

Implementation of Intervention Strategies – the Multisectoral Approach in Europe

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and Control

Acknowledgements



- World Health Organisation
- UNSIC, OCHA and WHO
- Eurogrippe and the French Presidency
- The London Workshop
- European Commission & WHO Workshops
- ECDC Colleagues
- European Union and European Economic Area Member States

Cat Herding?

Estimated additional deaths if a 1918-1919 Pandemic occurred now

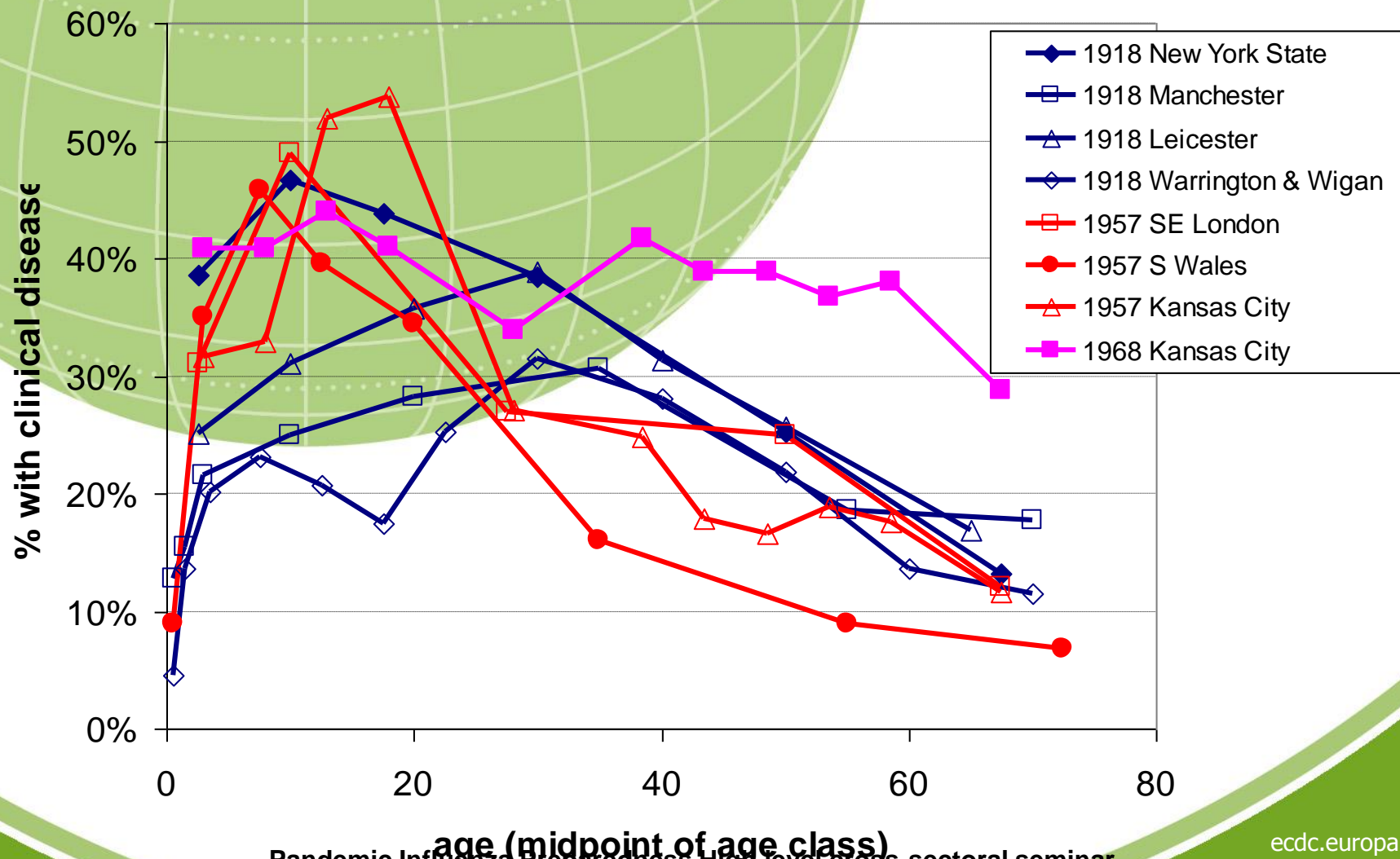
(Murray et al - Lancet 2006 368: 2211-2218) Probably an underestimate

Austria	13000	Latvia	13 800	Netherlands	23100
Belgium	14900	Lithuania	18800	Poland	155 200
Bulgaria	47100	Germany	116400	Portugal	25 100
Czech Rep	34100	Greece	27400	Romania	149 900
Cyprus	1900	Hungary	37700	Slovenia	5000
Denmark	7300	Ireland	6700	Slovakia	20600
Estonia	6100	Italy	95200	Spain	87100
Finland	8100	Luxembourg	500	Sweden	13300
France	89600	Malta	1100	UK	93000
EU Total	1.1m	Iceland	420	Norway	5800

The Problem

Pandemics are not standard

Age-specific clinical attack rate in previous pandemics – who is affected

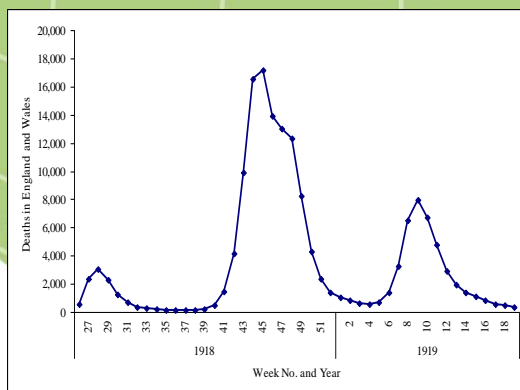


Uncertainty - Pandemic



- Three pandemics (1918, 1957, 1968)
- Each rather different

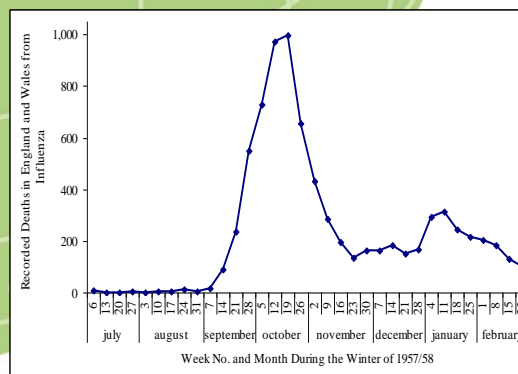
1918 Pandemic



1918/9: Flu Deaths Eng. and Wales

2-3 (US) Mills, Robins, Lipsitch (Nature 2004)
 1.5-2 (UK) Gani et al (EID 2005)
 1.5-1.8 (UK) Hall et al (Epidemiol. Infect. 2006)
 1.5-3.7 (Geneva) Chowell et al (Vaccine 2006)

