

Strengthening Immunization Systems and Introduction of Hep B in Central and Eastern Europe, NIS

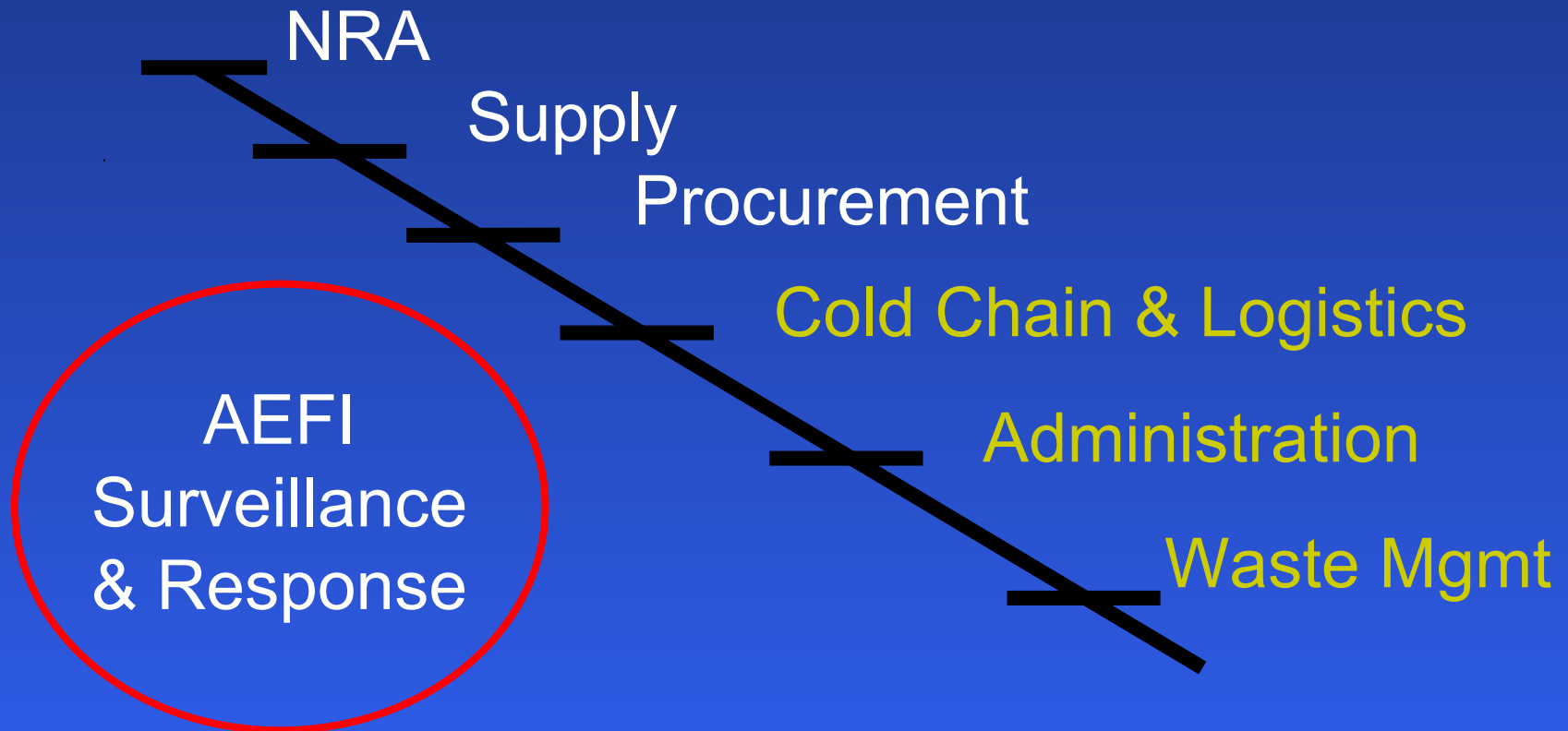
Cold Chain, Logistics & the Safety of Injections

