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

New WHO injection safety initiative focusing on therapeutic services

Professor Benedetta Allegranzi
WHO Service Delivery and Safety Department

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

www.webbertraining.com

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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)

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

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

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)


Injections worldwide - 16 billion/year

- 10% Immunization injections
  - Most vaccine are administered by injections
- 90% Therapeutic injections
  - Many medications can be administered orally

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

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

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

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

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

Implementation Strategies

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

- Syringe Use:
  ➢ Healthcare workers training
  ➢ Public & patient education
  ➢ Technical guidance

- Post:
  ➢ Healthcare waste management
  ➢ Monitoring & evaluation

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

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)

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

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

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

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
WHO global injection safety initiative branding • To increase recognition of quality and safety of qualified safety engineered injection devices

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GLOBAL CAMPAIGN KEY FEATURES

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<td>International donors’ engagement</td>
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<td>• Seeking support from key donor agencies to promote and endorse the global campaign.</td>
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<td>• Funding only the procurement of safety engineered injection devices in all projects and in sufficient quantities.</td>
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<td>• Procurement of sufficient single dose diluents, safety boxes, sharps waste management supplies and provision of health-care workers’ training.</td>
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<td>Industry engagement</td>
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<td>• 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.</td>
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<td>• WHO code of conduct, transparency, equity, inclusion of key players.</td>
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<td>Key stakeholders’ engagement</td>
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<td>• 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).</td>
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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

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

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_GSPC1_5May_2013/en/

WHO Teleclass Schedule

2014

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

March 7
How to prevent the spread of multiresistant bacteria
Dr. Stephan Hanarth, Switzerland

April 9
Highlights on ISSI prevention: The new CDC guidelines and more
Dr. Joseph Solomon, USA

May 5
Special lecture for International Hand Hygiene Day
Prof. Didier Pittet, Switzerland

September 3
New WHO global campaign to eliminate unsafe therapeutic injections
Dr. Benedetta Allegranzi, Switzerland

October 8
Public reporting and disclosure of HAI rates: Positive impact or confusion?
Dr. Maryanne McGuckin & Mr. John Govednik, USA

November 5
Global application of behavior change models and infection control strategies
Dr. Michael Borg, Malta

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