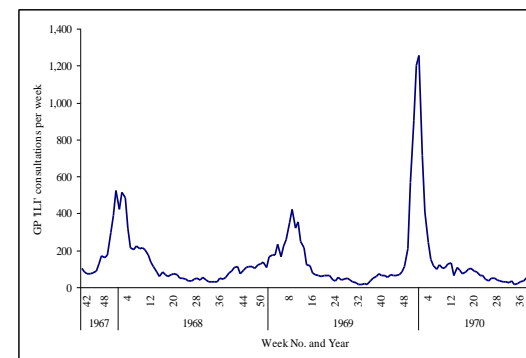
1957 Pandemic



1957/8: Flu Deaths Eng. and Wales

1.8 (UK) Vynnycky, Edmunds (Epidemiol. Infect. 2007)
 1.65 (UK) Gani et al (EID 2005)
 1.5 (UK) Hall et al (Epidemiol. Infect. 2006)
 1.68 Longini et al (Am J Epidemiol 2004)

1968 Pandemic

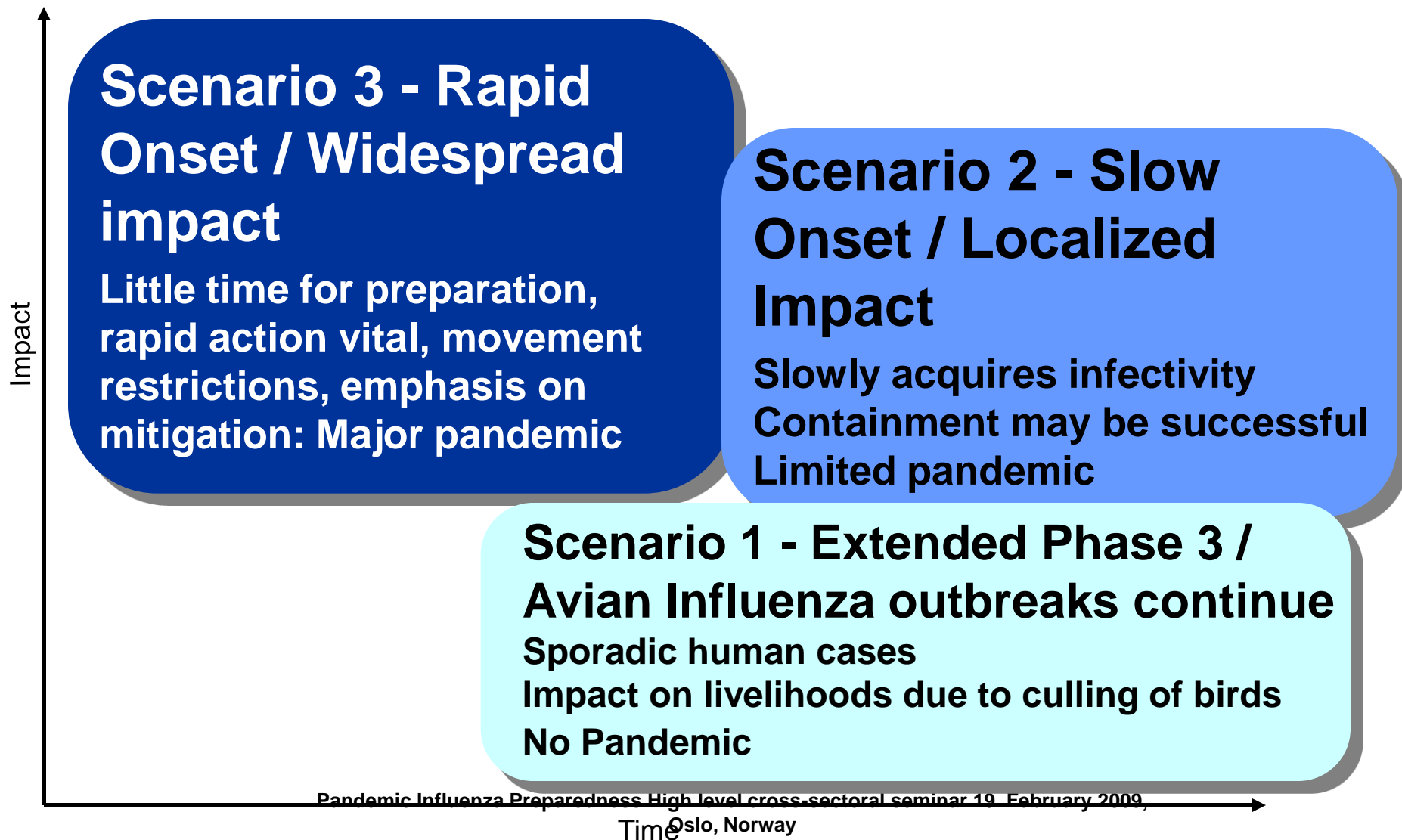


1968/9: GP consults Eng. and Wales

1.5-2.2 (World) Cooper et al (PLoS Med. 2006)
 2.2 (UK) Gani et al (EID 2005)
 1.3-1.6 (UK) Hall et al (Epidemiol. Infect. 2006)



Three planning scenarios



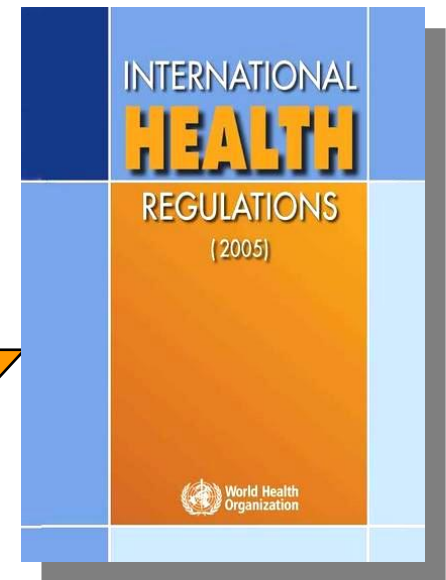
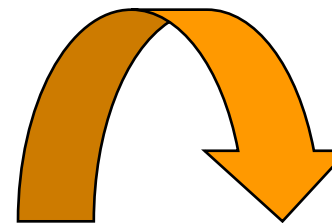
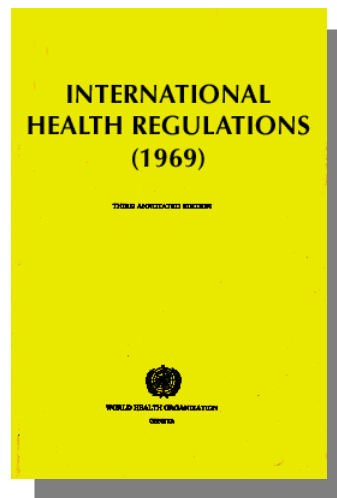
Why New WHO Guidance 2009?