3rd Meeting
Kiev, May 25-28 2004

Denis MAIRE, Technical Officer
WHO EURO, dgm@who.dk



Programme Components



Cold Chain & Logistics



**Ensure that “100%” of vaccines used in
all NIP are of assured quality**

Effective Vaccine Store Management Initiative

Effective vaccine store management

WHO-UNICEF joint statement on effective vaccine store management

1. The reuse of standard single-use disposable syringes and needles poses the greatest public health risk of disease and death.
2. The reuse of standard single-use disposable syringes and needles poses the greatest public health risk of disease and death.
3. "Safety boxes", premixed, pre-filled containers for the collection and disposal of used disposable and auto-disable syringes, needles and other injection materials – reduce the risk posed to health staff and the general public by contaminated needles and syringes.
4. WHO, UNICEF and UNFPA reaffirm the current policy that auto-disable syringes, vaccines and safety boxes should continue to be supplied as a "bundle" (see box, page 6) for all elective and emergency campaigns.
 - UNICEF reaffirms its current policy that UNICEF programme funds cannot be used to procure standard disposable syringes for any immunization program.
 - UNICEF announces that, as of 1 January 2024, no procurement contract for standard disposable syringes will be entered into.
 - WHO, UNICEF and UNFPA urge that, by the end of 2023, all countries should use only auto-disable syringes or syringes which are designed to be modified. Standard disposable syringes should no longer be used for immunization.
 - WHO, UNICEF and UNFPA urge that, by the end of 2023, all countries should use only auto-disable syringes for immunization.
5. All partners of immunization services are requested to finance not only the vaccines, but also the safe administration of vaccines, auto-disable syringes and safe management of waste. Partners should do this by planning and implementing the above strategy, as well as by supporting related training, supervision and vaccination activities.



WHO-UNICEF joint statement on effective vaccine store management

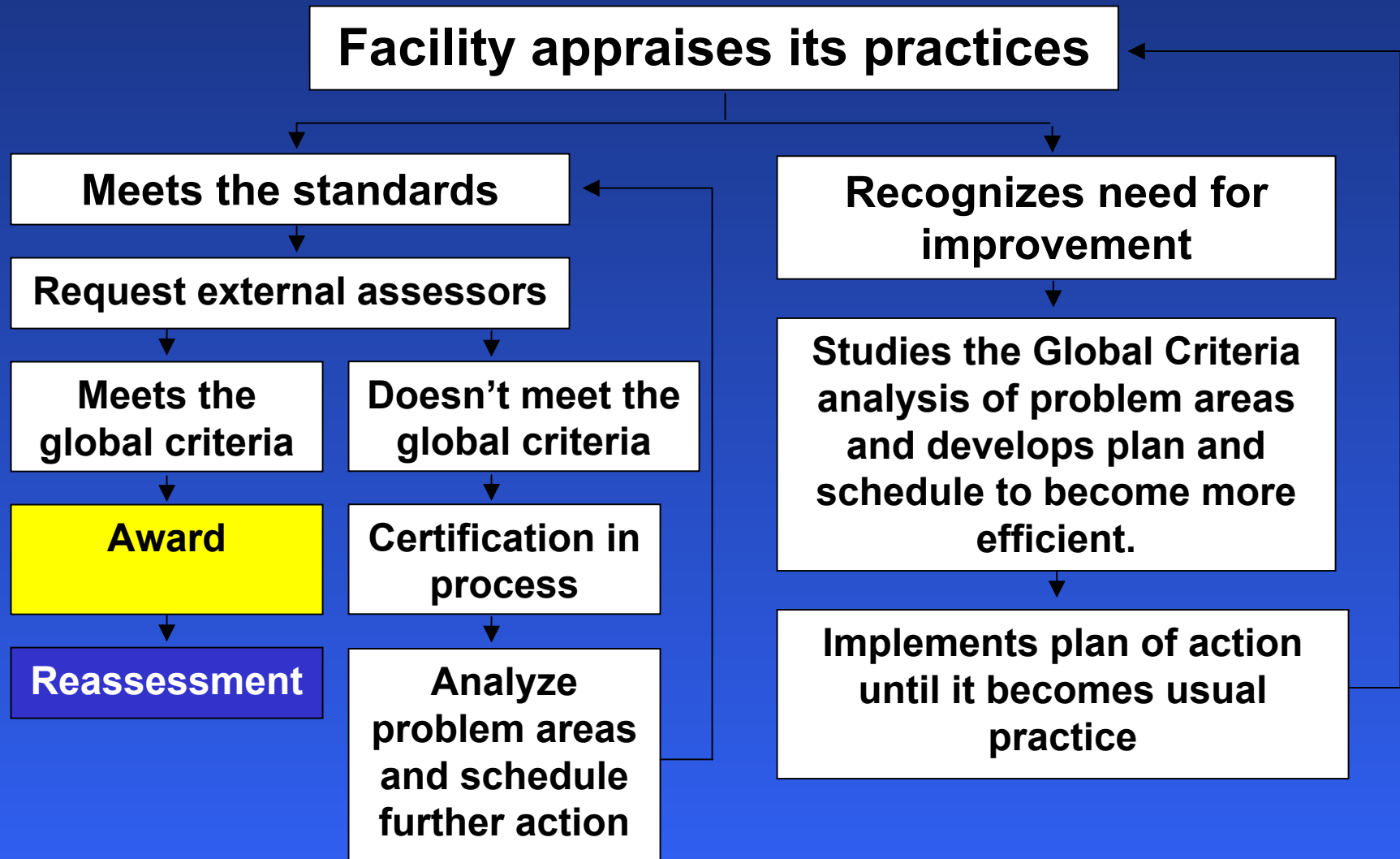
10 Global criteria for effective vaccine store management

