Pandemic Preparedness planning in EU

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ECDC activities within pandemic preparedness 2011-2016

Joint work with WHO – EURO

- Revision of pandemic preparedness indicators

- Organising 3 regional "lessons learnt" workshops

- Supporting evaluation and plan revision processes

- Development of Guidance on pandemic plan revision

2016 Review of elements of national pandemic plans:

http://ecdc.europa.eu/en/healthtopics/pandemic_preparedness/national_pandemic_preparedness_plans/Pages/influenza_pandemic_preparedness_plans.aspx

Methodology

- A review of publically available pandemic influenza plans

- Based on lessons learned exercise involving EU/EEA Member States following the 2009 H1N1 pandemic

- A 42 item list, related to fourteen themes, such as:
  - risk communication,
  - non-pharmaceutical public health measures,
  - international cooperation, coordination and interoperability.

- 27 plans from EU/EEA Member States (12 post-2009)

Pre 2009 plans	
Country	Year of publication
Austria	2006
Belgium	2006
Croatia	2005
Estonia	2007
Greece	2009
Hungary	2008
Iceland	2006
Ireland	2008
Italy	2006
Luxembourg	2006
Poland	2009
Portugal	2006
Romania	2009
Slovenia	2006
Spain	2005/6

Post 2009 plans	
Country	Year of publication
Bulgaria	2018
Czech Republic	2011
Denmark	2013
Finland	2012
France	2011
Germany	2016
Iceland	2016
Latvia	2015
Netherlands	2014
Norway	2014
Slovakia	2012
Sweden	2015
Switzerland	2015
United Kingdom	2011

Key elements (42-items) of a national pandemic influenza preparedness plan

Theme		Item	Description
Preparedness planning	1	Simulation exercises	The plan refers to simulation exercises.
	2	National planning committee	The plan refers to a national planning/ preparedness committee.
	3	Evaluation methodology	The plan includes a methodology to evaluate the pandemic mitigation measures.
Strategic planning	4	Activation / de-escalation triggers	The plan refers to defined, country-specific triggers for activation and de-escalation of mitigation measures.
	5	Ethical aspects	The plan discusses and describes ethical aspects of mitigation measures.
	6	Planning assumptions	The plan includes a range of realistic, country-specific planning assumptions.
Risk-based planning	7	Risk assessment capacity	The plan refers to capacity and processes to perform national and subnational risk assessments.
	8	National surveillance and monitoring	The plan refers to a national surveillance system to collect and analyse epidemiological and virological data (e.g. virology, risk groups, transmission, clinical severity, vaccination uptake, antiviral consumption).
	9	Differentiated response planning	The plan considers the possibility of differentiated responses depending on the situation severity.
Command control, coordination & monitoring	10	Crisis management system	The plan describes activation of health-sector and multi-sectorial crisis management systems.
	11	Decision-making data requirements	The plan defines information requirements for decision-making.
	12	Technical advice for decision-making links	The plan describes the crisis management system links to technical and decision-making levels.

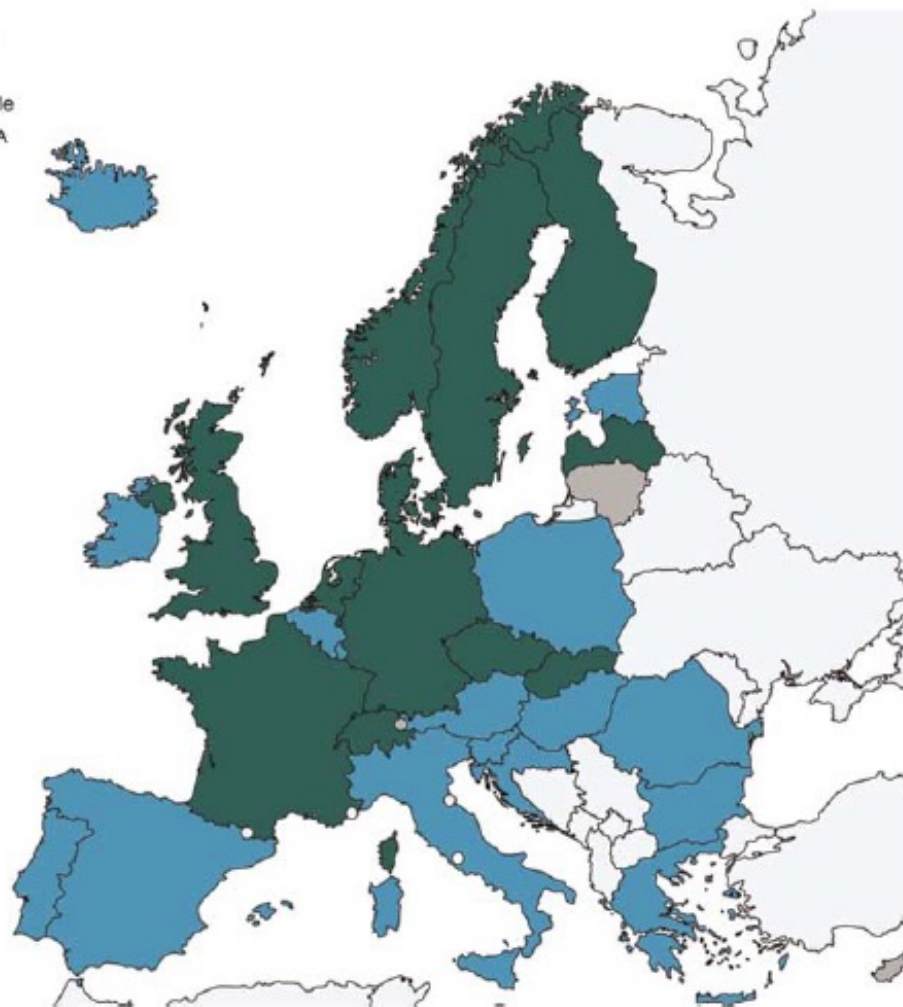# Key elements (42-items) of a national pandemic influenza preparedness plan

