Risk assessment group (RAG), between event identification and risk management.
How is Belgium dealing with a crisis?

Sophie Quoillien, MD
SsID, 21 May 2015
Brussels
RAG
What is it?

Risk Assessment group is

- an element of the **preparedness capacity**;
- put in place by **Belgian health authorities**;
- in order to manage **health threats**.
Legal Context

Why has the RAG been created?

International Health Regulations of the WHO (2005)

EC decision on Serious Cross Border Threat to Health - No 1082/2013/EU - (October 2013)

Risk Assessment group

- Entry into force: 15/06/2007
- Approval by IMC: 11/03/2008
- Scope extended to national crisis by protocol of agreement in 07/2014
Global framework
What are the main changes?

From diseases notification to health threat management

Core functions of the IHR

- Prevent
- Detect
- Facilitate
- Respond
- Inform

The IHR help countries to prevent, detect, inform about and respond to public health events in a facilitated manner.

http://www.who.int/ihr/en/

1. Preparedness and response
2. Joint procurement of medical countermeasures
3. Epidemiological surveillance, Ad hoc monitoring, Early warning and response
4. Public health risk assessment
5. Alert notification
6. Coordination of response
7. Recognition of emergency situations
What kind of data has to be notified?

**IHR**

A case of the following diseases:
- Smallpox
- Polio with wild poliovirus
- New serotype of influenza
- SARS

**1082/2013/EU**

Biological origin: communicable diseases, antimicrobial resistance, healthcare associated infections, biotoxins, harmful biological agents.

Chemical origin

Environmental origin

Unknown origin

**Events** which may constitute public health emergencies of international concern under the IHR

---

As per WHO case definitions

The disease list shall be used only for the purposes of these Regulations
<table>
<thead>
<tr>
<th>Each member state has to be able</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>To be prepared and able to respond</td>
<td><strong>National preparedness plan</strong> = description of core capacity requirements for surveillance, alert and response like role of federated entities, diagnostic capacity, surveillance systems, …&lt;br&gt;<strong>National crisis management plan</strong> = description of response capacity and organisation like contact persons, contact tracing, BPC, …</td>
</tr>
<tr>
<td>To detect possible signal</td>
<td>Epidemiological surveillance&lt;br&gt;Ad hoc monitoring&lt;br&gt;Early warning</td>
</tr>
<tr>
<td>To assess signal</td>
<td><strong>Public health risk assessment</strong></td>
</tr>
<tr>
<td>To notify within 24 hours “events which may constitute a public health emergency of <strong>international</strong> concern”</td>
<td><strong>Decisional structure for alert notification and coordination of the response (e.g.: control measures, communication, …)</strong></td>
</tr>
</tbody>
</table>
Preparedness and response
What are the main structures involved in the response?

FOD/SPF Interior Affairs: Governmental Crisis Cell

Risk Management Group/NFP – HEALTH

Communities/Region/FAVV, … Provinces, cities, …

Expected local impact

FOD/SPF Public Health

Expected (inter)national impact

RAG

1. Unusual
2. Unexpected
3. International impact

Signal

Event-based or indicator-based monitoring
Preparedness and response
What is the role of the different structures?

NFP = National Focal Point (FPS-public health)
- Makes the international notification (WHO + EWRS)

RMG = Risk Management Group (coordinated by FPS-Public health)
- Decides on the notification
- Decides on the control measures

RAG = Risk Assessment Group (WIV-ISP, epidemiology ID)
1. Conduct the risk assessment (literature review, experts)
2. Make recommendations based on scientific evidence for the RMG
3. Monitor the event for its acute public health impact & risk factors
4. Evaluate the intervention and identify lessons learned
Preparedness and response
What is the role of the different structures?

NFP = National Focal Point
- Makes the international notification (WHO + EWRS)

RMG = Risk Management Group
- Decides on the notification
- Decides on the control measures

RAG = Risk Assessment Group
1. To conduct the risk assessment (literature review, experts, …)
2. To make recommendations based on scientific evidence for the RMG
3. To monitor the event for its acute public health impact & risk factors
4. To evaluate the intervention and to identify lessons learned
Preparedness and response

What is the composition of the different structures?