Model quality plan = Reference

Assessment questionnaire = know how you will be assessed

Self-appraisal guidelines = do it yourself

EVSM Assessment Process



10 Criteria

1. pre-shipment and arrival procedures

VAR, Lot release / NRA, TTM



2. Storage within temperature ranges.

Proper devices, Documentation



3. Storage capacity of the store

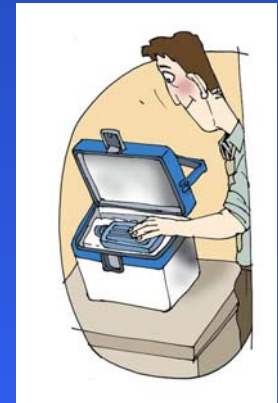
Storage capacity / Volume max Vaccines

4. Equipment and transport available

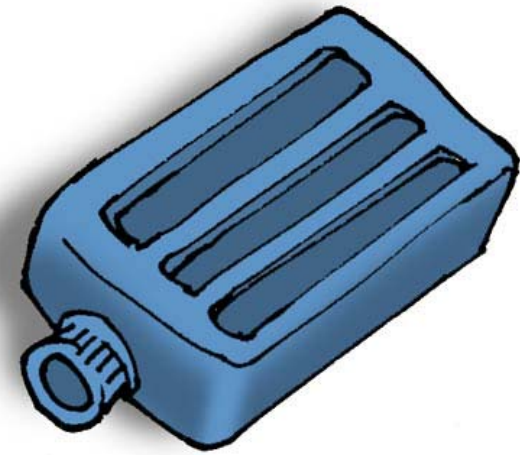
Requirement / Inventories /Replacement

5. Maintenance of buildings, Equipment and Vehicles

System in place and financed



Use conditioned or
chilled water packs
for vaccine
transportation
Frozen Icepacks =
OPV



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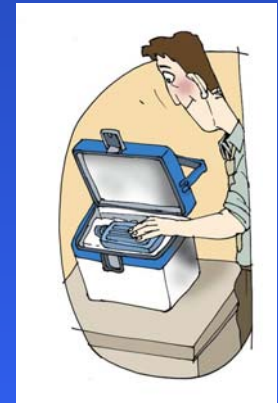
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System in place and financed



10 Criteria

6. Effective stock management

Stock out; Records/Inventory

7. Quality of deliveries to next level

Planned/actual; Short shipments

8. Vaccine wastage during transport

Use of VVM, FW

9. Standard Operating Procedures

Evidence of SOPs

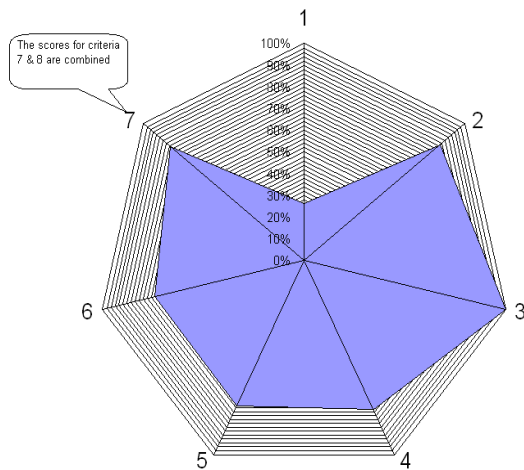
10. Adequate human and financial resources

