

H1N1 Flu Virus (Human Swine Influenza) Information Resources

(last updated June 17th, 2009 at 6pm)

Overview

- Confirmed cases in Ontario as of **June 17**: 2,265 (2 deaths)
- Confirmed cases in Canada as of **June 17**: 4906 (incl. 12 deaths)
- Confirmed cases worldwide as of **June 15**: 35,928 (incl. 163 deaths)
 - **WHO pandemic level: 6**
 - [JUNE 11] World now at the start of 2009 influenza pandemic
http://www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/index.html
- A Sanofi executive announced today at a health conference in Seattle that the company will donate 100 million doses of novel H1N1 influenza vaccine to the World Health Organization (WHO) to support its efforts to help the world's poorest nations respond to the pandemic, the company said in a press release. The company said that once vaccine production begins it will set aside 10% of doses to donate to the WHO. Novartis said recently it will provide discounted, but not free, vaccines. [\[Jun 17 Sanofi press release\]](#)
- The [map of Risk of Spread](#) shows the UK most at risk to the spread of an influenza pandemic, ranking number 1 out of 213 countries.

Contents

[Events](#)

Updates by Jurisdiction

Ontario

[Ontario Ministry of Health and Long-Term Care \(MOHLTC\)](#)
[Ontario Agency for Health Promotion and Protection \(OAHPP\)](#)

Canada

[Public Health Agency of Canada \(PHAC\)](#)

United States

[Centers for Disease Control and Protection \(CDC\)](#)
[Center for Infectious Disease Research & Policy](#)

Europe

[United Kingdom's Health Protection Agency \(HPA\)](#)
[European Centre for Disease Control and Prevention \(ECDC\)](#)

International

[World Health Organization \(WHO\)](#)
[Pan American Health Organization \(PAHO\)](#)

Live Searches, News Feeds and Disease Tracking Tools

[Google news search](#)
[Mapping resources](#)
[Twitter feeds](#)

Other Resources

[Scientific Resources](#)
[Research Articles](#)
[Clinical and Public Health Practice Tools](#)
[Historical Resources](#)
[Travel Advisories](#)

Events

Upcoming



[JUNE 24] The Ontario Hospital Association presents [The Pandemic Influenza: Where are we now?](#). The primary goal of this conference is to provide healthcare facilities with the tools and information they need to be able to recognize and manage an influenza pandemic. Chaired by Dr. Mary Vearncombe. Topics to include: H1N1 scientific update, ethics, occupational health issues, preparing for a pandemic vaccine response, risk communication, public health measures, and lessons learned. For brochure details and agenda: [Click here](#)
To register on-line: [Click here](#)

Archived

[JUNE 9] The American Bar Association's Health Law Section, the CDC Clinician Outreach and Communication Activity (COCA), and the CDC Public Health Law Program have collaborated to present a teleconference entitled ***Legal Issues Related to Novel Influenza A (H1N1)***. The PowerPoint Presentation will be available on the COCA website <http://emergency.cdc.gov/coca/callinfo.asp>

[JUNE 4] Briefing on A(H1N1) influenza outbreaks by Dr. Jon K. Andrus, Pan American Health Organization. Registration not required. Canadian Toll-Free Number: 1-866-682-1172. Questions can also be sent by email: pressconference@paho.org
http://new.paho.org/hq/index.php?option=com_content&task=view&id=1458&Itemid=1

[MAY 17] *The Lancet* co-hosted a session on influenza A H1N1 at the European Congress on Clinical Microbiology and Infectious Diseases (ECCMID) in Helsinki, Finland. Video highlights available at link below. www.TheLancet.com/H1N1-flu.

Ministry of Health and Long-Term Care (MOHLTC)



[JUNE 17] Confirmed cases of H1N1 Flu Virus in Ontario as of 3:00pm: **2,265**
http://www.health.gov.on.ca/english/media/news_releases/archives/nr_09/jun/nr_20090617.html

Dr. Arlene King, Ontario's Chief Medical Officer of Health, says there are 484 new confirmed cases of H1N1 flu virus since Friday, bringing the total number of cases in Ontario to 2,265.