Risk communication	13	Communications strategy	The plan describes the need for a communication strategy for the preparedness and response phases.
	14	Communication channels	The plan refers to strategies for targeting pandemic communications to different groups.
	15	Cross-border communication coordination	The plan describes methods to coordinate communication with neighbouring countries (e.g. the Early Warning and Response System).
Early warning, risk assessment & surveillance	16	Investigation of first cases	The plan specifies the approach for rapid investigation of the first indigenous cases.
	17	Routine seasonal surveillance	The plan refers to the availability of sustainable, routine seasonal influenza surveillance that can be adapted to pandemic requirements.
	18	Surveillance feedback	The plan describes the processes to provide feedback to surveillance stakeholders and others.
	19	Adaptable laboratory surveillance	The plan describes differential laboratory testing depending on the situation severity (e.g. decreasing testing as the pandemic evolves).
Vaccines	20	Vaccine policy	The plan refers to a strategy for use of pandemic vaccine (e.g. procurement, distribution, storage and policy).
	21	Vaccine uptake and adverse events	The plan refers to a system for monitoring vaccine uptake and adverse events.
	22	Vaccine effectiveness	The plan identifies a mechanism to monitor pandemic vaccine effectiveness.
Antivirals & other essential medicines	23	Antiviral policy	The plan refers to a strategy for use of antivirals during a pandemic (e.g. procurement, distribution, storage and policy).
	24	Antiviral adverse events	The plan describes a system for rapid detection and monitoring of pharmaceutical adverse events or side effects.
	25	Other essential medicines	The plan foresees an increased need for other medicines (e.g. antibiotics, NSAIDs).

Healthcare system preparedness and response	26	Existing healthcare capacity awareness	The plan identifies the need for awareness of healthcare capacities at the time of activation.
	27	Surge capacity	The plan describes surge capacity for laboratory tests and patient care.
	28	Healthcare information exchange	The plan proposes establishment of a network of clinicians, nurses, public health authorities and healthcare authorities for frequent and rapid information exchange.
Non-pharmaceutical public health interventions (NPI)	29	NPI policy	The plan refers to a policy describing the relevant non-pharmaceutical public health interventions (NPI).
	30	NPI communication strategy	The plan refers to a strategy to communicate non-pharmaceutical public health interventions (NPI) to the public and other target groups.
Essential services & business continuity	31	Essential services identification	The plan identifies essential public and private services.
	32	Health business continuity	The plan requires the Ministry of Health, key public health agencies and major health facilities to have business continuity plans.
	33	Vulnerable group support	The plan refers to identified methodologies to support vulnerable groups (e.g. at risk patient groups).
Special groups and settings	34	Business and workplace preparedness	The plan refers to preparedness/ business continuity for businesses and workplaces.
	35	Vulnerable populations	The plan refers to specific actions for migrants, persons in transit and hard-to-reach populations.
	36	Third sector engagement	The plan describes roles for third sector organisations: nongovernmental organisations, volunteer organisations or community-based organisations e.g. Red Cross and aid organisations.
Recovery and transition phase	37	Recovery and transition	The plan describes recovery and transition activities.
	38	Triggers for recovery	The plan refers to development of risk-based triggers to identify the end of the pandemic and trigger recovery.
	39	Human resources recovery	The plan outlines the recovery for staff and responders mobilized during a pandemic.
International interoperability	40	IHR core capacity	The plan cross references with IHR for core capacity requirements.
	41	Interoperability with neighbours	The plan describes requirements for interoperability of plans with neighbouring countries.
	42	International communication	The plan outlines communication strategies with international organisations.

