Building Capabilities to enhance Public Health Emergency Preparedness

*International Conference on the implementation of health aspects of Sendai Framework for DDR 2015-2030*

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Summary

• Lessons from recent and current outbreaks
• Public Health Emergency Preparedness in EU
• Enhancing capacities/capabilities of health systems
• Blind spots to address – ECDC contribution
UN Review of Ebola

Main conclusions
1. WHO must build a new Centre for Emergency Preparedness and Response
2. All countries must implement IHR
3. Appropriate financing required

Regional-level conclusions (selected)
- Strengthen regional-level preparedness plans
- Enhance regional research capacity and collaboration
- Facilitate sharing of experiences and lessons learned among regional partners
- Facilitate regional and sub-regional simulation exercises for health crisis responses
Public Health - Lessons learned conference

Conference "lessons learned for public health from the Ebola outbreak in West Africa – how to improve preparedness and response in the EU for future outbreaks" - Mondorf les Bains, 12-14 October 2015

http://ec.europa.eu/health/preparedness_response/events/ev_20151012_en.htm#c


(2015/C 421/04)
Public Health - Lessons learned conference
Council conclusions

- **Inter-sectoral collaboration** of the response coordination requires commitment on public health priorities from critical sectors.

- Long term engagement to support medical evacuation and health systems preparedness including access to intensive care treatment.

- Develop **health systems emergency plans** in line with WHO's emphasis on health system strengthening and implementation of the IHR core capacities.

- Implement control standards and advance research and development for medical countermeasures before an outbreak occurs.

- Importance of effectively **follow-up on these lessons learned**, within the EU but also at a more global level.

- Take forward **preparedness and response planning** at EU level as in Decision 1082/2013 on serious cross-border threats to health.
Monitoring of ZIKA virus outbreak in the green areas will inform us on *Ae. albopictus* vector capacity. Based on the model Kraemer at al. 2015, Threshold 0.6 for considering the area as suitable. Regular check of Zika epidemic evolution with regards to vector presence and suitability.
Scenarios for Dengue, Chikungunya and Zika introduction into EU

Potential vector present?

Yes

Vector competent?

Yes

Vector active?

No

No vector-borne transmission possible
Minimal risk of transmission in area:
- Sexual /Soho possible
- Imported cases

No

EU MS in continental EU without *Aedes albopictus* established

During winter season, EU MS in continental EU with *Aedes albopictus* established

Active

• First, pathogen introduction
• Then, transmission depends on context and environmental parameters favouring the vector capacity (i.e.: mosquito population density, survival, biting rates, ...)

EU MS in continental EU with *Aedes albopictus* established – active during the summer season (May - November)

• Outermost Regions and Overseas Countries and Territories (British, French and Dutch overseas territories):
  - Caribbean (*Ae. albopictus* and *Ae. aegypti*)
  - Indian Ocean (Reunion island *Ae. albopictus*)
  - Madeira (*Ae. aegypti*)
  - Pacific (*Ae. aegypti* and other *Aedes* spp. ?)

A case for learning in real-time how PHEP capabilities are strengthened before the season
## Knowledge gaps in PHEP

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description of knowledge gap</th>
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<tbody>
<tr>
<td>Attitudes and beliefs</td>
<td>Behavioural aspects related to PHEP (e.g. decision-making and communication strategies)</td>
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<tr>
<td>Collaboration and system integration</td>
<td>Integration of PHEP with other sectors</td>
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<tr>
<td>Communication</td>
<td>Use and application of e.g. social media, anthropology</td>
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<tr>
<td>Quality improvement and performance standards</td>
<td>Measurement of performance or capacity</td>
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<tr>
<td>Resilience</td>
<td>Public health roles in recovery</td>
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</tbody>
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Public Health should

1. Be prepared for a **naturally occurring outbreak or deliberate release**
   - Quickly recognize the disease (e.g. VHF, pandemic flu)
   - Control spread (isolation, quarantine, vaccination)
   - Assure that people get needed care
   - Coordinate with national and international agencies
   - Prevent mass panic

2. Be prepared for **other public health emergencies**, e.g. such as of environmental or technological origin (floods, earthquakes, chemical spills, RN incidents, extreme weather, ...)
   - Coordination across sectors and boundaries
   - Investment in workforce and social capital
   - Resilience to adapt to unexpected
Sendai Framework

Priorities for Action

• Understanding disaster risk
• Strengthening disaster risk governance to manage disaster risk
• Investing in disaster risk reduction for resilience
• Enhancing disaster preparedness for effective response

- 30(i) Enhance the resilience of national *health* systems
- 31(e) Enhance cooperation between *health* authorities and other relevant stakeholders to strengthen country capacity for disaster risk management for *health*
Policy context for preparedness in Europe

- Member States requests e.g. National Focal Points
- Decision 1082, and Health Security Committee
- IHR
- UNISDR
DECISION No 1082/2013/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 22 October 2013
on serious cross-border threats to health

- applies to biological, chemical or environmental threats
- existing rules on preparing for and managing health emergencies will be strengthened
- the Health Security Committee will be given a stronger mandate to react in a crisis

