Pandemic Influenza and Public Health Measures

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Interim Pandemic Guidance Document: Options for PHMs

Education/communication
Case/contact management
Social distancing (schools, workplaces, etc.)
School/childcare facility closure/class dismissals
Mass gathering restrictions/bans
Travel/trade restrictions

Not included:

- Healthcare IP&C
- Anti-virals
- Pandemic vaccination

Rationale for PHMs

Reduce mortality/morbidity → reduce cases/deaths

Slow pandemic spread, shift to the right → vaccines

Reduce height of pandemic curve → healthcare burden ↓

Continue in Pandemic Phase 6 (at least 6.1)

Methods

Literature search/review

Monitoring international websites, esp. southern hemisphere

Review of PHM documents (PHAC, CDC, ECDC, WHO)

Consultations with Legal Services Branches (MOH, MOL)

Consultation with Joint Centre for Bioethics

Assessment of PHMs ≠ recommendations for implementation

Considerations for Implementation of PHMs

Epidemiology of pH1N1 (impacts/severity)
Effectiveness of PHMs
Consequences of PHMs, e.g. social, economic
Ethical principles
Legal authorities, statutory/regulatory requirements
Decision factors/triggers for implementation
Nature/ease of implementation
Public understanding/acceptance

Ethics and Planning for PHMs

Joint Centre for Bioethics: *Stand on Guard for Thee (2005)*

Deliberative analysis of ethical principles

Importance of transparent and defensible decisions/recommendations:

- Individual autonomy vs. protection of the public's health
- Proportionality
- Reciprocity
- Equity

Legal Considerations and the Use of PHMs

Number of relevant sections *Health Protection and Promotion Act:*

- Section 22 orders if statutory tests are met
- Orders imposed on legal "persons", including corporations
- Section 22 (5.0.1) issuance of class orders
- Section 77.1 statutory powers of the CMOH
- Section 102 legal mechanisms for enforcing orders

Occupational Health and Safety Act and MOL statutory powers

Charter of Rights and Freedoms issues/potential concerns

Initiation of PHMs

Common sense, e.g. educational campaigns based on pandemic phases
System capacity/limitations, e.g. PH case/contact follow-up
Business continuity plans:

- absenteeism
- employer requirements re. risk assessment/mitigation
- maintenance of critical services

Assumptions of mathematical models
Epidemiology/severity of pH1N1:

- risk groups
- measures of transmission, e.g. Ro
- health service impacts, e.g. hospitalizations
- severity measures → case fatality ratio (CFR)

Pandemic Severity Measures

OHPIP:	Low	<0.1%
	Moderate	0.1-1.0%
	Severe	>1.0%

CDC Categories:	1 (seasonal)	<0.1%
	2 ('57, '68)	0.1-0.5%
	3	0.5-1.0%
	4	1.0-2.0%
	5 (1918)	>2.0%

Limitations on the real-time use of CFRs:

- numerator challenges (delays in death attribution)
- denominator challenges (depends on lab capacity/priorities)

Effectiveness of PHMs

Historical analyses of past pandemics (1918, 1957):

- not always applicable to OHPIP PHMs
- data limitations
- outcomes of interest, e.g. peak measures vs. overall impact
- a number of controversies → ?effectiveness of PHMs

Contemporary case studies

Mathematical models:

- attempt to approximate/analyze important realities
- numerous strengths + limitations
- provide guidance, not definitive direction

Population surveys:

- understanding of causes/prevention and protection measures
- understanding of/willingness to comply with PHMs

Education/Communication

Already a well-deployed PHM since the spring 2009

Adjusting to evolving nature of pH1N1, e.g.:

- incubation/infectious periods
- risk populations
- severity
- transition between Phase 6.1 vs. 6.2

Key Education Messages

Evolving epidemiology, e.g. impacts, severity, risk groups
Prevention measures → hand hygiene, cough etiquette
Environmental cleaning → diverse venues
Social distancing → diverse venues
Options for those with ILI symptoms:

- Telehealth
- Primary care
- Flu assessment centres

ILI illness measures→ cases, contacts/households
Diagnostic testing/anti-viral access
Pandemic vaccination sequencing and logistics
Potential PHMs

Communication Challenges

Multiplicity of sources, e.g. Ministry, OAHPP, PHAC, CDC, WHO

Provincial generics vs. local specificities

Timing of educational messaging:

- Dependence on local epi
- Local system capacity, e.g. primary care vs. flu centres

Coordinating mechanisms/channels → provincial vs. local

Needs of higher risk groups, marginalized, multi-cultural

Effectiveness of educational efforts?

