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DE SANTÉ PUBLIQUE

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

Sophie Quoilin, 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

FEDERALE OVERHEIDSDIENST VOLKSGEZONDHEID,
VEILIGHEID VAN DE VOEDSELKETEN
EN LEEFMILIEU

N. 2008 — 1504

[C - 2008/24165]

11 MAART 2008. — Protocol gesloten tussen de Federale Overheid en de overheden bedoeld in artikelen 128, 130 en 135 van de Grondwet, betreffende de internationale notificatie door België in het kader van het Internationaal Gezondheidsreglement (IHR)

SERVICE PUBLIC FEDERAL SANTE PUBLIQUE,
SECURITE DE LA CHAINE ALIMENTAIRE
ET ENVIRONNEMENT

F. 2008 — 1504

[C - 2008/24165]

11 MARS 2008. — Protocole conclu entre le Gouvernement fédéral et les autorités visées aux articles 128, 130 et 135 de la Constitution, concernant la notification internationale de la Belgique dans le cadre du Règlement sanitaire international (RSI)

Global framework

What are the main changes?



From diseases notification to health threat management



Core functions of the IHR



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/>

- Dec
1. Preparedness and response
 2. Joint procurement of medical countermeasures
- Ser
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

Scope of IHR and 1082/2013/EU

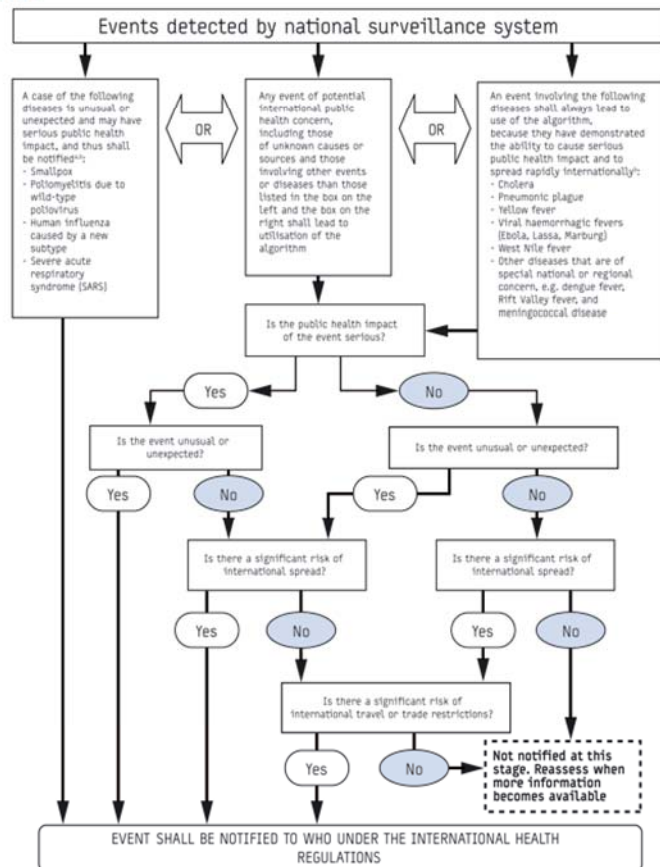
What kind of data has to be notified?



IHR

1082/2013/EU

FIGURE A case of the following
Decision instrument for the assessment and notification of events that may constitute a public health emergency of international concern



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

a. As per WHO case definitions
 b. The disease list shall be used only for the purposes of these Regulations

IHR versus Cross Border Threat

What kind of core activities has to be available in MS?



Each member state has to be able

To be prepared and able to respond	<p>National preparedness plan = description of core capacity requirements for surveillance, alert and response like role of federated entities, diagnostic capacity, surveillance systems, ...</p> <p>National crisis management plan = description of response capacity and organisation like contact persons, contact tracing, BPC, ...</p>
To detect possible signal	<p>Epidemiological surveillance Ad hoc monitoring Early warning</p>
To assess signal	<p>Public health risk assessment</p>
To notify within 24 hours “events which may constitute a public health emergency of international concern ”	<p>Decisional structure for alert notification and coordination of the response (e.g.: control measures, communication, ...)</p>

Preparedness and response

What are the main structures involved in the response?



**FOD/SPF Interior Affairs:
Governmental Crisis Cell**

Wider impact: mobility, energy, ...