Eighteen people who have the H1N1 flu virus were in hospital as of June 16, a number of whom have underlying medical conditions.

The Ontario cases involve 1,147 males and 1,107 females (the gender of 11 cases is unknown) with an age range of <1 to 80. The average age of the cases is 21.

The breakdown of the cases by health unit is as follows:

Health Unit	New Confirmed Cases	Total Confirmed Cases
Toronto	138	872
Peel Region	120	467
York Region	40	322
City of Ottawa	68	198
Halton	37	177
Durham Region	20	82
Simcoe Muskoka District	12	29
Northwestern	20	24
Hamilton	11	22
Wellington Dufferin Guelph	0	13
Haliburton, Kawartha, Pine Ridge	4	8
Waterloo Region	2	7
Middlesex-London	1	6
Niagara Region	2	5
Windsor Essex	0	5
Chatham Kent	4	4
Sudbury and District	0	4
Grey Bruce	2	3
Eastern Ontario	1	2
Haldimand Norfolk	1	2
Hastings and Prince Edward Counties	0	2
Kingston, Frontenac, Lennox and Addington	0	2
Leeds, Grenville & Lanark	0	2
Oxford County	0	1
Renfrew	0	1
Thunder Bay	1	1
Out of province (*)	0	4
TOTAL	484	2,265

(*) – Visitors who were tested and confirmed in Ontario but do not reside in the province.

Important Health Notices

[JUNE 11] H1N1 Update

The WHO has raised the global pandemic alert level from Phase 5 to Phase 6, signaling that a global pandemic is underway. This is based on trends in transmission globally, and does not reflect any change in severity of the circulating virus. Guidance to health care settings in Ontario remains unchanged.

http://www.health.gov.on.ca/english/providers/program/emu/health_notice/s/ihn_20090611.pdf

[ARCHIVE] Previous MOHLTC updates and news conference video footage available at:

http://www.health.gov.on.ca/english/public/updates/archives/hu_09/swine_flu.html

Ontario Agency for Health Protection and Promotion (OAHPP)

[ARCHIVE] Swine Influenza Outbreak page (no new resources since May 3)

<http://www.oahpp.ca/SRI%20Bulletin.php>

Public Health Agency of Canada (PHAC)



[JUNE 17] As of June 17 2009, a total of 4,906 laboratory-confirmed cases of H1N1 flu virus have been reported in all provinces and territories in Canada except Newfoundland. To date, 284 hospitalizations and twelve deaths have been reported among laboratory-confirmed cases. The most recent date of symptom onset is June 8th, 2009.

Province / Territory	New Confirmed Cases	Total Confirmed Cases	Total Deaths
British Columbia	19	191	0
Alberta	137	401	1
Saskatchewan	54	381	0
Manitoba	106	260	2
Ontario	360	2267	2
Quebec	145	1116	7
New Brunswick	0	2	0
Nova Scotia	10	91	0
Prince Edward Island	0	3	0
Newfoundland	2	3	0
Yukon	0	1	0
Northwest Territories	2	4	0
Nunavut	21	185	0
TOTAL	856	4905	12

<http://www.phac-aspc.gc.ca/alert-alerte/swine-porcine/surveillance-eng.php>

[JUNE 12] Frequently asked questions: update
http://www.phac-aspc.gc.ca/alert-alerte/swine-porcine/faq_rg_swine-eng.php

[ARCHIVE] Previous PHAC documents and updates available from:
http://www.phac-aspc.gc.ca/alert-alerte/swine_200904-eng.php

Centers for Disease Control and Prevention (CDC)

The CDC now posts case count updates on Friday only



[JUNE 16] Interim Guidance for Homeless and Emergency Shelters on the Novel Influenza A (H1N1) Virus
<http://www.cdc.gov/h1n1flu/guidance/homeless.htm>

