WATER RELATED DISEASE SURVEILLANCE: RELEVANCE TO THE PROTOCOL ON WATER AND HEALTH
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1. Background: WRD situation in Europe

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In the European Region, poor quality drinking-water causes over 13 000 deaths from diarrhoea among children aged 0–14 years (5.3% of all deaths in this age group) each year.

Countries of central and Eastern Europe and central Asia bear the largest share of the burden.
Classic water-related diseases in the WHO European region

Significant progress in the fight against classic water-related diseases such as cholera, hepatitis A and others.
Emerging water-related diseases in the European region

Graph showing the number of cases per year for different diseases:
- Campylo
- Crypto
- Giardia
- Legionellosis
- Linear (Campylo)
- Linear (Giardia)

Y-axis: Number of cases
X-axis: Year (2000-2010)

Legend:
- Campylo
- Crypto
- Giardia
- Legionellosis
- Linear (Campylo)
- Linear (Giardia)
Emerging diseases are mostly reported in Western Europe

- Campylobacteriosis
- Cryptosporidiosis
- Giardiasis
- Legionellosis
Legal obligations: Water-related Disease Surveillance

- Protocol on Water and Health
- Surveillance and the International Health Regulations (2005)
Legal obligations: Protocol on Water and Health

Art 6 § 2
- Set targets on the reduction of the scale of outbreaks and incidents of water-related diseases

• Art 8: comprehensive national and/or local surveillance and early-warning systems
  (i) Identify outbreaks or incidents
  (ii) Disseminate information to the public
  (iii) Provide information in alarm situations
  (iv) Recommend preventive actions
  (v) Develop contingency plans
International Health Regulations

- **Aim**: to prevent and respond to acute public health risks that have the potential to cross borders and threaten people worldwide.

- Develop, strengthen and maintain **core public health capacities** for surveillance and response.

- **By 15 June 2012**, surveillance and response capacity are expected to be implemented.
Results 2007 - 2010

http://www.euro.who.int/__data/assets/pdf_file/0009/149184/e95620.pdf

http://www.euro.who.int/__data/assets/pdf_file/0011/149186/e95619.pdf

- Policy and technical guidance materials
  - English available
  - Russian available November 2011
- Support countries in the implementation of water-related disease surveillance
Two types of targets

• **General**: strengthening of the water-related disease surveillance system to develop a solid *evidence base* for target setting. This includes inclusion in appropriate general (CISID) and specific (ENHIS) monitoring databases

• **Specific**: conducting *direct health interventions* in combination with improved water and sanitation and hygiene measures
Types

• Vaccine-preventable diseases (VPD)
  – Rotavirus
    – Hepatitis A
    – Typhus
    – Cholera

• Neglected Diseases (NTD)
  – Helminth infections
Direct health interventions - VPI

• Rotavirus infections
  – Impact
  • over 70,000 hospitalizations in EU
  • one of the main causes of diarrhoeal disease in young children
  • Median cost € 1417 per case (EU)

  – SAGE recommends inclusion of rotavirus vaccination of infants to all national immunization programmes
From 1999 – 2009: Over 5 Million Children Died from Rotavirus Disease

Global annual rotavirus deaths: 527,000—predominantly in developing countries

Global mortality figure: WHO. Weekly Epidemiological Record. 82(32).
Direct health intervention - ND

- Locally high contribution to infectious pathology
- Local burden 35 – 40,000 infections recorded
- 61 – 79% of children infected
- Cheap treatment – challenging logistics