Yearly institutional development plan

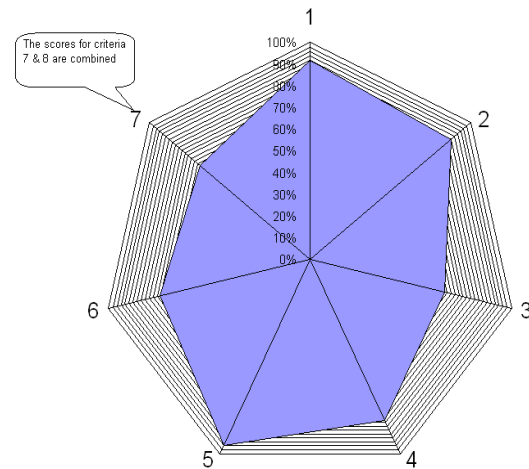


Moldova / Turkmenistan / Albania / Kyrgyzstan

Assessment results for criteria 1 to 8



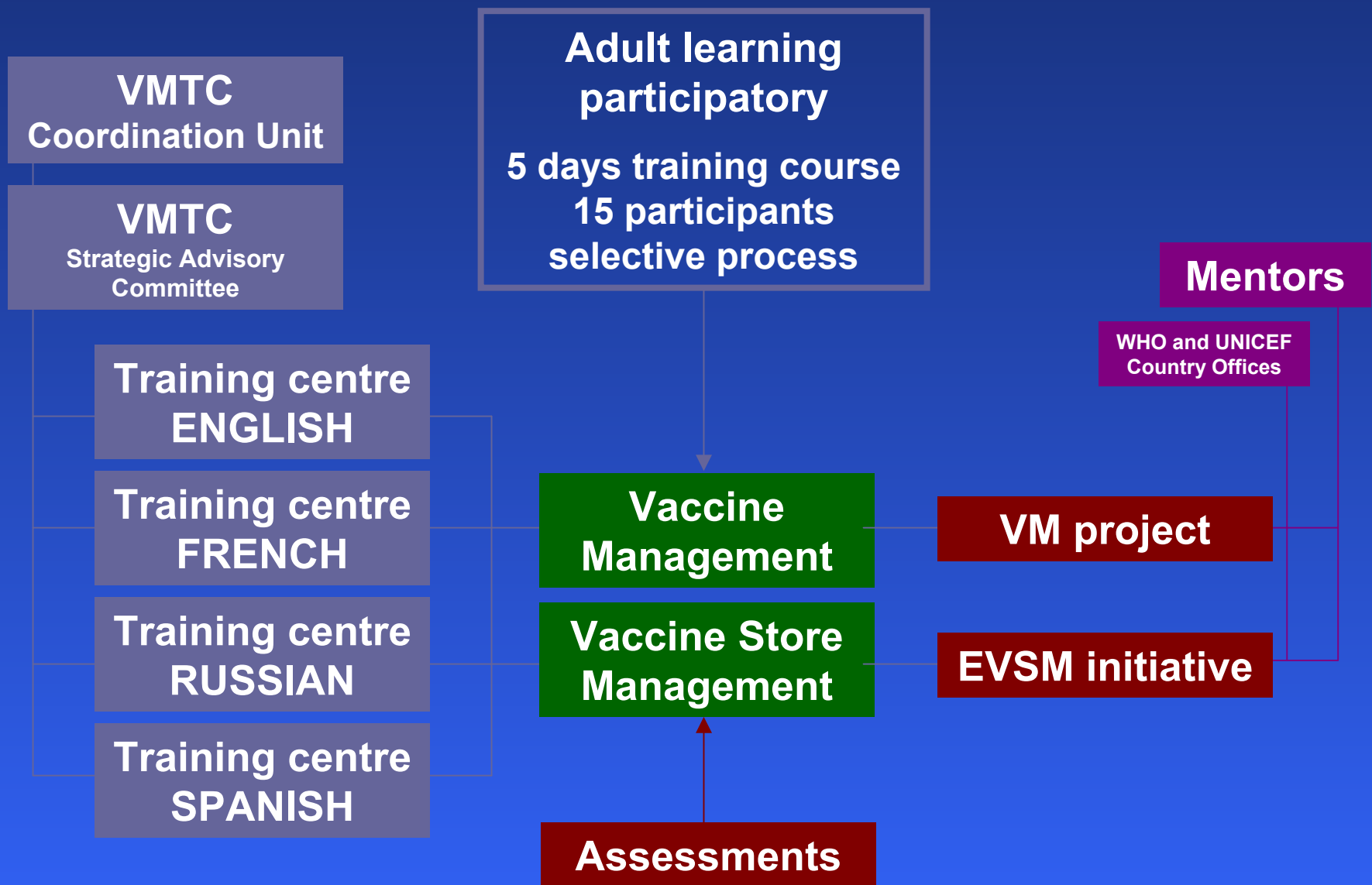
Assessment results for criteria 1 to 8



VIMTC

Vaccine Management Training Cluster





Administration of Vaccine



☐ **Safe administration of vaccines**

Ensuring that all injections for immunization

a) do not harm the recipient

b) do not expose the provider to any avoidable risks

Injection Safety - National Programme

- **Main steps to improve/secure injection safety**
 - Picture the situation about injection safety and waste disposal => comprehensive assessment
 - Develop/revise national policy and plan of action
 - Gather the required competences to find options and implement the plan => multi-sectoral working group
 - Test and select affordable technical options => pilot projects, cost studies, implementation programmes
 - Improve behaviors and practices => training and advocacy for health staff and general public
 - Ensure proper budgeting and secure funds

The Safety of Injections

□ *Monitoring*

- Assessment of the safety of injections for immunization
 - Provision of sufficient quantity of supplies
 - Respect of injection best practices
- Existence of a Committee with a designated focal point
- Policy and plan of action in place

18 SIP Assessments



Results from 8 countries *ARM, BUL, GEO, KAZ, KYR, MOL, TAJ, UKR*

■ <u>Risk to patients</u>		Proportion	Min	Max
➤ Availability of supplies (syringes)		84.8%	34	100
➤ Respect of sterility for administration		99.6%	93	100
➤ Respect of sterility for reconstitution		98.8%	78	100
➤ Reconstitution with correct diluent		96.8%	59	100
■ <u>Risk to providers</u>				
➤ Recapping needles	33.3%	21	61	
➤ Needle sticks	18.0%	8	30	
➤ Use of safety boxes	35.7%	0	91	
■ <u>Risk to the community</u>				
➤ Presence of sharps around HCF		09.3%	2	31
➤ Incineration		10.2%	0	50
➤ Open burning		41.2%	25	88

Proportions weighted by population figure

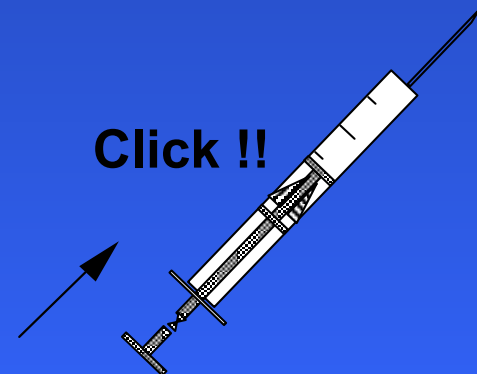
Injection Safety – Challenges

- Several improvements in the recent years
 - disposable equipment
 - safe container
 - reinforced policies
 - increased awareness, etc.
- limitations
 - Curative / Immunization
 - Risk of misuse
 - Increased volume of waste
 - Disposal of sharps
 - Increased costs

Injection Safety – Technical Issues

Disposable / AD syringes

- Risk of being reused
- WHO/Unicef/UNFPA Statement : Only AD by 2003
- Higher price: 0.06 USD
- Disposal of AD syringes: Options to be assessed (pilot project on AD recycling)
- Potential technology transfer