[JUNE 16] Questions and answers: novel H1N1 flu (swine flu) and you [updated]
<http://www.cdc.gov/h1n1flu/qa.htm>

[JUNE 14] Interim CDC Guidance on Day and Residential Camps in Response to Human Infections with the Novel Influenza A (H1N1) Virus
<http://www.cdc.gov/h1n1flu/camp.htm>

[JUNE 12, 11am] Confirmed and probable cases in the US: **17,855** (incl. 45 deaths). Section also includes an updated summary of H1N1 in the U.S.
<http://www.cdc.gov/h1n1flu/update.htm>

[ARCHIVE] Previous CDC documents and updates available from:
<http://www.cdc.gov/h1n1flu/guidance/>

Center for Infectious Disease Research and Policy

[JUNE 16] US hunt for novel flu reveals persistence of seasonal strains
<http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/jun1609/seasonal-jw.html>

[ARCHIVE] Older updates from CIDRAP available at:
<http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/index.html>

Health Protection Agency (UK)



[JUNE 16] Confirmed swine flu cases in UK: **1461**
http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1245138057630

[ARCHIVE] Swine Influenza page:

<http://www.hpa.org.uk/webw/HPAweb&Page&HPAwebAutoListName/Page/1240732817665?p=1240732817665>

European Centre for Disease Prevention and Control (ECDC) and European Society for Clinical Microbiology and Infectious Diseases



[JUNE 17] Situation report: **2,574** confirmed cases in EU/EFTA countries

167 new cases were reported in EU and EFTA countries;
2,159 new cases were reported from non-EU and EFTA countries;

http://www.ecdc.europa.eu/en/files/pdf/Health_topics/Situation_Report_090617_1700hrs.pdf



[JUNE 17] Guide to public health measures to reduce the impact of influenza pandemics in Europe – ‘The ECDC Menu’

http://www.ecdc.europa.eu/en/files/pdf/Health_topics/0906_TER_Public_Health_Measures_for_Influenza_Pandemics.pdf

[ARCHIVE] Maps, surveillance summaries and previous ECDC updates available from:

<http://www.ecdc.europa.eu/en/Health%5Ftopics/novel%5Finfluenza%5Fvirus/2009%5FOutbreak/>

World Health Organization (WHO)



[JUNE 15] Update 49: As of 17:00 GMT, 15 June 2009, 76 countries have officially reported 35,928 cases of influenza A(H1N1) infection, including 163 deaths.

http://www.who.int/csr/don/2009_06_15/en/index.html



[JUNE 15] Influenza A(H1N1) patient care checklist

http://www.who.int/csr/resources/publications/swineflu/patient_care_checklist/en/index.html

[ARCHIVE] WHO H1N1 Guidance documents available at:

<http://www.who.int/csr/disease/swineflu/guidance/en/index.html>

[ARCHIVE] Older WHO updates available at:

<http://www.who.int/csr/disease/swineflu/en/index.html>

Pan-American Health Organization (PAHO)



[JUNE 16] Influenza A(H1N1) Regional Report

As of 16 June 2009, **32,663 confirmed cases** of the new virus influenza A (H1N1) infection, including **167 deaths**, have been notified in 26 countries of the Americas: Argentina, Bahamas, Barbados, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Panama, Peru, United States, Trinidad and Tobago, Uruguay and Venezuela.

WHO is not recommending any travel restrictions related to the outbreak of the Influenza A (H1N1) virus.

In the Americas Region, there were **224 additional confirmed cases** compared to previous day. **Argentina notified its first death** caused by the new influenza A (H1N1) virus. The following overseas territories have confirmed cases of influenza A (H1N1): Bermuda, UK (1); Cayman Islands, UK (4); Virgin Islands, UK (1); and Martinique, French Department (1).

http://new.paho.org/hq/index.php?option=com_content&task=view&id=1499&Itemid=1167

[ARCHIVE] PAHO Influenza A(H1N1) Portal

http://new.paho.org/hq/index.php?option=com_content&task=blogcategory&id=805&Itemid=569&lang=en

Google News Search on Swine Flu

[June '09] Results are refreshed each time you click on the link.