Risk Management Group/NFP – HEALTH

Communities/
Region/FAVV,
...
Provinces, cities, ...

FOD/SPF
Public
Health

RAG

- 1. Unusual
- 2. Unexpected
- 3. International impact

Expected local
impact

Expected
(inter)national
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)

Early warning and response system
Detail for Message ID: 20150223NL0001

You are logged in as: Belgium [Sophie Quolin](#)

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Notifying authority

Name: Netherlands [National Institute for Public health](#)
Institution: Centre for Infectious Disease Control

Event information

Posted on: 23/02/2015
Message Type: Threat of biological origin
Message Content: Other information (outside of the scope of article 9)
Notification Criteria: it affects or may affect more than one Member State
Syndrome / Disease: HCAI
Country of Occurrence: Netherlands
Date of onset/detection: 23/02/2015
Mail Sent to: European Commission, Public Health Authorities and ECDC
Message Accessibility: This message is **NOT** accessible to WHO
This message is **NOT** accessible to EMA
This message is **NOT** accessible to EFSA
This message is **NOT** accessible to ECHA
This message is **NOT** accessible to DGENV

Attachments list:
 22-04-2015-RRA-Mycobacterium Cardiovascular infection-Switzerland Netherlands.pdf EC, 30/04/2015

MESSAGE:

Recently, a patient with endocarditis due to *Mycobacterium chimaera* was identified in a Dutch hospital. Prior to this report, cases of endocarditis due to *M. chimaera* following open heart surgery have been reported by Switzerland. The Dutch patient underwent cardiac surgery (mitralis valve) several months before onset of symptoms. A comprehensive retrospective tracing of all cases of unexplained endocarditis after cardiac surgery in the past 3 years has been started. In line with the alert from the Swiss Agency for Therapeutic Products (EWRS message July 2014) regarding infections of *M. chimaera* after cardiac surgery in Switzerland, water of the technical device used to control blood temperature during open heart surgery (heater cooler units) at the hospital was examined. *M. chimaera* could be demonstrated in five out of five sampled devices. Water samples from heater cooler units belonging to other cardiac centers tested positive for this microorganism, as well. We believe that heater coolers that, due to their design, allow for aerosol production and that are placed in the operation room, are likely to be the source of infection. In all cardiac centres in the Netherlands, additional measures for the use and cleaning/disinfection of heater coolers were taken, together with the placement of these devices outside the operating theater. Currently, additional research is being conducted, including a detailed characterization of the *M. chimaera* found in various samples.

Aura Timen, MD, PhD
Head EWRS-unit of the Netherlands

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

Daily at
WIV-ISI
Commu

1. Sentinel laboratories (1985)
(about 40 ID, +/- 70.000 records/year, reporting to health authorities, ecdc, WHO, ...)
2. Sentinel pediatricians (2003)
3. Sentinel STI clinicians (2000)
4. Sentinel hospitals (2010)
5. CJD register (1998)
6. HIV register (1985)
7. Cohort HIV (2006)
8. Sentinel GP (1983)
9. National reference centre (oct 2010)