**Main objectives**

- To ensure adequate level of **preparedness planning** for all types of serious cross border health threats across the EU
- To include provisions for **joint procurement** of medical countermeasures
- To provide for **risk assessment and risk management** for serious cross border health threats from chemical, biological and environmental origin
- To **coordinate EU-wide response** and avoid duplication with other instruments at EU and international level (eg. IHR)
Elements of Preparedness and Response planning in Decision 1082/2013/EC

- Core capacity standards for preparedness and response planning at national level in accordance with IHR

- Measures and arrangements with other sectors ensuring interoperability
  - coordination structures in place for cross-sectoral incidents;
  - emergency operational centres (crisis centres);

- Business continuity plans

- Revised National Preparedness Plan
The capability of the public health and health care systems, communities, and individuals, to prevent, protect against, quickly respond to, and recover from health emergencies, particularly those whose scale, timing, or unpredictability threatens to overwhelm routine capabilities. Preparedness involves a coordinated and continuous process of planning and implementation that relies on measuring performance and taking corrective action.
ECDC Country Preparedness Support

Supporting countries in implementing Decision 1082

- Support countries in improving their capacities and plan activities for public health emergency preparedness;
- Foster interoperability in planning for cross-border health threats;
- Promote capabilities and cooperation with other sectors involved in preventing and preparing for cross-border health threats;
- Ensure the continuous cross-border health threats communication among EU, enlargement and ENP countries in the Mediterranean basin.

Health Emergency Preparedness

- Identification of good practice
  - Literature review
  - Case studies
- Dissemination of good practice
  - Development of tools
  - Good practice workshops
- Capacity strengthening
  - Training
  - Preparedness review
Methods of conducting critical incident reviews for the purposes of preparedness and response planning

Clinical and public health management of intoxication with plant toxins Ricin and Abrin

Types of CD control services available for refugees and asylum seekers arrived in Europe

Best practices in ranking emerging infectious disease threats

Tool for assisting EU MS in enhancing preparedness for CD control during sudden influx of migrants

Safe use of PPE in the treatment of IDHC

Video on PPE donning and doffing

How to plan for pre-hospital management of suspected Viral Haemorrhagic Fever (VHF) patients Training course

Pilot course for intersectoral training on staff protection from biological hazards

How to set up, run and evaluate exercises in EU public health settings; a practical course

How to plan and run Simulation exercises: Handbook

Overlap between preparedness for communicable diseases and for other types of health threats.

Assist EC on Joint Procurement on PPE

Prototype tool for assessment of health emergency preparedness

Case studies: Mers-CoV, Polio

Peer review of EVD preparedness

How to plan and run Simulation exercises Training course Modules

How to plan and run Simulation exercises: Handbook
ECDC Logic Model for PHEP

### Capabilities
- **Legal Measures**
  - Accountability
  - Organisational structures
  - Policy development
  - Delegation of authority
  - Administrative preparedness
- **Economic Measures**
  - Financing
  - Workforce development
  - Facilities
  - Infrastructure
- **Operational Measures**
  - Capacity assessment and planning
  - Drills and exercises
  - After Action reports and post-event evaluation
- **Social Capital**
  - Partnerships between public health and
  - Health care providers
  - Emergency responders
  - Law enforcement
  - Community organisations

### Response Capabilities
- **Assessment**
  - Incident recognition
  - Risk characterisation
  - Epidemiological investigation
  - Surveillance and epidemiological monitoring
  - Laboratory analysis
  - Environmental monitoring
- **Policy development and implementation**
  - For infection control and treatment guidance
  - For population-based disease control
  - Enforcing laws and regulations
- **Health care services**
  - Preventive services
  - Medical surge
  - Management of medical countermeasures, supplies and equipment
  - Care for health care workers and emergency responders
- **Coordination and communication (within the public health emergency preparedness system)**
  - Crisis management
  - Communication with healthcare providers
  - Communication with emergency management, public safety, and other sectors
  - Communication with other public health agencies at the global, European, national, and subnational levels
- **Emergency risk communication (with the public)**
  - Identification of public information needs
  - Developing message content and delivering through appropriate channels

### Objectives
- **Earliest possible identification of event**
- **Early and effective response**
  - Minimising morbidity and mortality
  - Limiting spread of disease
  - Minimising social disruption
  - Minimising infrastructure and environmental damage
- **Earliest possible recovery and return to normal**

Blind spots for capacity building and operational research in PHEP

1. How to address gaps and strengths of PH systems preparedness (capacities-capabilities) to develop competencies of management and frontline staff

1. How to enable the generation of real-time evidence (clinical, epi, anthropological)? E.g. multi-discipline network/platform in “peace time”

1. How to facilitate cross-sectorial, cross-border lessons learning from response/recovery – to address the gap that not much learning happens from crisis to crisis
   a. Community and participatory approaches to preparedness (which resources, networks, or types of local ‘lay’ expertise exists and can be accounted for?)
   b. Not everyone is equally at risk – where is vulnerability?
   c. How can flexibility be designed or accounted for in preparedness planning
“Everybody has a plan until they get punched in the face.”
Thank you