Surveillance systems of WRD in the UNECE /WHO European region

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Agenda

1 Progress report
2 Draft technical and policy guidance
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3 Status of water-related disease surveillance systems
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4 Slovak intersectoral cooperation in WRDs
5 Lessons learned and way forward
I. PROGRESS AND GUIDANCE
Progress report

• MOP-1 created the Task Force on Water-related Disease Surveillance to “provide assistance in establishing and/or strengthening outbreak detection and response systems, including assessment and improvement of national and/or local surveillance, outbreak detection and early warning systems, contingency plans and capacity response.”
Activities

• First meeting 24 – 25 Sep 2008
• Second meeting 28 – 29 April 2009
• Main areas of work
  – Guidance materials on water-related disease surveillance
  – Assessment of water-related disease surveillance
  – Cooperation and coordination with other Task Forces
  – Assistance to in-country programmes
Technical guidance documents

• Many WHO guidance documents on surveillance exist and were endorsed
  – Setting priorities in communicable disease surveillance
  – Communicable disease surveillance and response systems
• Special guidance needed for local surveillance systems in regional / local laboratories
Table of content technical guidance

• Health risks from microbial pathogens
• Health risks from chemicals
• Health risks in the water system
• Essential epidemiology
• Essential concepts of surveillance
• Data management and analysis using GIS
Current status technical guidelines

• 23 authors
• 11 countries
• Open for independent review
• Fundraising needed USD 50,000 min
  – Final writing editing
  – Final technical editing
  – Professional layout
  – Printing and distribution
Policy guidance

• How to set up an essential surveillance system on water-related diseases
• How a water-related disease surveillance system should practically work
• How to evaluate a water-related disease surveillance systems
• Specific issues of rural areas
• Bibliography
CONCLUSIONS I

• Existing WHO guidelines
• Specific technical guidance for regional / local laboratories
• Policy guidance
• Bibliography
TIME OUT
II. SURVEILLANCE AND EARLY WARNING SYSTEMS, CONTINGENCY PLANS AND RESPONSE CAPACITY
Questionnaire on Surveillance Systems of WRDs

• Elaborated at the TFWRDS 1 to assess current capacity of water-related disease surveillance systems.
  • [http://cms2.iss.it](http://cms2.iss.it) hosting
  • National focal points informed
  • Translated into Russian
Focus

• **Priority water-related diseases:** cholera, enterohaemorrhagic E coli, viral hepatitis A, bacillary dysentery and typhoid fever

• **Emerging water-related diseases:** campylobacteriosis, cryptosporidiosis, giardiasis, and legionellosis

• **Locally important water-related diseases:** blue-baby syndrome, arsenicosis, viral infections (particularly norovirus), parasites
Replies

• 15 countries replied
• EUR-A: Andorra, Finland, Germany, Belgium, Czech Republic, Italy, Norway.
• EUR-B: Armenia, Georgia, Slovakia, Turkey
• EUR-C: Belarus, Estonia, Moldova, Hungary
Limits

- Representativeness of the authors of the replies to the questionnaire covers 10 different and heterogeneous sections
- Heterogeneity within each country and problems of extrapolation at national level
General aspects

• All 15 countries have a mandatory surveillance system on communicable diseases.

• All the priority WRDs are generally surveyed. Only enterohaemorrhagic E. coli is not surveyed in two EUR-A countries.
General aspects (cont)

• Selective emerging WRDs NOT surveyed
  – Campylobacteriosis in 2 countries (EUR-A and EUR-C)
  – Cryptosporidiosis in 6 countries (4 EUR-A, 1 EUR-B, 1 EUR-C)
  – Giardiasis in 4 countries (2 EUR-A, 1 EUR-B and 1 EUR-C)
  – Legionellosis (1 EUR-C)

• Emerging diseases not surveyed at all in 2 countries (EUR-A and EUR-C)
General aspects (cont)

- Locally important WRDs surveyed where they are relevant (endemicity or high natural concentration)
- Blue baby syndrome in 2 countries (EUR-B and EUR-C +1 in preparation).
- Arsenicosis in 1 EUR-C country
- Viral infections, particularly norovirus, in 7 countries (3 EUR-A, 1 EUR-B and 3 EUR-C)
- Parasitic diseases in 3 EUR-A, 2 EUR-B and 3 EUR-C countries; in preparation 1 EUR-C
General aspects: recommendations

• Improve the capabilities of the national surveillance systems in the countries where enterohaemorrhagic E. coli is not controlled.