Global Landscape is Changing

- More national experience has changed gaps & needs
 - H5N1
 - Pandemic preparedness
- New concepts & tools are available
 - International Health Regulations, stockpiles, rapid containment protocol ...etc
- New uncertainties & realities
 - Decreasing media attention & increasing national fatigue
 - Intergovernmental influenza virus & benefits sharing process

Important Underlying Developments

- International Health Regulations (2005) now in force
- Provides over-arching international framework
- Covers all critical aspects for responding to global threats
 - Reporting
 - Communications
 - Decision making
 - Response
 - Capacities



Important Underlying Needs

- More "whole of society" perspective while retaining unique & leading role of health sector
- More emphasis on ethical considerations to strengthen decision making
- Stronger emphasis on central role of communications
- Clarification or refinement of existing concepts such as pandemic phases

Important Underlying Needs

- Incorporation of new concepts such as pandemic severity assessment
- More detailed guidance such as community-level disease control & response recommendations
- Incorporation of rapidly increasing new scientific & technical knowledge

WHO Guidance on Pandemic Influenza Preparedness and Response: Core Document – March 2009

Supporting Technical Documents

Recommended
Disease
Control
Measures
for
Pandemic
Influenza

Outbreak
Communicat
ions

Global
Pandemic
Influenza
Surveillance

Laboratory
Preparedness
for
Pandemic
Influenza

Surge
Capacity in
Health
Care
Facilities

Non-
Health
Sector
Preparedness

Tools

Self-
Assessment
Checklist for
Preparedness

Planning and
Executing a
Preparedness
Exercise

Training
CD-ROMs
for Trainers

Rapid
Containment
Training
Package

Handbook
for the
Public

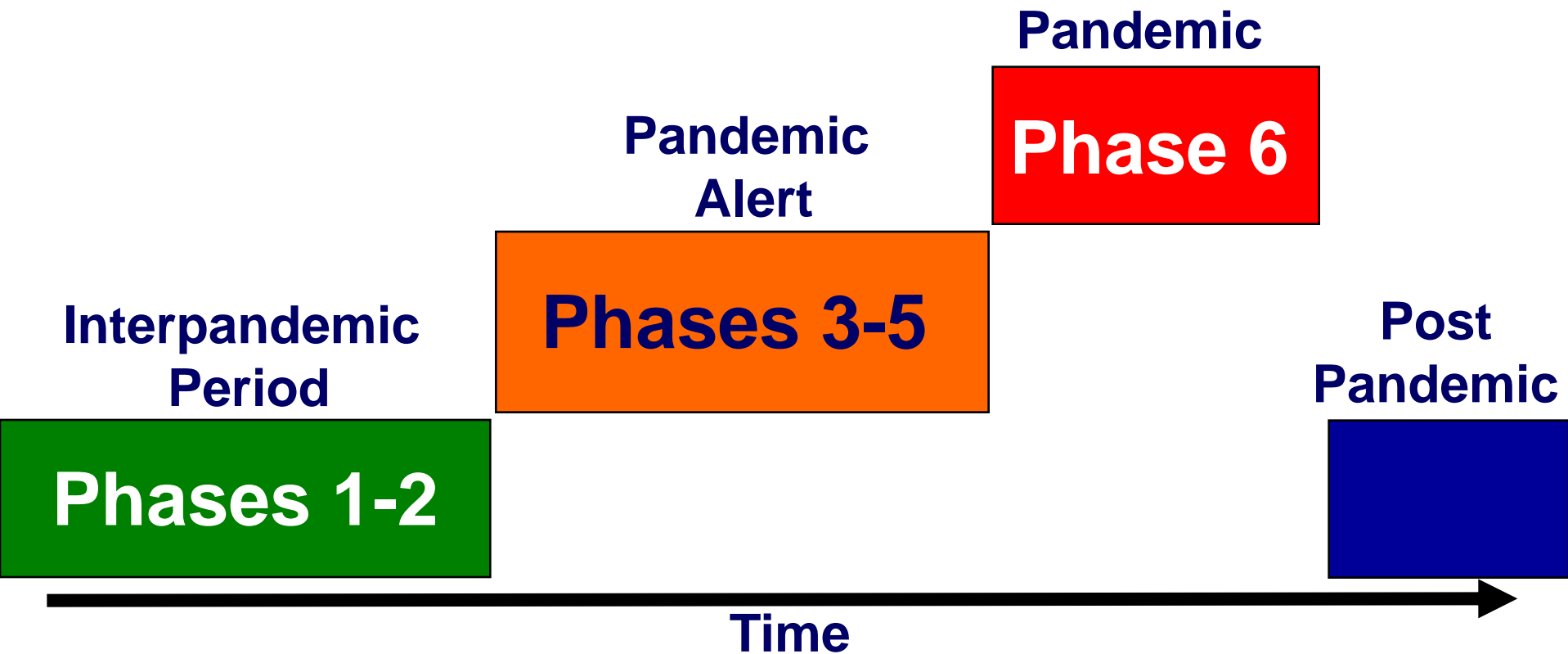
Sample
Preparedness
Plans

Pandemic Phases

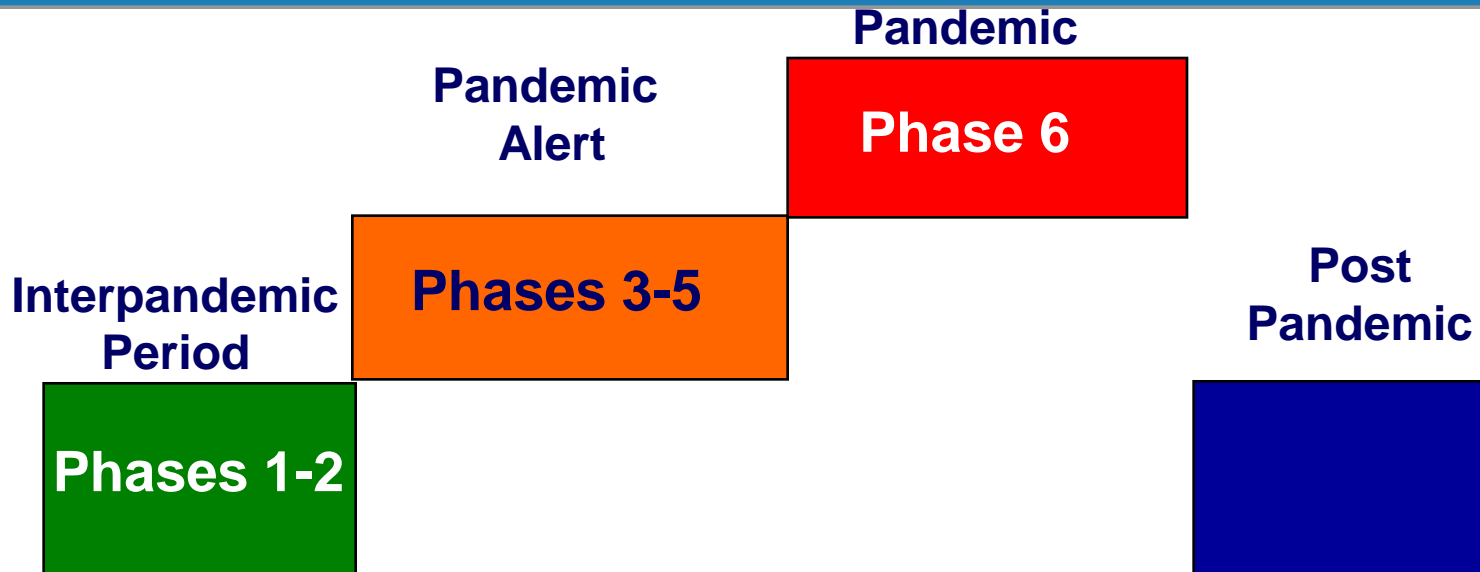
- Originally intended as planning tools to help decide when actions should take place
- 2005 guidance
 - 6 pandemic phases + post pandemic period
 - Simpler than phases in 1999 guidance
- Most national plans based on these phases

2005 Phases

Structure & Pandemic Disease "Risk"



Issues With 2005 Phases



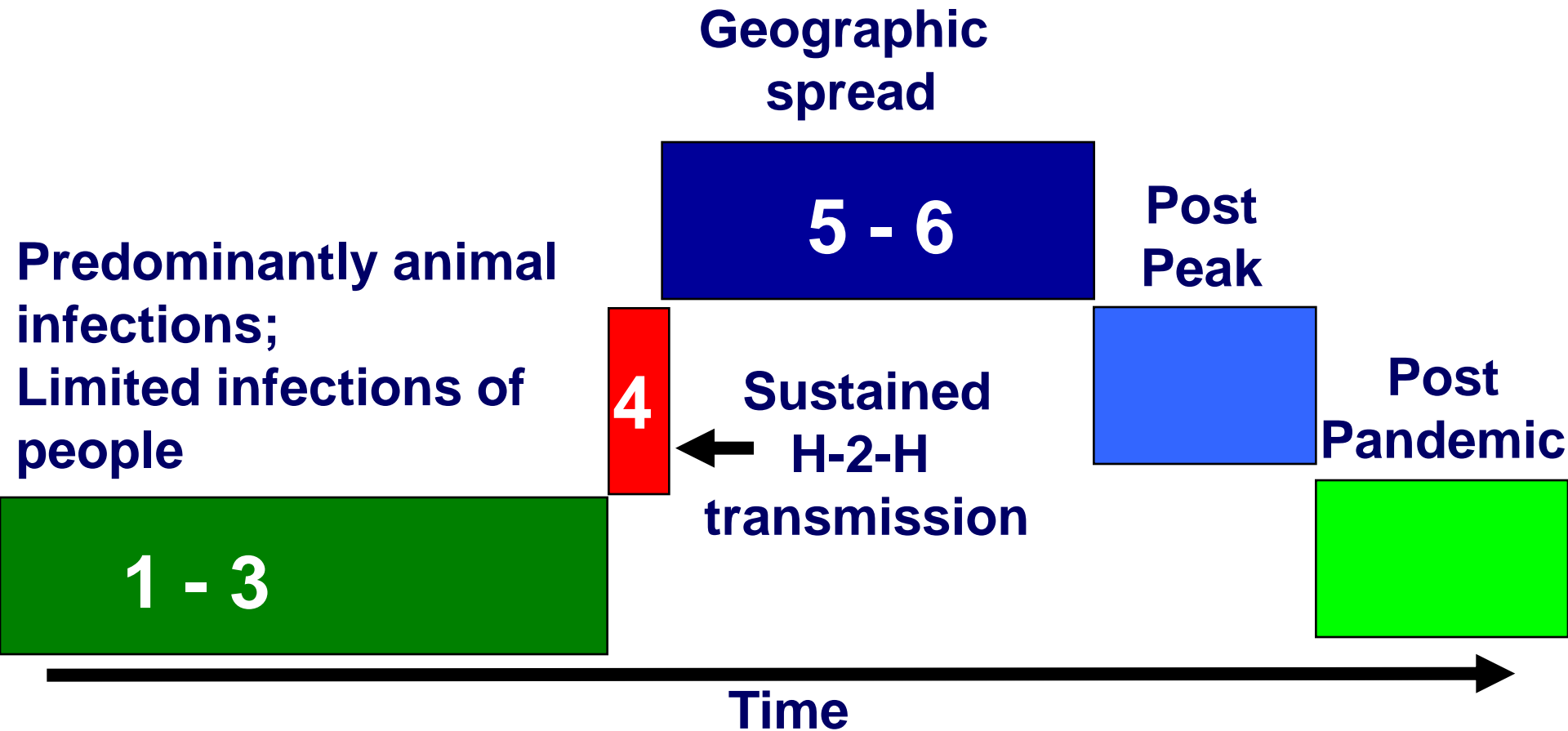
- Builds up to Phase 6 ("pandemic")
- Earlier phases much more critical for preparedness
- Progression does not convey epidemiological risk very well

