statement on the use of auto-disable syringes in immunization services

1. Introduction

2. Objectives

3. Definitions

4. Key messages

5. Recommendations

6. References

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SAFE INJECTION GLOBAL NETWORK

Summaries of Injection Safety Country Success Stories

Type of intervention:

- Needlestick injuries prev – 18
- Immunization – 11
- Training IS practices - 5
- Access to disposable syr – 4
- MMIS – 4
- Waste management – 3
- Education to reduce injections – 3
- PEPFAR/PATH – 3
- Safety needles/syringes - 2

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Cost-effectiveness modeling - policies for the safe and appropriate use of injections (1)

- Modeling based on a year 2000 cohort over a 30-year time horizon - HBV, HCV, HIV incidence attributable to unsafe injections
- Interventions for the **safe** (provision of single-use syringes, assumed effectiveness 95%) and **appropriate use** of injections (patients-providers interactional group discussions, assumed effectiveness 30%)
- **Cost-effectiveness**
 - Reduction of the global burden of injection-associated infections by as much as 96.5% (8.86 million DALYs)
 - Average cost of such a policy: < \$ 0.50 per person per year

Dziekan G et al. Bull World Health Organization 2003;81:277-285 7

Cost-effectiveness modeling - policies for the safe and appropriate use of injections (2)

• Cost-effectiveness:

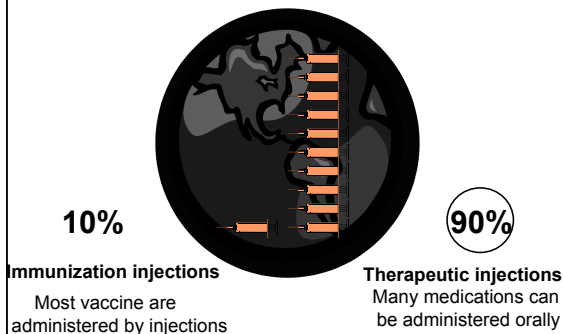
- In all sub-regions analysed, the cost of each DALY averted through national policies is considerably less than one year of average per capita income (threshold for an intervention being highly cost-effective - WHO Commission on Macroeconomics and Health)
- Average yearly averted cost: \$ 905 million (average cost per DALY averted, 102; range by region, 14-2293)

Dziekan G et al. Bull World Health Organization 2003;81:277-285

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Injections worldwide - 16 billion/year



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New WHO initiative on injection safety



- A collaborative cross-departmental effort (PSP HDS, IVB)

Main objectives:

- To consolidate results achieved by SIGN in the immunization field over the last decade
- To reduce curative unsafe injections
- To avoid unnecessary injections when an oral option is available

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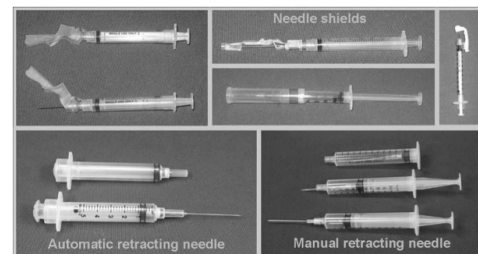
Safety engineered injection devices

Various disabling mechanisms



- Costs**
- Standard disposable syringes: \$0.03-0.05
 - AD syringes: \$0.05-0.08
 - RUP syringes: \$ 0.06-0.09

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- Costs**
- Standard disposable syringes: \$0.03-0.05
 - RUP syringes: \$ 0.06-0.09
 - RUP/SIP: \$0.07-0.23

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Learning from others... Making Medical Injections Safer (MMIS)

- 2004 – 2010
- Part of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR)
 - Focus on 11 countries with high HIV prevalence
 - To reduce risk of disease transmission (HIV, HBV, HCV)
- **Main objective:** to decrease unsafe injections (rapid interventions focusing on curative injections)
- Funders: CDC and USAID
- Organizations involved:
 - John Snow Institute
 - Other subcontractors (PATH, CDC, etc)
- Focus on collaborating with host nations for sustainability

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Implementation Strategies

Pre-

Syringe Use

Post-

- Advocacy
- Policy Reform
- Technology (safe injection equipment)
 - Evaluation & Development
 - Standards
 - Procurement & Logistics

- Healthcare workers training
- Public & patient education
- Technical guidance

- Healthcare waste management
- Monitoring & evaluation

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MMIS project - Main results

- 9 of 11 countries developed injection safety policies
- Policies focused on devices, IPC, waste management
- Procurement transitioned from MMIS to country systems, resulting up to 3-fold increase in local procurement
- In some countries safety syringes now listed on **Essential Equipment Lists**
- African countries: directly or indirectly through partners trained over 97,000 healthcare workers (e.g. Uganda: 18% to 78%, Nigeria: 33.3% to 71.5%)
- Safety boxes became available in almost 100% of MMIS facilities

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PATH – EVALUATION OF RETRACTABLE SYRINGES FOR CURATIVE INJECTIONS IN SOUTH AFRICA