Injection Safety – Technical Issues

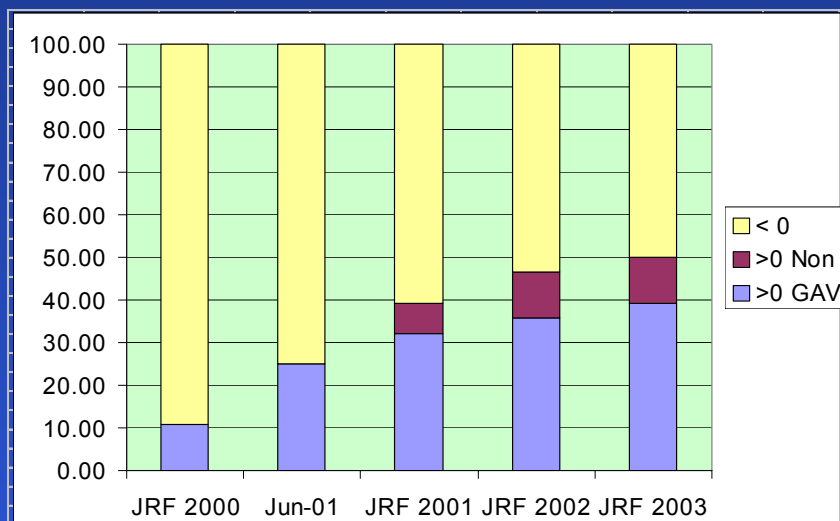
- Required condition to contain all sharps to prevent injuries
- Use strongly recommended even if decontamination
- Wide range of containers existing (plastic, reinforced carton)
- Could be locally manufactured
- Largely used worldwide
- Cost of containers needs to be budgeted => part of the safety