Other Issues Related to 2005 Phases

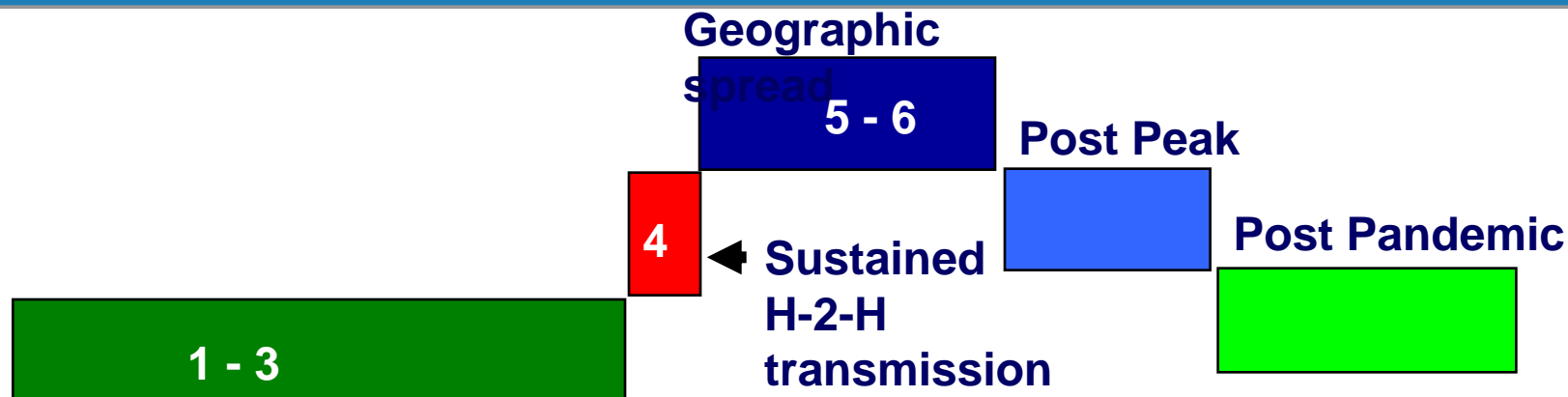
- Difficulties with interpretation, especially Phase 4

"small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting virus is not well adapted to humans"
- Why aren't we in phase 4 now?
- What does "well adapted" mean?

Proposed 2009 Phases



Advantages of 2009 Phases



- More accurate representation of epidemiological "risk"
- Identifies sustained H-2-H transmission as most pivotal event
- Better distinguishes between time for preparedness & response
- Defines post pandemic peak to facilitate recovery activities

Simpler Definitions Based on Concrete Directly Visible Events

2005

Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.

Current Draft

Human-to-human transmission of an animal or hybrid animal-human influenza virus able to cause community level outbreaks has been verified.

First Detection of Community Level Outbreaks Will Require Several Urgent Decisions

Consider Phase

Change to 4

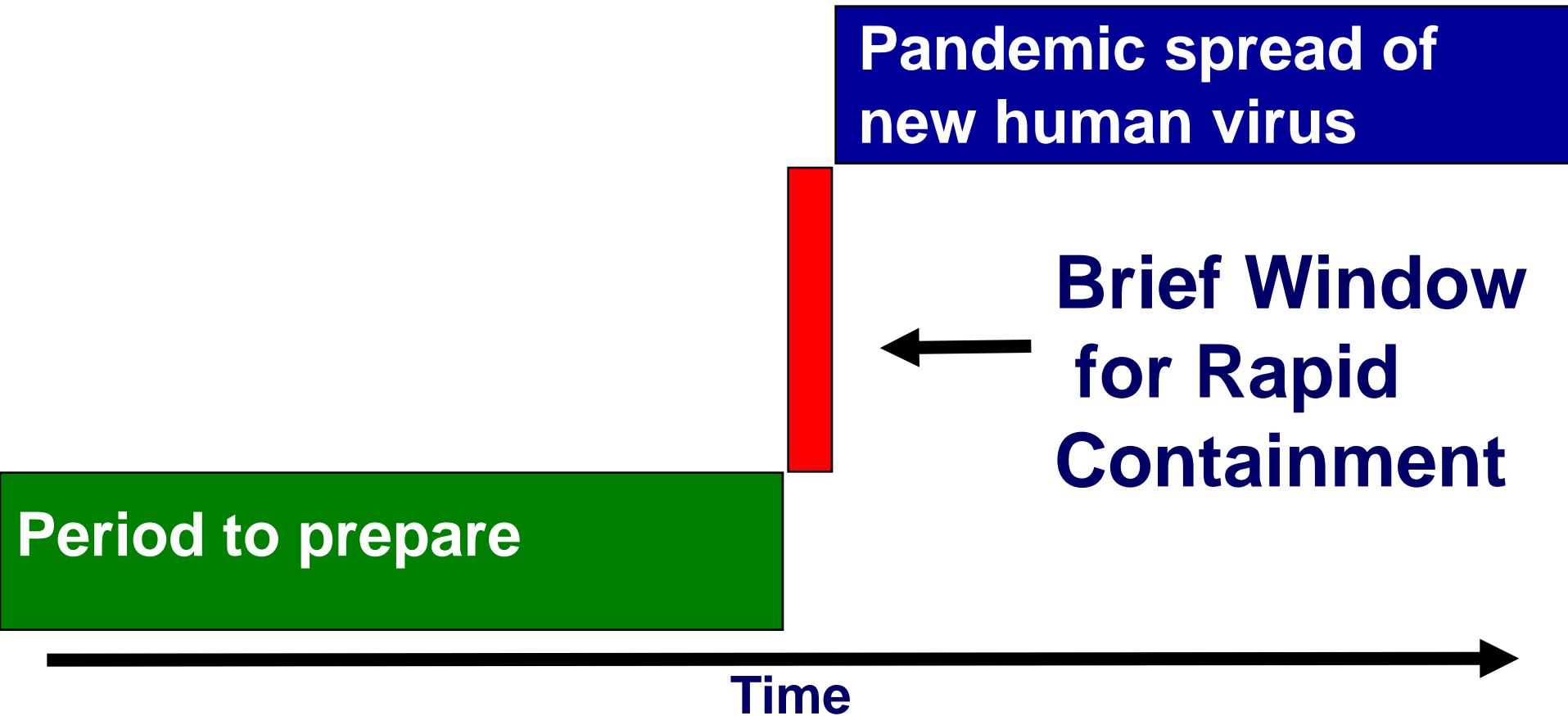
**Consider
rapid
containment**

**Consider
switch to
pandemic
vaccine**

Other

**Sustained
H-2-H
transmission**

Rapid Containment of Initial Emergence of Pandemic Influenza



Severity Assessment of Pandemics

- Anticipated need for early, public assessment by WHO
 - National decisions whether to implement potentially disruptive counter measures
 - Public communications & confidence
- Assessment will focus on direct health effects rather than social or economic consequences
 - For example, case fatality, age specific mortality or complications
- Simple 3 point scale
 - 1) mild 2) intermediate 3) severe

New Discussion on Disease Control Measures

- School closings
 - Be prepared to suspend classes
- Mass transport
 - Insufficient evidence to advise on restriction for decrease disease brden
- Travel within borders
 - Restriction not recommended

Where are we now A global perspective?