NFP = National Focal Point (International notification)
- FPS-public health

RMG = Risk Management Group (Decision, management)
- Coordinated by FPS-Public health
- Composed by representatives from Ministers
  - Flemish Community, French community, German Community, Brussels Cocom/GGC
  - Brussels Region, Flemish Region, Walloon Region
  - Federal Public Service - Public Health, NFP
  - Coordinator of the RAG
Preparedness and response

What is the composition of the different structures?

RAG = Risk Assessment Group (Assessment, recommendations)

- Coordinated by the WIV-ISP, Unit Epidemiology ID
- Composed by representatives from health administration
  - FPS-Public health, NFP
  - Flemish Community, French community, German Community,
    Brussels Cocom/GGC
  - Brussels Region, Flemish Region, Walloon Region
- Ad hoc experts from federal agencies, health care sectors, universities, …
Epidemiological surveillance
What are the MS duties?

Only for infectious diseases:
- Surveillance network for communicable diseases, AB resistance and HCAI
- Participation to surveillance at EU level by providing data (in usual surveillance, epidemic, event, …)
- Use of case definition
Ad hoc monitoring
How are the risks/changes identified?

Epidemiological surveillance
What kind of data sources for surveillance do exist?

Surveillance networks: Sentinel network vs registers

1. Sentinel laboratories (1985)
   (about 40 ID, +/- 70,000 records/year, reporting to health authorities, ecdc, WHO, …)
5. CJD register (1998)
6. HIV register (1985)

External sources
1. Mortality
2. Minimal clinical datasets
3. Mandatory notification
4. Study, …
Ad hoc monitoring
How are the risks/changes identified?

Daily activity at WIV-ISP/Communities, ...

NFP

RAG

RMG

Evaluation impact measures
Ad hoc monitoring
What are the criteria for RAG activation?

Any health risk:
External or internal signal
Permanent, recurrent problems or potential health emergency

Any change in
- Geographical distribution
- Spread
- Severity
- Specific group

Emergence new strain or new resistance

Any extend:
Local or national
Affect more than one Member State
Require a coordinated response at Union level
Public Health Risk Assessment

Who can alert the RAG?

How to contact the RAG?
Through competent health authority
Through RAG coordinators (office time)
Through Epidemiology duty service - 24/7
Public Health Risk Assessment

What is the role of the RAG?

**Primary Risk Assessment of Potential Public Health Event**

<table>
<thead>
<tr>
<th>Signal</th>
<th>Description</th>
<th>Score</th>
<th>Description / arguments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
<th>Description / arguments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Cause known?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Unexpected/unusual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Severity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Dissemination (Low/Medium/High)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Risk of (inter)national spread</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Preparedness and response**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Preparedness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Specific control measures (surveillance, control, communication)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Public health impact**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A Public health impact in Belgium (Low/Medium/High)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Recommendations (surveillance, control, communication)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C Actions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Public Health Risk Assessment
What is the role of the RAG?

<table>
<thead>
<tr>
<th>Assessment Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal × assessment</td>
<td><strong>Rapid risk assessment</strong>: epidemiological opinion</td>
</tr>
<tr>
<td></td>
<td># STOP/vigilance</td>
</tr>
<tr>
<td></td>
<td><strong>Primary risk assessment</strong>: descriptive assessment</td>
</tr>
<tr>
<td></td>
<td>▶ email consultation</td>
</tr>
<tr>
<td></td>
<td># Vigilance (+ possibly measures)</td>
</tr>
<tr>
<td></td>
<td><strong>Risk assessment</strong>: evidence based assessment</td>
</tr>
<tr>
<td></td>
<td>▶ Literature review</td>
</tr>
<tr>
<td></td>
<td>▶ Experts meeting</td>
</tr>
<tr>
<td></td>
<td># Measures</td>
</tr>
</tbody>
</table>

Instrument: RAG - Risk assessment group
Public Health risk assessment

What is the scope of the RAG?