Safety containers/boxes

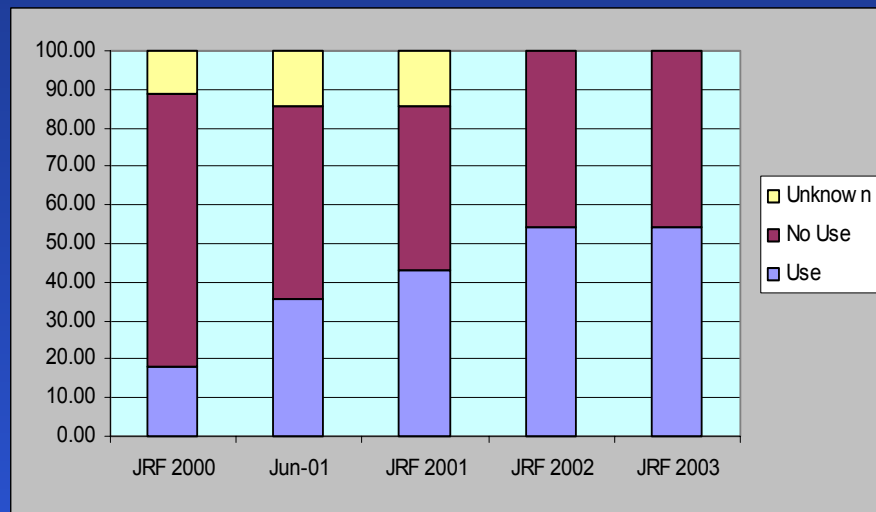


EURO Introduction of ADs & SDBs

28 countries from CEE, NIS and Turkey 2000 - 2003



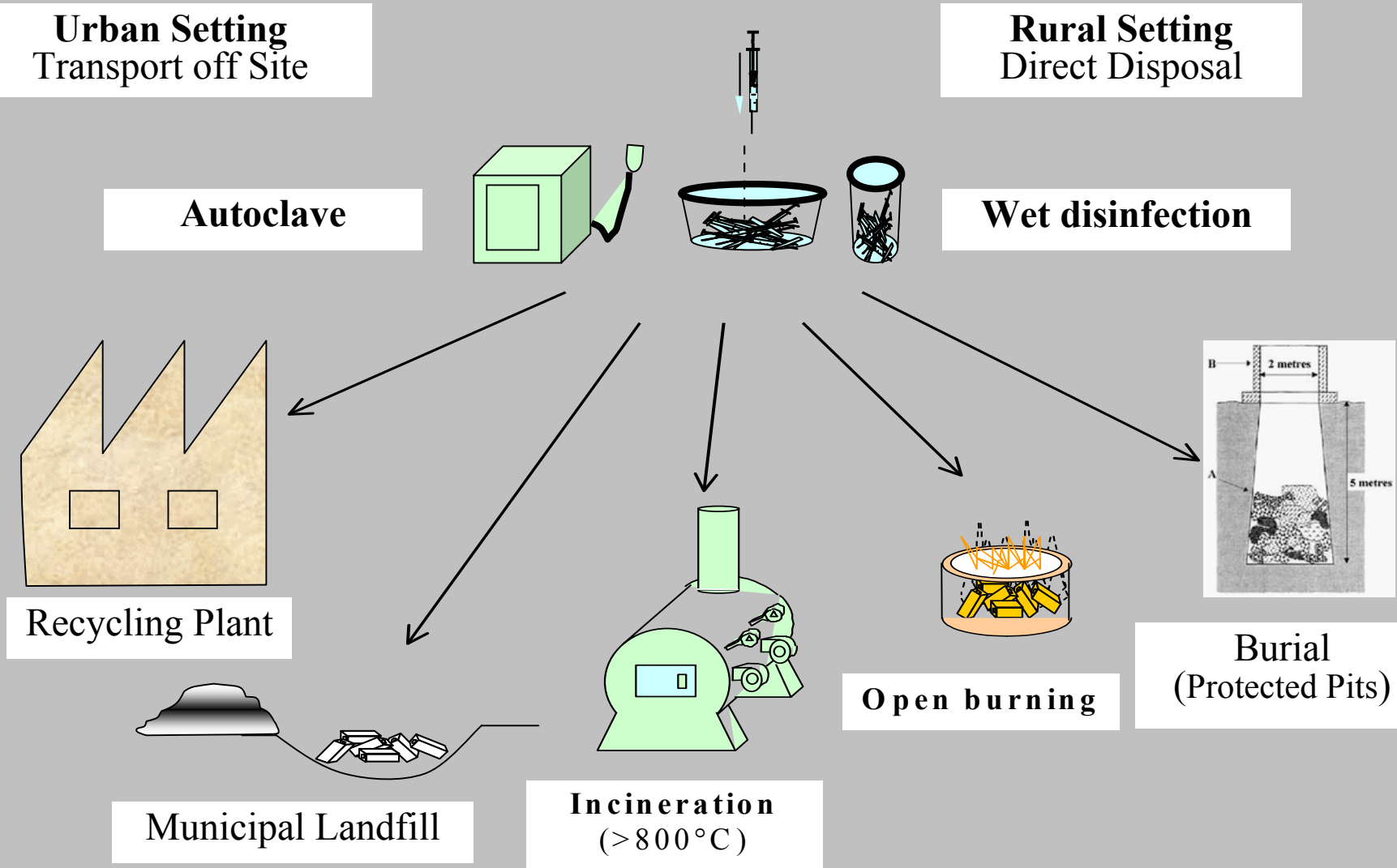
Auto-Disable Syringes



Safe Disposal Boxes

- Sustained use of AD's & SDB depends on costs
- Technology Transfer for local production

Waste Collection & Treatment



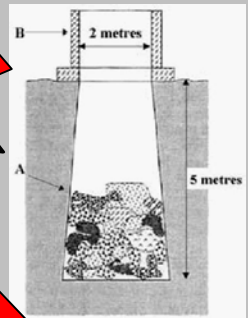
Collection & Waste Treatment

Urban Setting
Transport off Site

Rural Setting
