

# Clinical Care and the Health System

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## Clinical Care and the Health System: Outline

1. Patient assessment & treatment: OHPIP vs. pH1N1
  - a) Screening & infection control
  - b) Identifying ILI
  - c) Whom to test
  - d) Whom to treat
2. Health System measures:
  - a) Primary care
  - b) Alternative assessment, treatment and referral
  - c) Acute care
  - d) Critical care

## Background

**pH1N1 event similar to 1957 pandemic:**

- **$R_0$  likely about 1.5**
- **Thus far low severity of illness in general, but high acuity in some populations**
- **Risk highlighted in pregnant women, children, first nations and patients with medical conditions including morbid obesity**

## Patient assessment & treatment: screening & infection control

	Patient Screening	Engineering/ administrative controls	PPE (provider)
OHPIP	ILI	Isolate or cohort	Surgical mask for seasonal, N95 for pandemic 'flu
pH1N1	Fever and cough	Isolate or cohort	N95 for ILI

## **Patient assessment & treatment: Identifying ILI**

**Acute onset of respiratory illness with fever and cough PLUS one or more of:**

- **Sore throat**
- **Arthralgia**
- **Myalgia**
- **Prostration**

**Note: young children and the elderly and immunocompromised may NOT present with fever**

## Patient assessment & treatment: Lab testing

- **NOT** indicated for clinical treatment (*clinical indications*)
- **NOT** generally done in ambulatory settings or in ED non-admitted patients (*sentinel physicians*)
- **SHOULD** be performed in hospitalized ILI and pneumonia patients (*surveillance of Severe Respiratory Illness*)
- **MAY** be performed in potential outbreak situations (*check with local public health unit*)
- **All specimens on patients who are tested MUST have lab forms completed**

## **Patient assessment & treatment: ILI Treatment Guidelines**

- **Treatment should be initiated for clinical reasons:**
  - **ILI and sick (abnormal vital signs)**
  - **ILI and worsening condition (pending admission)**
  - **ILI and risk factors\***
- **Waiting for lab results will result in delayed treatment**
- **Oseltamivir 75 mg bid for 5 days, Zanamivir**
- **If sick may be initiated >48 hours after symptom onset**

## **Patient assessment & treatment: ILI + Risk factors**

- **Age <5 or >65**
- **Co-morbid illness (lung, kidney, heart, liver, neuromuscular, DM)**
- **Immunosuppressive illness**
- **Pregnancy**
- **Morbid obesity**
- **Aboriginal**
- **LTCH residents**

## **pH1N1 Hospitalization Rates: Canada (per 100,000)**

- **National - 4.4**
- **Children < 1 year - 32.5**
- **1- 4 - 12.4**
- **5 - 14 years - 7.5**
- **Pregnant women – 18.4**
- **Aboriginals – 21.9**

## Pandemic (H1N1) 2009: Ontario/Canadian Demographics

	Reported cases	Hospitalized cases	ICU	Deaths
<b>Median age</b>	<b>18 (Canada)</b>	<b>21/23</b>	<b>37 (Canada)</b>	<b>56/50</b>
<b>Underlying conditions (%)</b>	<b>36 (Canada)</b>	<b>67/58</b>	<b>68 (Canada)</b>	<b>87/79</b>

## Severe outcomes

**“Children under 2 years of age, pregnant women, persons under 65 years of age with underlying medical conditions and Aboriginal populations have higher rates of hospitalizations and greater risk of severe outcomes (ICU admissions and deaths). Aboriginal communities have more pregnant women, young children, and underlying chronic disease than the general Canadian population, which may explain the disproportionate number of severe cases in this population.”**

**Flu Watch**

## Severe outcomes

- **Children < 5 years of age have also the highest ICU admission rate**
- **mortality rate highest in > 65 years (0.42 per 100,000), followed by the cases between 45 and 64 years (0.27 per 100,000)**

## Health System Issues

- a) Primary care
- b) Alternative assessment, treatment and referral
- c) Acute care
- d) Critical care

## Primary Care

- **Inadequately prepared in the spring re infection prevention and control**
- **OHPIP primary care chapter useful in guidance re maintaining primary care services**
- **Variable response**