1. Is the signal a potential event?
   = agent, severity, transmission, diagnostic capacity, existing preventive measures, …
2. Is the public health impact of the event serious?
3. Is the event unusual or unexpected?
4. Is there spread to > 1 MS?
5. Is there a risk outside Belgium with a risk for Belgium?
6. Is there a significant risk of international spread?
7. Is there a significant risk of international restriction(s) to travel and trade?
8. Is there need for measures/additional measures?
9. Is there need of timely coordinated EU action to contain it?

If required, must be able to give advice to health authorities within 24 hours.
Public Health risk assessment
What is NOT the scope of the RAG?

**RAG ≠**

Recommendations on
1. Curative aspects (e.g.: HCH, BAPCOC, ...)
2. Strategy (e.g.: KCI)

Scientific opinion (e.g.: HCH)

Management (e.g.: health authorities)

Writing procedure (e.g.: health authorities)

Policy (e.g.: health authorities)
Between September 2007 and December 2014:

- 36 assessments [Median 4.5, range 1-8]
- 86% were related to infectious diseases
- 32% were detected in Belgium

Some examples:

Influenza H1N1: activation of Influenza National Plan, …

Chikungunya: communication to health professionals alerting them about risk for travellers, …

CPE: realisation of a national plan against antibiotics resistance, …

Usutu virus: nothing

Invasive meningococcal disease in MSM: To inform MSM community, no systematic targeted vaccination campaign, …

Autochthonous malaria case: Entomological investigation, …

Lyme: Update on existing information and recommendations by experts at Belgian level for health care workers, …
Examples
Signal: identification of exotic mosquitoes in Belgium?

Event:
Unusual

Risk:
Intermediate for environment (dissemination, competition with indigenous)
Low for public health at that time but potential vectors for ID like dengue

Recommendations (e.g.):
Immediate: destruction mosquitoes by Walloon Region
Short term: Information vicinity to avoid standing water by Mayor
Mid-term: national plan for surveillance of exotic mosquitoes by IMC environment
Examples
Signal: Mers-Corona

Event:
Unusual

Risk:
Severity: High case fatality rate
Import case in Belgium possible

Recommendations (e.g.):
Development lab capacity (NRC KULeuven)
Epidemiological follow up by WIV-ISP
Procedure for sample instructions and notification to health practitioners by health authorities (written by WIV-ISP with experts, validated and sent by health authorities)
Information to Muslims travelling to Hajj by health authorities
Examples
Signal : Outbreak Mumps

Event:
Unexpected/unusual

Risk:
Severity : complications among young adults
Insufficient herd immunity

Recommendations (e.g.):
Development lab capacity, virus typing (NRC WIV-ISp)
Strengthening surveillance (sentinel GP, mandatory notification in Vlaanderen, ...) by health authorities and WIV-ISp
Contact Superior Health Council workgroup Vaccination on need for change of immunization schedule
Message to EWRS by NFP
Examples
Signal: 4-Methylamphetamine

Event:
Circulation new drug, unexpected severity

Risk:
Severity: 4 deaths in Belgium
Upcoming festival season

Recommendations (e.g.):
Information Emergency department physicians by health authorities
Specific communication strategy to reach the exposed public
(press, festival organizers, etc…) by health authorities
4-Methylamphetamine to be added to the list of controlled substances in Belgian Lawn
Examples

Signal: Ebola is West Africa

Event:
Unusual

Risk:
Severity: High CFR, high intensity, but only by imported case
Direct flight

Recommendations (e.g.):
Advice for travellers by health authorities,
Identify lab and hospitalisation capacity,
Continuous risk assessment,
Information health care workers,
Procedure for systematic case identification, case management and contact tracing,
Generic crisis plan for Belgium, …
Conclusion

Advantages:
- Coordination of recommendations
- National and international levels
- All types of threat
- Flexibility & timeliness
- Network of experts

Improvements:
- ‘Fame’
- Capacity to maintain RA for ‘other threat’
- Follow up implementation of recommendations
- Common risk assessment