Use of social media?

Case/Contact Management

No role for mandatory isolation/quarantine → voluntary approach
However:

- How will self-isolation be mandated/monitored?
- How will supportive measures be developed and assessed?
- How will service refusals be developed, understood and supported?

Variable Wave 1 experience in volume/capacity re. case/contacts measures

Expectation of an early return of widespread community transmission:

- Limited, if any, role for individual case/contact F/U by PHUs
- Focus on generic case/contact educational messages
- Possible research questions → selected F/U by certain PHUs

Social Distancing

Wide of measures seeking to ↓ contact events, thus ↓ transmission

Range of strategies:

- Education
- Environmental supports
- Policies/procedures

Wide range of venues for application of social distancing measures:

- Educational/childcare
- Workplaces
- Faith community settings
- Corrections
- Shelters
- Public transit

Continuum of social distancing, e.g. school closures, mass gathering bans

Social Distancing Challenges

Size and complexity of the terrains where measures could be applied:

- Public/private → MOL roles/jurisdiction
- Organized vs. diffuse e.g. corporations vs. NGOs
- HR/labour relations realities/capacities
- Financial/capital resources

Theoretical vs. real-world evidence of effectiveness:

- Widespread opportunities for transmission
- Limitations of mathematical models
- Limitations of historical studies
- Easy-to-implement measures vs. capital/operational-intensive measures
- Nature of the social venues involved, e.g. faith or cultural communities

Beware of evidence-poor expert-based pronouncements:

- Expectations re. risk mitigation
- MOL monitoring/enforcement requirements

Social Distancing Recommendations

Be modest and respectful in terms of expectations

Focus on basic IP&C measures

Develop sector-specific tools/resources, involving these sectors

Consider lower-cost strategies (not applicable to all venues):

- Reduce meetings
- Use available technologies, e.g. teleconferencing
- Promote flexible work hours/staggered breaks
- Increase physical distances where feasible
- Create/support policies re. self-isolation

School Class Dismissals/Childcare Facility Closures

Terminology: school closures vs. class dismissals

Epidemiology of pandemic transmission → children/venues

Case study experience

Mathematical models:

- Need for early implementation of closures
- Lack of accounting for school-based measures to ↓ Ro
- Variable accounting for non-school transmission
- Models often incorporate other PHMs

Consequences → economic, educational, social, ethical

Coherence with other jurisdictions: provinces, PHAC, international

Recommended School/Childcare Measures

No recommendation for proactive, system-wide dismissals/closures

Substantial work done by Ministry/EMB re. educational system guidelines

Importance of basic IP&C measures:

- Hand hygiene
- Cough/sneeze etiquette
- ILI case detection/isolation
- Environmental measures
- Social distancing?

Pre-existing decision factors for individual school/childcare closures

Need for board of education + school communication/contingency planning

Mass Gathering Restrictions/Bans

Huge array of public/private assembles/groupings, e.g.:

- Cultural
- Religious
- Sporting
- Social
- Commercial

Significant challenges in identifying/justifying restrictions/bans:

- Ongoing identification/application of measures
- Application of less restrictive prevention/distancing measures
- Potential social/economic costs and impacts
- Ethical principles: proportionality, reciprocity, equity

Public Support for Mass Gathering Restrictions/Bans

Harvard School of Public Health Survey earlier this year:

- Avoid movies, sporting event, concerts… 92%
- Avoid malls/department stores 91%
- Limit use of public transit 89%
- Avoid church/religious services 82%
- Reduce outside contacts with people 88%

Mass Gathering Recommendations

No recommendations for restrictions/bans at present

IP&C measures, especially when pH1N1 circulation documented:

- Don't attend if ill with ILI
- High risk individuals to avoid gatherings
- Hand hygiene/respiratory etiquette
- On-site measures, e.g. HH, environmental cleaning
- Use these events for educational purposes

Develop risk assessment tools for these events:

- Size/location/need
- Risk populations
- Ability to implement IP&C measures
- Impacts of adverse consequences

Provincial/local PH to ID alternate means to provide gatherings

Travel/Trade Restrictions

Judged to be outside-of-scope → international/national domains

Travel-related IP&C measures:

- Travel at off-peak times
- Provide opportunities for hand hygiene
- Respiratory etiquette education and practice
- Physical distancing (?)
- No role for public use of masks

Discourage/prohibit "medical clearance" for those travelling from "affected areas"


Ontario
Agency for Health
Protection and Promotion