External sources

1. Mortality
2. Minimal clinical datasets
3. Mandatory notification
4. Study,



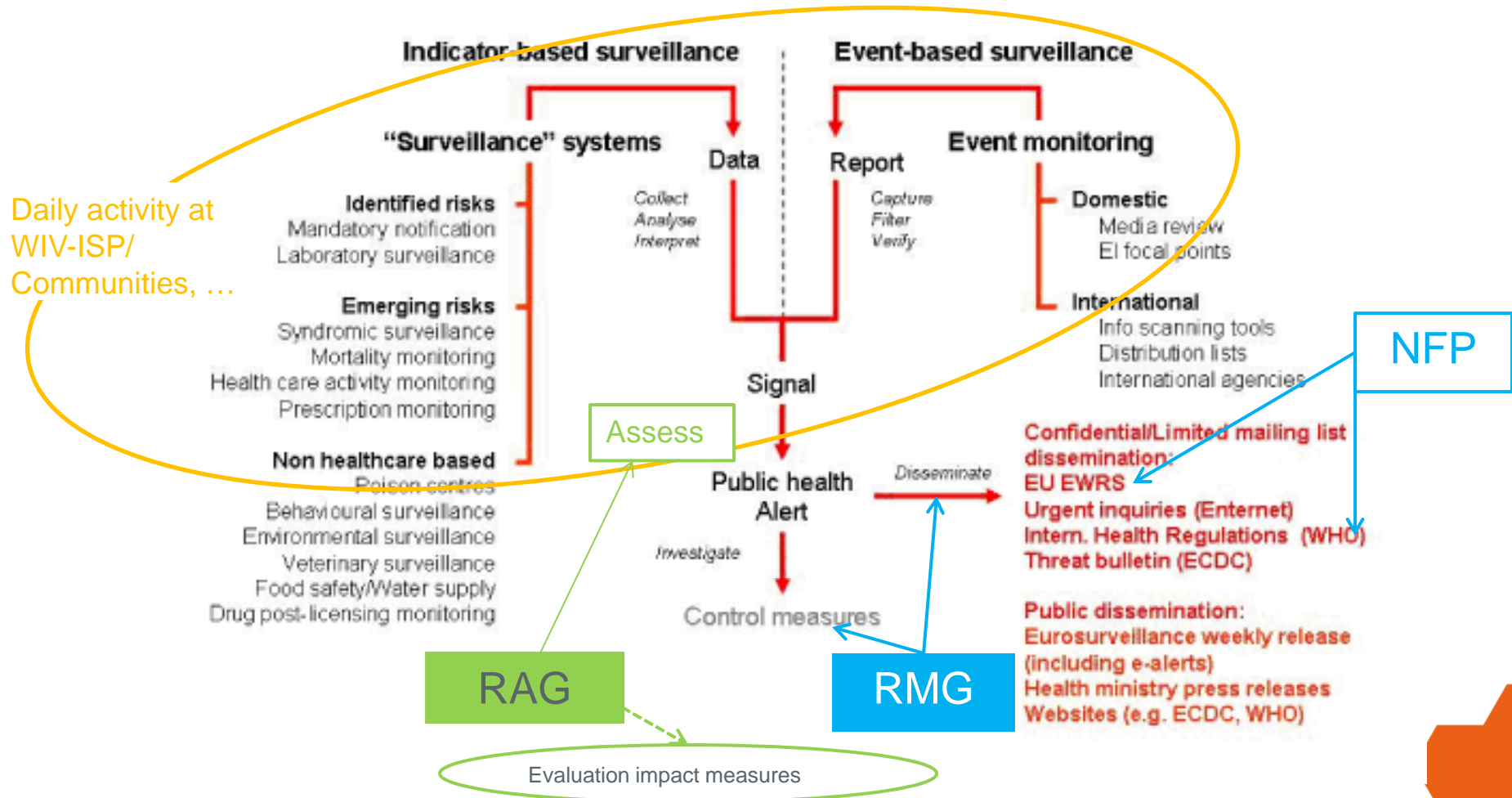
Evaluation impact measures

.be

.be

Ad hoc monitoring

How are the risks/changes identified?



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

Unusual
Unexpected
Impact

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

Signal		X	
		X	
		X	
Description		Score	Description / arguments
1	Cause known?		
2	Unexpected/unusual		
3	Severity		
4	Dissemination (Low/Medium/High)		
5	Risk of (inter)national spread		
Preparedness and response			
6	Preparedness		
7	Specific control measures (surveillance, control, communication)		
Public health impact			
A	Public health impact in Belgium (Low/Medium/high)		
B	Recommendations (surveillance, control, communication)		
C	Actions		

Public Health Risk Assessment

What is the role of the RAG?



Signal \xrightarrow{x} **assessment:**

Rapid risk assessment: epidemiological opinion
STOP/vigilance

Primary risk assessment: descriptive assessment
▸ email consultation
Vigilance (+ possibly measures)

Risk assessment: evidence based assessment
▸ Literature review
▸ Experts meeting
Measures

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, SAPCOC, ...)

2. Strategy (e.g.: KCO)

Scientific opinion (e.g.: HCH)

Management (e.g.: health authorities)

Monitoring procedure (e.g.: health authorities)

Policy (e.g.: health authorities)

RAG = Signal → Impact + recommendations + notification

Risk Management Group



Alert notification and coordination of the response

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 Law

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