Disposal

High risk of needle sticks due to manipulation of sharps after injection

- Disassembling
- Soaking, rinsing
- Collection and
- Disposal/Recycling



Burial
(Protected Pits)

Open burning

Incineration
($> 800^{\circ}\text{C}$)

Municipal landfill

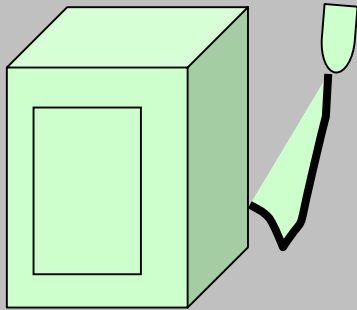
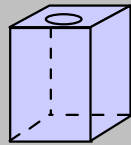
Recycling

Sharp Containment Options

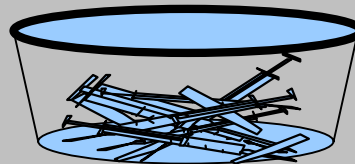
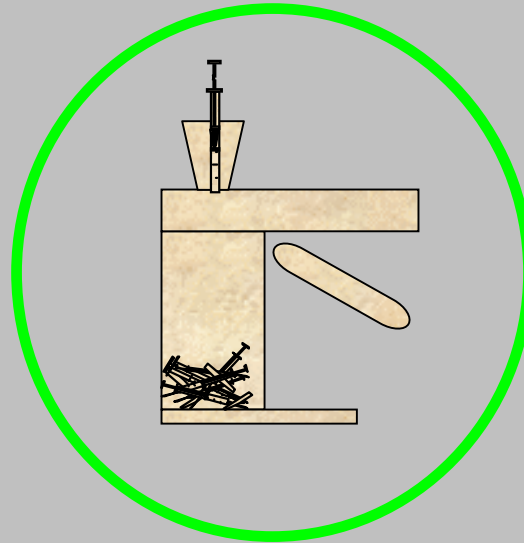
After Injection