State of Pandemic Readiness – A Global Perspective

Very few Comprehensive Whole-of-Society Planning

FEW Essential Infrastructure interdependencies and the role of other sectors of society is identified but critical sectors not fully involved in planning, lack concrete operational plans

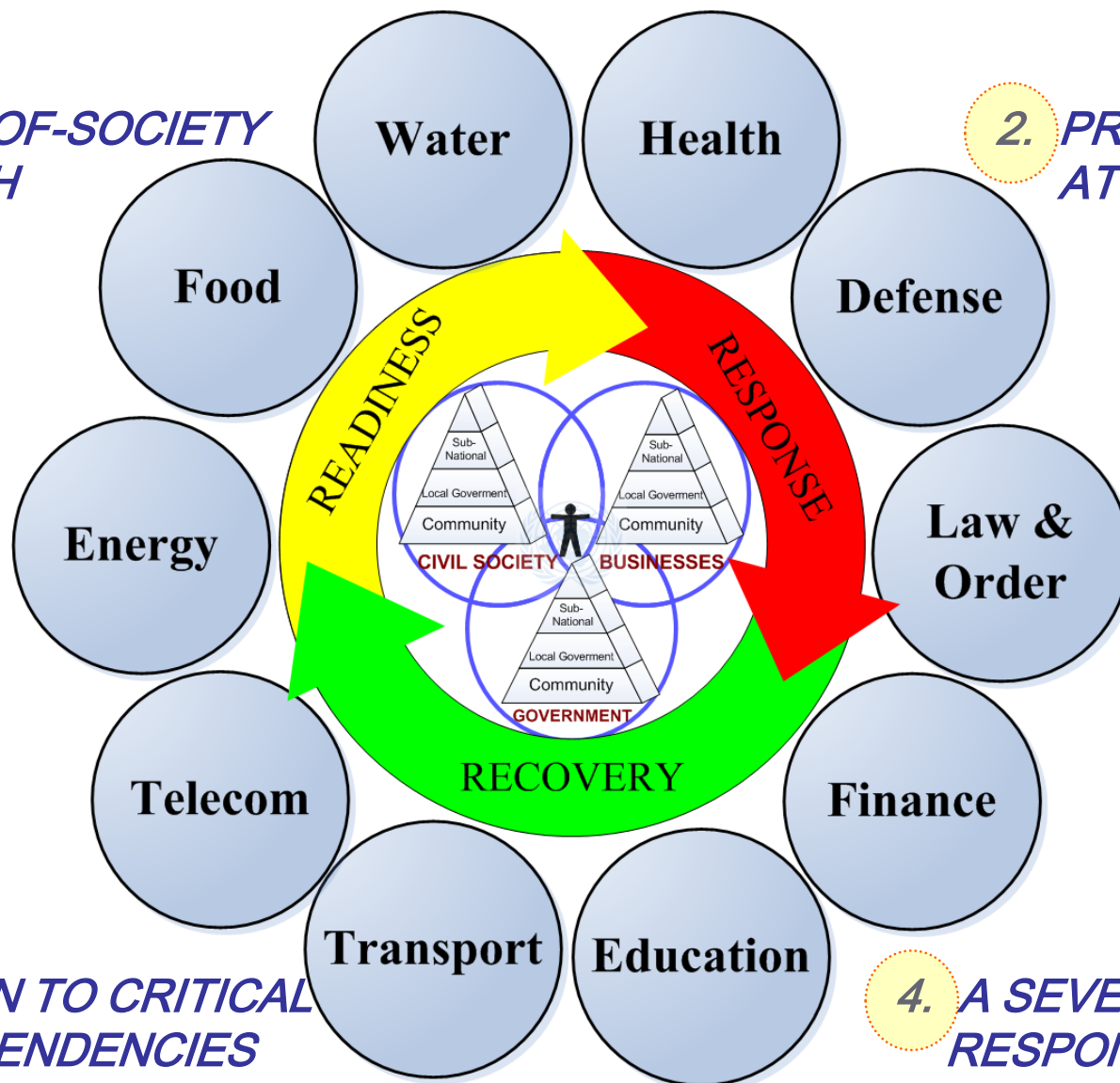
MAJORITY Pandemic Preparedness limited mainly to the Ministry of Health and Agriculture with some involvement of the disaster management structures



The 5 Pandemic Readiness Principles

1. *A WHOLE-OF-SOCIETY APPROACH*

2. *PREPAREDNESS AT ALL LEVELS*



3. *ATTENTION TO CRITICAL INTERDEPENDENCIES*

4. *A SEVERITY-BASED RESPONSE*

5. *TRANSPARENCY*

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Proposed Whole-of-Society Approach

Ministry of Health

Ministry of Agriculture

Multisectoral Government Pandemic
Preparedness Core Group** within NDMA

Committee
Secretariat

Working
Groups*



1. Critical Infrastructure
2. Law and Order
3. Economy and finance
4. Education
5. Welfare
6. Border responses
7. Bilateral, regional and global cooperation

→* Similar structures and processes should be developed in parallel at the state and district levels

→** Similar to the Core Groups constituted for Earthquakes, Cyclones and Landslides

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Sectoral Preparedness main elements for LINE Ministries

1. Determine legal and regulatory changes that maybe necessary to enact pandemic preparedness measures
2. Provide BCP guidance to businesses and public institutions in the sector and monitor the compliance
3. Plan for the continuity of the essential functions of the line ministry
4. Test the above through simulation exercises



BUSINESS CONTINUITY CORE ACTIONS

1. Identify the personnel, supplies and equipment vital to maintain essential functions
2. Identify the critical functions
3. Consider how to deal with the anticipated level of staff absenteeism
4. Provide clear command structures, delegations of authority and orders of succession for workers
5. Assess the need to stockpile strategic reserves of supplies and equipment
6. Determine the ability of the organisation to continue operations if critical infrastructure services and/or supplies become unavailable



7. Agree on a system of communication with suppliers and customers
8. Identify business units that could be downsized or closed to reallocate human and material resources
9. Assign and train alternates for critical posts
10. Plan for security risks to operations and supply chain
11. Consider alternative methods of working, e.g. changes to shift patterns, working from home
12. Consider the implications of travel restrictions and develop procedures to follow if such restrictions are imposed



13. Train staff on infection control and communicate essential safety messages
14. Consider whether there are ways of reducing social mixing (e.g. home working and reducing meetings and travel) and test these
15. Consider the need for family and childcare support for essential workers
16. Consider the need for psychosocial support services to help workers to remain effective
17. Consider and plan for the recovery phase