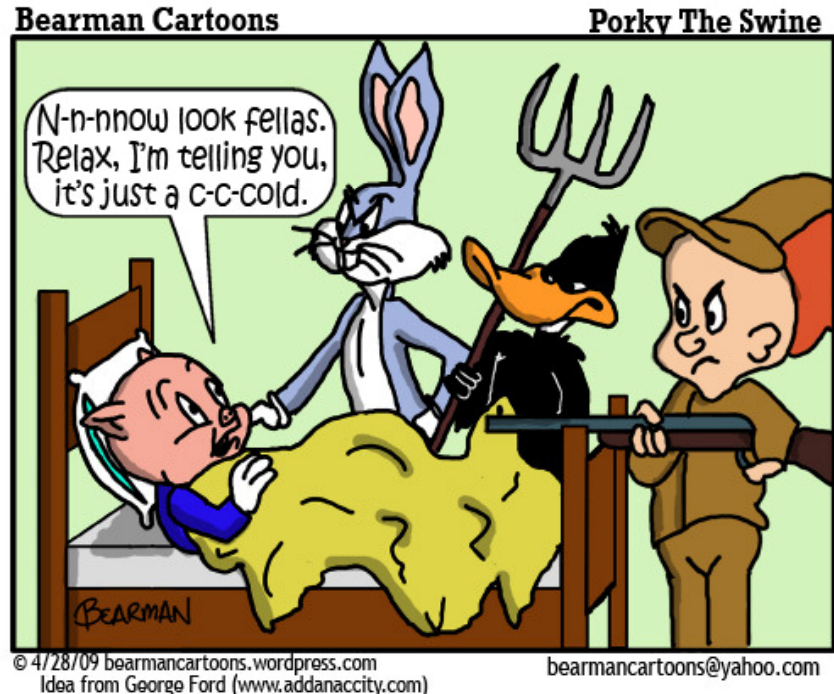
## Primary Care strategies

- **Self assessment algorithms**
- **Telehealth**
- **IPC and Clinical guidance for ambulatory care settings**
- **Provider education and support**
- **Maintaining services: cohorting patients, group coverage, phone assessments**

## Primary Care

- Primary care system is still “primary” in this pandemic,

however....



## **Alternative Assessment, Treatment and Referral Strategies (e.g. flu centres)**

- **Local contingency plans should address circumstance where local primary care system is unable to meet demand for assessment, treatment and referral**
- **Local plan to be flexible and address strengths and constraints of local health care delivery system**
- **Health care providers to work with local public health unit to put plan in place**

## **Alternative Assessment, Treatment and Referral Strategies: examples:**

- **“Flu Centre” – ad hoc health facilities performing assessment, treatment and referral services**
- **Augmented hours of primary care operation, staff resources of existing primary care centres**
- **Out-patient hospital clinic**
- **Mixed approach including some or all of the above**

## Acute Care

- **20-25% of hospitalizations have been ICU admissions**
- **Due to “polarity” of illness, non-ICU care may not be as stressed as Critical Care**
- **Exception may be in children <5: asthma, croup, bronchiolitis**

## Critical Care Surge Planning

- **pH1N1 critical care surge strategy currently in development by Emergency Management Branch and the Critical Care Secretariat**
- **Goal is to optimize existing critical care surge resources through the LHIN-based Surge Capacity Management Program and to provide for contingencies should existing resources become overwhelmed**

## Critical Care Surge Planning

- **On-going monitoring and analysis of critical care resource utilization**
- **Application of principles and approaches of the provincial Surge Capacity Management Program: hospital-based and LHIN-based**
- **Encourage local planning, using strategies outlined in OHPIP**
- **Clinical guidance for critical care (in development)**
- **Provincial support for additional ventilator capacity**

## Summary: Clinical lessons

- **Mild in many, severe in some**
- **Clarification on nasopharyngeal testing: indications, technique, level of protection**
- **Early treatment important: Access to antiviral medication**
- **Recommending antivirals for children, elderly, pregnant women, morbid obesity, underlying illness**
- **Watch out for those who get sick**

## Health System Issues

- **Primary care settings: infection prevention and control concerns for office staff & patients, maintaining services**
- **Linkages between public health and primary care**
- **Role of 'flu assessment & treatment centres**
- **Anticipate stress on primary care, acute paediatrics and adult critical care**

**“Plans are useless, but planning is indispensable.”**

**Dwight D. Eisenhower**