- 1-year operational study in 10 HCFs (2 hospitals, 7 clinics, 1 mobile clinic) in KwaZulu (SA) - 2006-07
- To assess acceptability, safety perception, effect on waste management and cost
- Methods:
 - focus group discussions
 - individual interviews with supervisors (99 respondents) and decision makers
 - observations of injection and waste handling practices
 - anonymous questionnaire on needlestick history
 - economic evaluation (costs and benefits) in curative and immunization settings
- Use of VanishPoint© syringes for intradermal, sub-cutaneous and IM injections

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Economic evaluation – needlesticks + syringe reuse

- Model assumption of 2% syringe reuse and 2.2 needlesticks per nurse per year
- The retractable syringe was found to be cost saving. Syringe reuse would have a much larger cost impact than needlestick injury
- The model showed that the introduction of retractable syringes could avert **3,823** HBV, HCV, and HIV infections caused by unsafe injections in KZN and **18,426** infections (HBV 93%, HCV 3.6%, HIV 2.4%) in South Africa
- If the estimate of syringe reuse is increased to 5%, nearly 15,000 infections would be averted in KZN and over 65,000 averted in South Africa by using retractable syringes

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New WHO initiative on injection safety under the DG mandate

Main objective: to promote rational and safe use of injections

- Consolidate results achieved by SIGN and others
- Reduce curative unsafe injections
- Avoid unnecessary injections when an oral option is available

Main outputs:

- Global policy (with background technical work)
- Global strategy and campaign

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Key points for the policy document (1)

Target: Ministries of Health, international donor programmes [e.g. USAID, UNICEF, Global Fund, etc] and umbrella organizations of injection devices manufacturers

- Rational and safe use of all injections worldwide is a high priority
- Reaffirmation of previously issued WHO-UNICEF-UNFPA joint statement into national policies and strategies
- Recommendation for transition to the exclusive use of WHO prequalified RUP/SIP devices
- Recommendation for development of rational use of and supply for standard disposable syringes in specific procedures and settings (e.g. medication reconstitution, multiple drugs mixing, nasal feeding, IV pumps, emergency settings, etc)

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Key points for the policy document (2)

- Urging donor agencies to fund only procurement of safety engineered injection devices
- Recommendation that donor agencies financing injectable products also finance appropriate quantities of safety engineered injection devices, single dose diluents, safety boxes and the cost of sharps waste management
- Development and implementation of a strategy for the reduction of overuse of injection according to WHO recommended components

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Key points for the policy document (3)

- Strongly encouraging international and local manufacturers to switch to safety engineered injection devices production and seek PQS prequalification
- Requirement that only PQS prequalified products will be suitable for being marked with the WHO global IS initiative branding

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Key features for advocacy and global campaigning plans

- Political commitment
- Sound communication strategy
- WHO global injection safety initiative branding
- International donors' engagement strategy
- Industry engagement strategy
- Key stakeholders' engagement strategy
- Emphasis on health-care workers' safety, education and training
- Public awareness-raising and patient education and involvement
- Evaluation plan and indicators

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Tackling the value chain as a whole...

Stakeholders:

- global policymakers
- international donors
- ministries of health
- country governments
- regulatory agencies
- NGOs
- manufacturers
- private sector suppliers
- healthcare workers
- patients



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GLOBAL CAMPAIGN KEY FEATURES	DETAILS
Political commitment	• Seeking formal engagement by MS through the signature of a document pledging countries' engagement in the campaign
Sound communication strategy	• Strong visibility • Communication strategies based on social marketing concepts and innovative approaches (e.g. use of videos, mobile phones, social media, creation of new interactive web pages, etc)
WHO global injection safety initiative branding	• To identify the campaign • To increase recognition of quality and safety of qualified safety engineered injection devices • Use could include display on any injection device certified according to the WHO performance, quality and safety standards (PQS), as a means of identifying safe devices.

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GLOBAL CAMPAIGN KEY FEATURES	DETAILS
International donors' engagement	<ul style="list-style-type: none"> Seeking support from key donor agencies to promote and endorse the global campaign. Funding only the procurement of safety engineered injection devices in all projects and in sufficient quantities Procurement of sufficient single dose diluents, safety boxes, sharps waste management supplies and provision of health-care workers' training
Industry engagement	<ul style="list-style-type: none"> Launch of a formal collaboration platform with umbrella organizations of injection devices manufacturers to motivate them to develop or expand the production of safety engineered injection devices, facilitate procurement in countries and reduce device costs as much as possible. WHO code of conduct, transparency, equity, inclusion of key players
Key stakeholders' engagement	<ul style="list-style-type: none"> Comprehensive list of key stakeholders to tackle the whole value chain involved in the policy and campaign implementation (e.g., ministries of education, global and local policy-makers, regulatory agencies, NGOs, universities and academic institutions, private sector suppliers, health-care workers, and patient organizations)



Private Organizations for Patient Safety

A collaborative that aims to promote and support global patient safety, facilitated by WHO

'To establish a transparent WHO:industry collaborative drawing on corporate social responsibility, avoiding a focus on the potential for commercial gain and aimed at preventing avoidable infections to the benefit of patients in all countries of the world'