7 Success Factors for Whole Society Approach

1. High level political endorsement of the Multisectoral Whole of Society Approach from the Prime Minister and/or Parliament
2. Active leadership and technical support by MoH
3. Buy-in from key stakeholders – public and private – involvement of the private sector from the start
4. Each of the working groups lead by a key ministry but with participation of other relevant ministries and agencies and MOPH in all working groups
5. Working proactively with the media
6. Contribute to broader emergency preparedness and use pandemic preparedness to refine the national disaster management mechanisms
7. Develop local sub-national and national level plans in parallel and use results to inform the refinement process



Thank You

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Categories of Risk

Livelihoods

- Food and income loss from poultry deaths, culling & decreased economic activity

Human Health

- High illness & potentially higher death rates
- Overstretched health facilities
- Disproportionate impact on vulnerable

Governance & Security

- Increased demand for governance & security
- Higher public anxiety
- Reduced capacity due to illness & death

Social & Humanitarian Needs

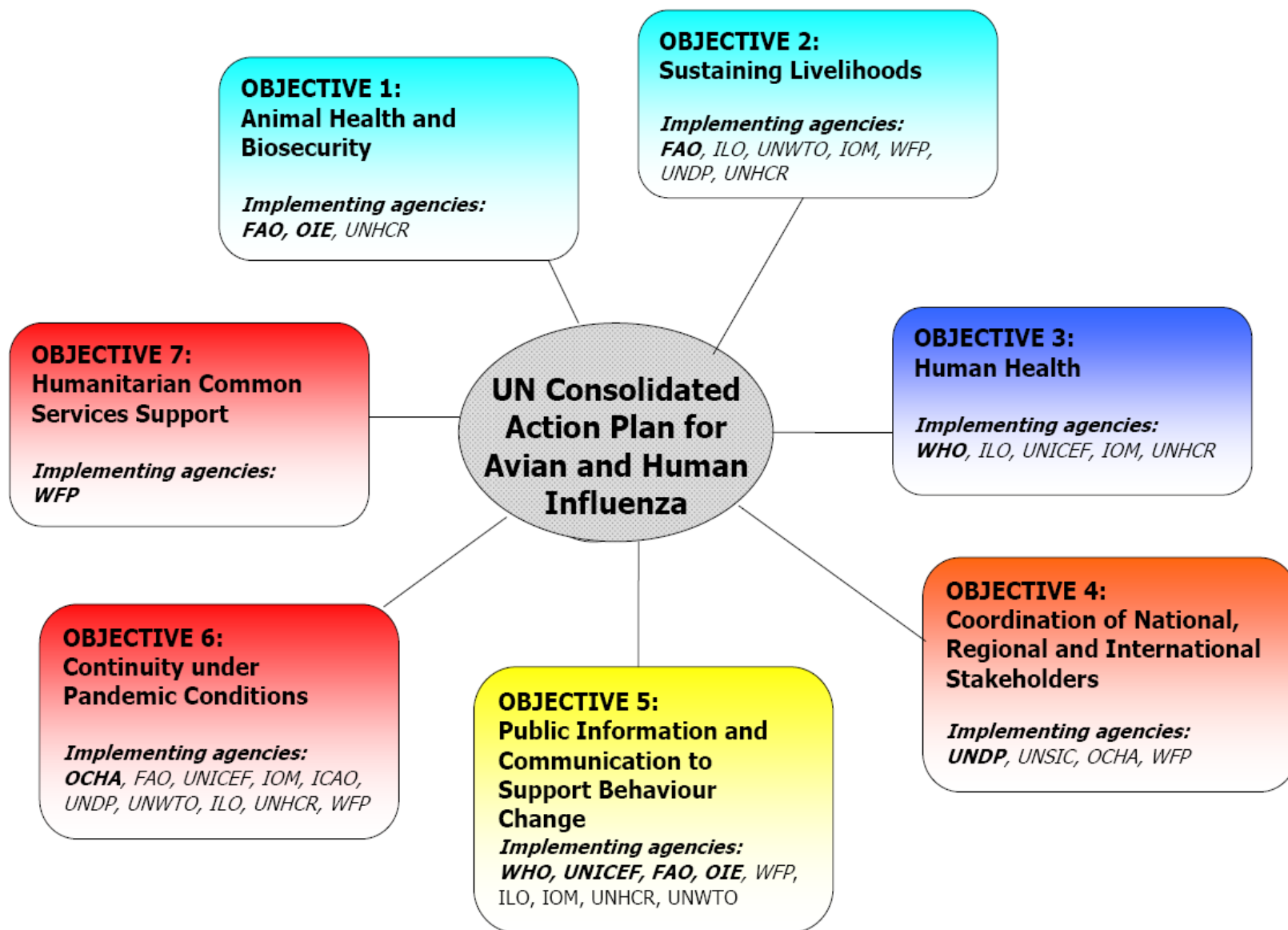
- Deterioration of coping & support mechanisms
- Interruption in public services
- Quarantine policies

Economic Systems

- Trade & commerce disruptions
- Degraded labour force
- Interruption of regular supply systems