Publicly Available Pandemic Influenza Preparedness Plans of 28 European Union / European Free Trade Association Member States in July 2016, Categorized by Plans Pulished Before (Blue) and After (Green) the 2009 Pandemic. Abbreviations: EU, European Union; EEA, European Economic Area

Legend:
- Post-2009
- Pre-2009
- Unavailable
- Not EU/EEA

Results

❑ Twenty-eight EU/EEA countries have a publicly available pandemic preparedness plan.

❑ Plans published before 2009 available for 16 countries and plans published after the 2009 pandemic available for 12.

❑ Variation in the scope and approach of the national plans: strategic, action plan or combination of both.

❑ Range from one single document to a suite or an overarching strategy with support of operational documents and annexes

Theme	Item	Frequency of item in plans (n=28)	Average per theme
Preparedness planning	1 Simulation exercises	17	
	2 National planning committee	27	20
	3 Evaluation methodology	15	
Strategic planning	4 Activation / de-escalation triggers	17	
	5 Ethical aspects	19	18
	6 Planning assumptions	18	
Risk-based planning	7 Risk assessment capacity	16	
	8 National surveillance and monitoring	25	21
	9 Differentiated response planning	21	
Command control, coordination & monitoring	10 Crisis management system	23	
	11 Decision-making data requirements	21	23
	12 Technical advice for decision-making links	24	
Risk communication	13 Communications strategy	27	
	14 Communication channels	25	26
	15 Cross-border communication coordination	26	
Early warning, risk assessment & surveillance	16 Investigation of first cases	19	
	17 Routine seasonal surveillance	24	20
	18 Surveillance feedback	19	
	19 Adaptable laboratory surveillance	19	
Vaccines	20 Vaccine policy	24	
	21 Vaccine uptake and adverse events	19	19
	22 Vaccine effectiveness	13	
Antivirals & other essential medicines	23 Antiviral policy	27	
	24 Antiviral adverse events	16	21
	25 Other essential medicines	20	
Healthcare system preparedness and response	26 Existing healthcare capacity awareness	21	
	27 Surge capacity	25	21
	28 Healthcare information exchange	16	
Non-pharmaceutical public health interventions (NPI)	29 NPI policy	23	21
	30 NPI communication strategy	19	
Essential services & business continuity	31 Essential services identification	14	
	32 Health business continuity	19	16
	33 Vulnerable group support	15	
Special groups and settings	34 Business and workplace preparedness	17	
	35 Vulnerable populations	11	13
	36 Third sector engagement	10	
Recovery and transition phase	37 Recovery and transition	18	
	38 Triggers for recovery	9	11
	39 Human resources recovery	7	
International interoperability	40 IHR core capacity	18	
	41 Interoperability with neighbours	17	19
	42 International communication	23	

Key elements (n=42) of a national pandemic influenza preparedness plan, including frequency in the 28 reviewed plans

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Results *Top 5*

Key area	Sub-area	Description of item	'Yes'
Antivirals and other essential medicines	Policy	The plan refers to a strategy for use of antivirals during a pandemic (e.g. procurement, distribution, storage and policy)	27/27
Risk communication	Communications strategy	The plan describes the need for communication strategy for the preparedness and pandemic phases	26/27
Risk communication	Pandemic communication channels	The plan refers to communication strategies for different targeted groups - how information will be provided in a pandemic situation	25/27
Planning for a risk-based pandemic response	Surveillance and monitoring	The plan refers to national surveillance system that collects and analyses epidemiological and virological data (e.g. influenza virology, risk groups, transmission rates, clinical severity, vaccination uptake, antiviral consumption	24/27
Risk communication	Coordination across countries	The plan ensures method to coordinate communication with neighbouring countries (e.g. EWRS)	24/27

On average, 66% (± 17%) of the items are included in the plans.

Results Low 5

Key area	Sub-area	Description of item	'Yes'
After the pandemic: Recovery and transition phase	Human resources	The plan has outline of recovery phase for human resources mobilized during a pandemic	6/27
After the pandemic: Recovery and transition phase	Trigger	The plan refers to development of risk-based triggers to identify the end of the pandemic at subnational and national levels	9/27
Special groups and settings	Third sector	The plan describes the roles for organisations in the third sector: NGOs, volunteer organisations or faith-based organisations. For example Red Cross, and Church	9/27
Special groups and settings	Migrants and persons in transit	The plan refers to specific actions for migrants, persons in transit and hard-to-reach populations into account	10/27
Vaccines	Effectiveness	The plan requires availability of a mechanism for monitoring the effectiveness of pandemic vaccines	12/27

Results – Stratified

Comparing the post 2009 pandemic plans and plans that are not revised after the H1N1 pandemic in 2009:

- 60% ± 21% of the items are included in the plans (n=15) published before the 2009 H1N1 pandemic.