Background to POPS ethos

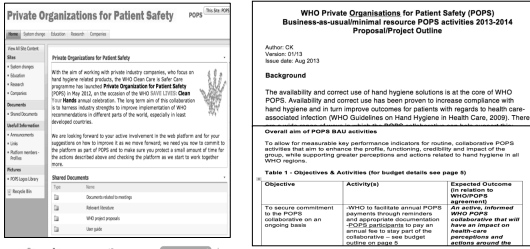
Criteria for joining

Code of Conduct

Rules

Signed agreement

How POPS works



WHO Private Organisations for Patient Safety (POPS)
Business-as-usual/minimal resource POPS activities 2013-2014
Proposal/Project Outline

Background

The availability and correct use of hand hygiene solutions is at the core of WHO POPS. Availability and correct use has been proven to increase compliance with hand hygiene and in turn improve outcomes for patients with regards to health care-associated infection (WHO Guidelines on Hand Hygiene in Health Care, 2009). There is no ongoing threat to our active involvement in the web platform and for our signature on the 10-point plan for most forward, we will continue to be committed to the platform as part of POPS and beyond as you collect and report data for the actions described above and checking the platform as we seek to work together POPS.

Table 1 - Objectives & Activities (for budget details see page 9)

Objective	Activities	Expected Outcome (on condition of agreement)
To secure commitment to the POPS programme through recruitment of POPS participants in an ongoing basis	WHO to facilitate annual POPS programme recruitment. POPS participants to pay an annual fee to stay part of the collaborative - rate budget details in table 2.	An active, informed WHO POPS collaborative that will have an impact on health-care performance and patient safety.

Working groups
ABHR survey project
Bottle Bank Africa project
Consumer campaign scoping project

GLOBAL CAMPAIGN KEY FEATURES	DETAILS
Health-care workers' safety, education and training	<ul style="list-style-type: none"> Based on already available documents and tools developed by the WHO Injection Safety programme and other successful approaches Based on the communication strategy, the branding and on the behavioural change theories and approaches
Public awareness-raising and patient education and involvement	<ul style="list-style-type: none"> Based on WHO experience on engaging patients and the public Using a broad international network and connections with leading champions and institutions voicing patient perspectives about health Targeted messages within the campaign communication strategy, workshops, use of specific educational materials, with the aim of raising awareness about safety in injection administration and reducing the demand for injections by patients
Evaluation plan and indicators	<ul style="list-style-type: none"> Collaboration with a high level academic institution Identification of the best indicators for tracking the impact of the campaign and appropriate methodologies for data collection and analysis Evaluation of campaign feasibility and reliability aspects Evaluation of the change model through implementation science and ethnography methods Use of indicators already measured by national surveillance systems and identification of new ones more sensitive and specific for tracking the safety of injection practices at different levels of the process

Implementation testing in pilot countries

Phase 1 - business case framework implementation

Objectives:

- To assess the implementation conditions feasibility (demand, locally available supplies, costs, procurement and programme implementation strategies) of the new policy and campaign strategy at the local level
- To estimate the cost-effectiveness of the strategy implementation in the local context based on collected data

Phase 2 – actual implementation of the new policy and campaign in pilot countries in collaboration with partners

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Thank you for your attention
For more information

Contact information

WHO PATIENT SAFETY PROGRAMME

patient.safety@who.int

Web sites

http://www.who.int/injection_safety/en/

<http://www.who.int/patientsafety/en/>

http://www.who.int/gpsc/5may/EN_PSP_GPSC1_5May_2013/en/

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2014 WHO Teleclass Schedule

Clean Care is Safer Care

<p>January 29 Innovation and implementation strategic approaches to reduce catheter-related bacteraemia: The results of a European multicentre study (PROHIBIT) <i>Dr. Walter Zingg, Switzerland</i></p> <p>March 7 How to prevent the spread of multiresistant bacteria <i>Dr. Stephan Harbarth, Switzerland</i></p> <p>April 9 Highlights on SSI prevention: The new CDC guidelines and more <i>Dr. Joseph Solomkin, USA</i></p>	<p>May 5 Special lecture for International Hand Hygiene Day <i>Prof. Didier Pittet, Switzerland</i></p> <p>September 3 New WHO global campaign to eliminate unsafe therapeutic injections <i>Dr. Benedetta Allegranzi, Switzerland</i></p> <p>October 8 Public reporting and disclosure of HAI rates: Positive impact or confusion? <i>Dr. Maryanne McGuckin & Mr. John Govednik, USA</i></p> <p>November 5 Global application of behaviour change models and infection control strategies <i>Dr. Michael Borg, Malta</i></p>
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2014 WHO Teleclass Schedule

Clean Care is Safer Care

Special added WHO teleclass ... September 16

KEY MEASURES FOR THE PREVENTION AND CONTROL OF EBOLA VIRUS DISEASE

Dr. Sergey Romualdovich Eremin,
World Health Organization

January 29
Innovation and implementation strategic approaches to reduce catheter-related bacteraemia: The results of a European multicentre study (PROHIBIT)
Dr. Walter Zingg, Switzerland

March 7
How to prevent the spread of multiresistant bacteria
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