United Nations System Strategy



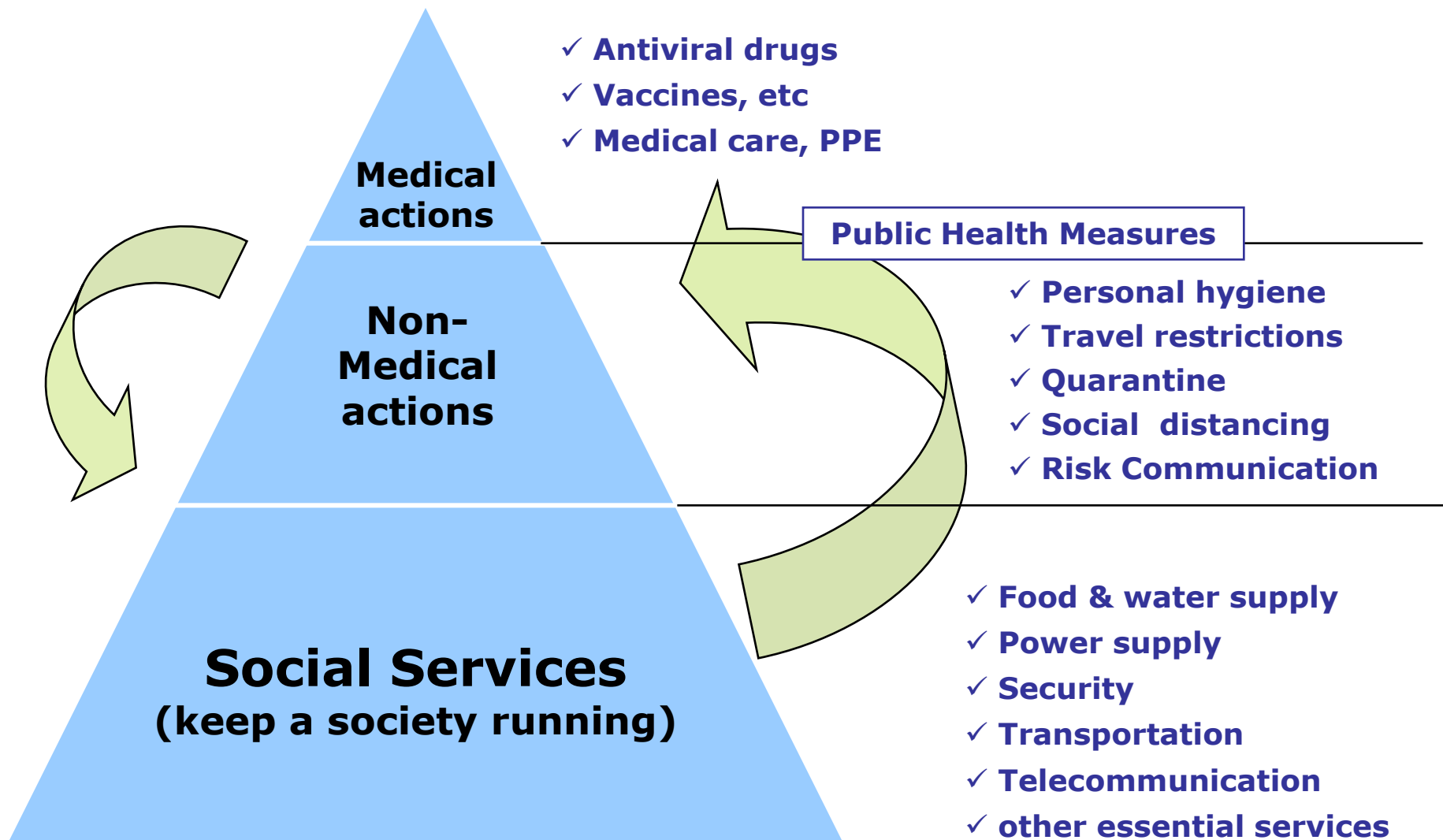


Global Priorities for 2008

- 1: Multi-sector, multi-stakeholder and multi-economy pandemic preparedness, particularly within highly decentralized economies**
- 2: Joint working between governments, private sector and voluntary organizations**
- 3: Tracking inter-country planning: joint action (scientific cooperation, exercises and responses)**
- 4: Longer-term preparation for emerging diseases outbreaks and pandemics (human, animal, environment interface)**



Pandemic Response



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(source) Dr T Kasai, WHO WPRO



WHAT are we preparing for? Pandemic ABC

Seasonal Influenza

- Viral respiratory infection in humans
- Self-limiting, fatal in elderly & very young
- ~ 500,000 deaths globally/year
- Occurs seasonally

Avian Influenza

- Bird virus - spreads from birds to birds
- H5N1 strain highly lethal to poultry
- Can sometimes infect humans

Pandemic Influenza

- Global outbreak of a new human influenza
- Causes increased morbidity & mortality.
- Last pandemics originated from animal viruses

&

other MEGA-PAN-CATASTOPHES

- Large scale Bio- and other terrorist attacks
- Global or regional IT disasters

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- Simultaneous major natural disasters



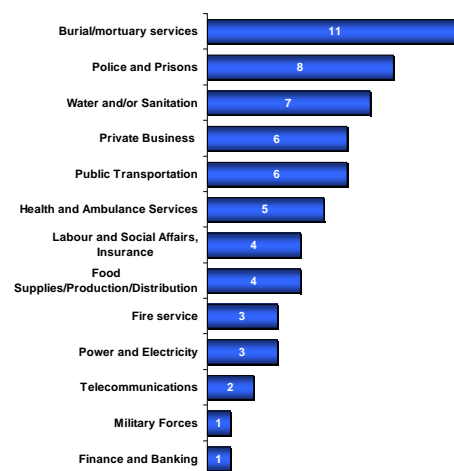
The potential pandemic impact

The next influenza pandemic will start with local outbreaks that if not contained it will quickly have a global impact:

- Millions of deaths, up to \$2 trillion of economic consequences and as much as 5% reduction in GDP**
 - Compare with SARS - <1000 dead, \$50 billion economic loss.**
- Deaths, absenteeism and attempts to avoid infection have consequences for supply and demand side of economy**
 - Markets close, utilities unreliable, telecoms break, cash in short supply**
 - Travel and leisure travel reduces, demand for food changes**
- There may be threats to Rule of Law and Security**
- Should be a temporary shock: recovery will be painful**



Coverage of contingency planning for essential services in 15 National Pandemic Preparedness Plans in Asia Pacific



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- **Human Health**
• *Containing the pandemic: Medicines, Commodities, Equipment, R and D, Patient Care, Lab services*
- **Financial Services**
• *Keeping financial systems going: Banking (cash and settlements), financial regulation, risk management and insurance*
- **Utilities, Personal Services**
• *Electricity, Water, Food, Telecoms, Postal services, Retailing (Catering for the needs of the most vulnerable)*
- **Travel – Logistics, Business, Leisure**
• *Supply systems; Air, sea, rail; Ports; Pilgrimages; Sports and other events; Tourism*
- **Government, Security, Military**
• *Public Services, Rule of law, Judiciary and Correction, Private Security, respect for rights*
- **Information Management**
• *Transparency Strategic communication; Broadcast and print; Good use of www*
- **Environment and hygiene**
• *Biosecurity: Cleaning, Maintenance, refuse management, wildlife*
- **Food and Livestock Production**
• *Growing, Processing, Marketing and Distribution of animal meat for human consumption*

WHO Enhancements to Pandemic Planning being undertaken in 2008



- Review of global pandemic planning document (2005) with some changes
http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_5/en/index.html
- New documents on interventions and counter-measures especially public health measures – compatible with the ECDC 'Menu'
http://ecdc.europa.eu/Health_topics/Pandemic_Influenza/phm.html
- A document on the *whole-society approach* to pandemic preparedness from the Office of the UNSIC (United Nations System Influenza Coordinator)
- Draft guidance on Surveillance in a Pandemic – continuing the work by ECDC
<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=3300>