- 73% ± 18% of the items are included in the plans (n=12) published after the 2009 H1N1 pandemic

Stratified scores by quartiles of country population size

Population size		
Quartiles (n=7)	range, x 1 000 000pop	scoring, average
1	0.3 - 4.6	20.3
2	5.2 - 8.6	32.3
3	9.7 - 16.9	32.1
4	19.9 - 81.2	30.0

Stratified scores by quartiles of country healthcare expenditure

Health care expenditure		
Quartiles (n=7)	range, % of GDP	scoring, average
1	5.14 - 6.96	22.9
2	7.17 - 8.98	28.7
3	9.01 - 10.26	31.9
4	10.37 - 11.37	31.3

Scoring stratified by type of healthcare system

Health care system type*	scoring, average
Decentralised[1], n=3	25.7
Partially decentralised[2] - several functions (but not legislation decentralised), n=9	28.6
Operatively decentralised[3], n=8	30.5
Centralised[4], n=4	33.3

- *According to categorisation by EU committee of regions, 2012, for four member states the typology is unavailable (Croatia, Iceland, Norway, Switzerland). 1: Austria, Italy, Spain. 2: Belgium, Czech Republic, Denmark, Estonia, Finland, Germany, Hungary, Poland, Sweden. 3: Bulgaria, Latvia, Luxembourg, Netherlands, Romania, Slovakia, Slovenia, United Kingdom. 4: France, Greece, Portugal, Ireland.*

Limitations

- Plan revision (written document) not actual implementation
- Subjectivity
- Lack of visibility over all available plans in country
- Translation issues
- Excluded plans:
  - Cyprus (unavailable)
  - Lithuania (legally expired)
  - Malta (being updated, not on website)
  - Bulgaria (being updated, not on website)

Conclusions

Least mentioned

- elements related to the recovery and transition phase
- special groups and settings.

Opportunity for improvement

- coordination and communication
- communication activities during the pre-pandemic phase
- process to understand baseline to increasing healthcare capacity

Essential elements within EU

- interoperability nationally and internationally

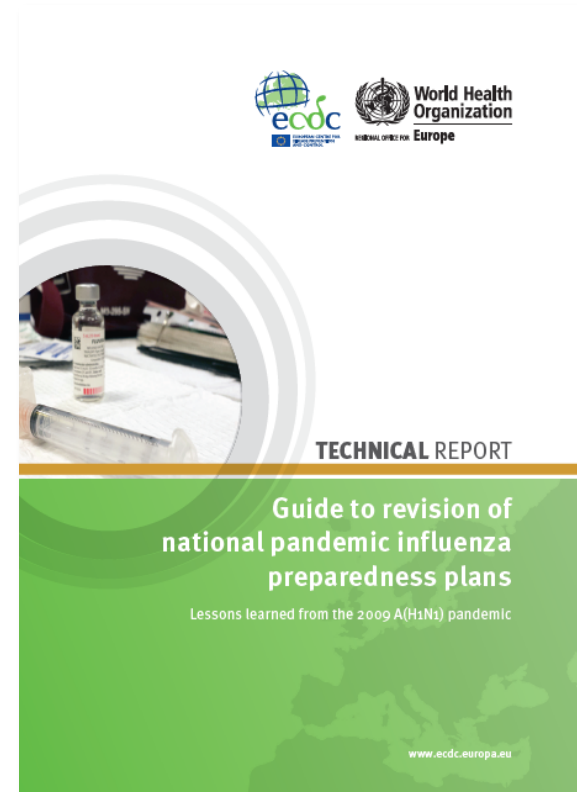**Key elements of the pandemic preparedness planning cycle**

Final considerations

o Lessons learnt and post 2009 evaluation

o Written plans do not reflect actual preparedness level

o Planning process as/more important than published plan

o Baseline is the WHO guidance from 2009

Next steps

- Publication of Guidance document
  Nov 2017 - Feedback welcome
- Publication of review
  - Need for validation of national results?

- Regional planning workshops
  - Country pandemic preparedness reviews
  - Regional SimEx

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TECHNICAL REPORT

Guide to revision of national pandemic influenza preparedness plans

Lessons learned from the 2009 A(H1N1) pandemic

www.ecdc.europa.eu

Thank you