• Emerging and locally important WRDs should be surveyed on the basis of available criteria such as those indicated in the technical and policy guidelines.
2. Surveillance: structure, coordination and reporting

- All the countries have dedicated, mandatory WRD surveillance systems with 2 exceptions (EUR-A)
- Generally, the surveillance systems include local, regional, and national structures (with coordinating tasks)
- Generally, there is a standardized surveillance notification form provided by the central level to collect communicable disease surveillance data
2. Surveillance: Structure, coordination and reporting - Recommendations

• In some countries, structures and coordination should be improved.

• The notification forms should include information on:
  – Possible vehicle of infection
  – Later confirmation of the exposure route
  – Potential environmental sources responsible for water contamination
3. Case confirmation

- Case confirmation by laboratory analysis is mandatory in several countries, with some exceptions.
- In general a national laboratory capability to confirm the etiological agents does exist, with some exceptions.
- The etiological agents responsible for priority WRDs are generally detected by routine laboratory analysis.
- Less important are considered those responsible for emerging WRDs.
3. Case confirmation: recommendations

• It is important in some countries to raise these capabilities, using the criteria indicated in the technical and policy guidelines.
4. Public information: recommendations

• There is a general need, with few exceptions, to improve these activities
5. Data characteristics: recommendations

- High heterogeneity in the replies
- Need to integrate the notification forms with information on:
  - Case information (age, sex and occupation)
  - Location information (district, region, municipality, travel-related)
  - Other information (outbreaks, time, sentinel)
6. Outbreak detection

• Drinking-water is in many countries identified as a source of WRDs especially for priority diseases in centralized water supply systems.

• The exposure route of WRDs by food source (aquaculture, irrigated crops) or recreational activities is rarely identified
6. Outbreak detection: recommendations

• General need to improve the capability of identifying the source of WRDs, with special reference to:
  – Drinking-water in small communities and rural areas
  – Aquaculture and irrigated crops according to criteria indicated in the technical guidelines
  – Recreational activities in microbiologically contaminated water
7. Epidemic preparedness

- A national epidemic preparedness and response plan is available only in few countries.
- Emergency drug, vaccine, medical and water treatment supplies are rarely available.
- Information related to the emergency and response plan are often not provided adequately to the people.
7. Epidemic preparedness: recommendations

• Need of a general improvement of this part of the surveillance system
8. Response capacity

• In general central or local authorities have the ability to start intervention measures within 48 hours
9. Training

- WRDs are addressed by training courses in few countries
- International support for these training courses are requested by some countries: need to organize these activities
10. Databases and mapping/GIS resources

- A central computerized database for cases and outbreaks of WRD is available only in few countries
- GIS is rarely used and training courses on GIS application are seldom organized.
CONCLUSION II

• There is generally poor information to the public at large in case of outbreaks: eight countries have no public awareness programme on water-related diseases.

• The level of detail available at central level concerning outbreaks is frequently incomplete: only five countries offer complete case information; only three offer complete location information.
CONCLUSION II (cont)

- Statistical treatment is performed in most countries but is often at basic level
- Threshold values for water-related disease are not consistently defined throughout the region
- There is a need for improved investigation of water supply as exposure route especially small scale supplies
CONCLUSION II (cont)

• There is a need to investigate recreational waters, aquaculture and irrigation agriculture as exposure route

• Epidemic preparedness is weak – poor vaccine and medicine supply in vulnerable areas

• International support to training is needed
TIME OUT
SLOVAK INTERSECTORAL COOPERATION

Martina Behanova
TIME OUT
Water-related diseases and small scale systems

- There is an elevated risk in areas served by small-scale systems [children (hepa and ehec)], pregnant women, immunocompromised persons, and certain occupations in ALL European subregions.
- Main exposure: private wells and surface water.
- Main causes: lack of resource protection, low communication capacity, lack of hygiene.
Future plans until MOP-2

• Complete the guidance documents
• Publish the review on water-related disease surveillance systems
• Develop advocacy material on health risk assessment and management in small scale water services, and strengthen epidemiological evidence
• Economic impact of water-related diseases
Future plans until MOP-2

- Collaborate with other Task Forces
- Workshop on climate change on water-related disease (Israel)
- Contribute to the Parma Ministerial Conference on Environment and Health
- Third meeting prior to the WHWH3
Possible decisions

- Entrust TF to finalize guidance within available financial resources
- Agree on proposed work plan and invite Parties to support work plan elements
- Prepare cost draft work plan 2010 – 2013 for the WGWH3
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