Separation sharps

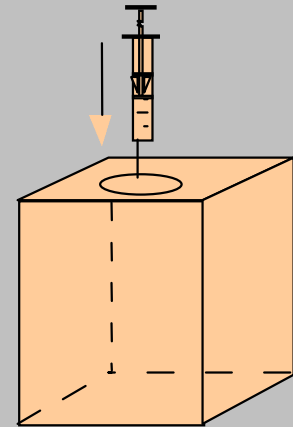
Needle Remover



Desinfection
Chemical/Autoclave



Containing sharps



Safety Box

Injection Safety – Technical Issues

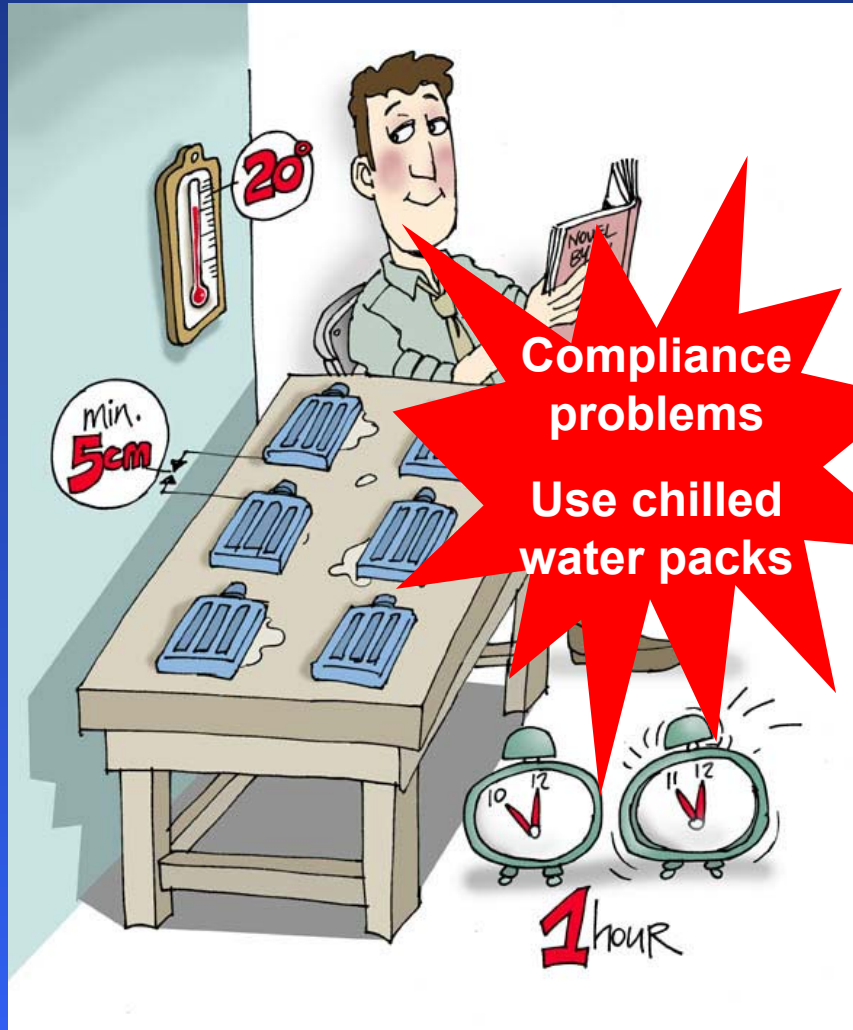
- Prevent the risk of reuse for regular disposable syringes
- Required when disposal process needs separation needle/syringe (e.g. recycling)
- Avoid dismantling by hands
- Recent PATH contamination surface study: NO evidence
- Cost: 25-100 USD
- Need for maintenance

**Needles removers,
pullers, destroyers**



Conclusion

Vaccine Management



Safety of Injection