<http://www.google.com/cse?cx=014077570761466621685%3As7g-vji-dmo&cof=FORID%3A11&q=swine+flu&sa=search+influenza+sites>

Mapping Resources



ScienceDaily (June 17, 2009) — A Warwick Business School professor and one of the founders of global risks specialist, Maplecroft, has released three new maps and indices revealing the countries most at risk from an influenza pandemic.

The Influenza Pandemic Risk Index (IPRI) consists of three categories:

- Risk of Emergence
- Risk of Spread
- Capacity to Contain

Each index generates a list of countries most at risk and which require a tailored policy response on the part of government and business. Maplecroft's research focuses on global risks to business.

The map of Risk of Spread shows the UK most at risk to the spread of an influenza pandemic, ranking number 1 out of 213 countries. The Netherlands, Germany, Italy, Russia, Canada and Japan are also categorised as extreme risk because of their high population density, urbanisation and busy airports.

Even though the UK and other developed Western nations are at extreme risk of spread, their capacity to contain influenza pandemics ranks low risk. Large stockpiling of drugs and a sophisticated health infrastructure, which the Capacity to Contain index captures, means they have very effective measures with which to fight human influenza. Sub-Saharan Africa stands out as the area least able to contain pandemic influenza with 27 out of the 30 most extreme risk countries.

Read more at: <http://maps.maplecroft.com/panspread>

World Health Organization interactive timeline map of cases: view the number of cases reported on any given day since April 26, 2009
http://www.who.int/csr/disease/swineflu/history_map/InfluenzaAH1N1_maps.html

Pan-American Health Organization: Atlas to Confirmed Cases of Influenza A(H1N1)
<http://ais.paho.org/flu/sm/en/atlas.html>

HealthMap: Swine flu global disease alert map
<http://www.healthmap.org/en>

Google: Swine flu map
<http://maps.google.com/maps/ms?ie=UTF8&hl=en&t=p&msa=0&msid=106484775090296685271.0004681a37b713f6b5950&z=2>

Twitter Feeds, Weblogs, RSS Feeds, etc

World Health Organization News on Twitter
<http://twitter.com/whonews>

Health Map on Twitter
<http://twitter.com/healthmap>

Avian/Pandemic Influenza Daily Digest on Twitter
<http://twitter.com/AIDigest>

CDC swine flu updates on Twitter

<http://twitter.com/cdcemergency>

Avian/Pandemic Influenza Daily Digest Blog

<http://aidailydigest.blogspot.com/>

Avian/Pandemic Influenza Daily Digest RSS Feed

http://twitter.com/statuses/user_timeline/32957440.rss

Business Resources

Harvard Health Publications

Business Preparedness for Pandemic: Executive briefing for corporate and governmental decision-makers

https://www.health.harvard.edu/special_health_reports/Business-Preparedness-for-Pandemic?utm_source=twitter&utm_medium=tweet&utm_campaign=0526_tw

Link to report from U.S. Government Accountability Office re Pandemic Planning and funding

<http://www.gao.gov/new.items/d09760t.pdf>

Canadian Business

H1N1 virus: A plan for the worst

http://www.canadianbusiness.com/managing/strategy/article.jsp?content=20090615_10014_10014

Scientific Resources

American Journal of Epidemiology (AJE)

AJE H1N1 Collection (all articles freely available)

<http://aje.oxfordjournals.org/collections/>

American Society for Microbiology

Research Publications on Influenza A(H1N1)

<http://tinyurl.com/asmh1n1>.

BioMed Central

Influenza Gateway (all articles freely available)

<http://www.biomedcentral.com/gateways/influenza>

British Medical Journal

Podcast: Swine flu: planning

<http://podcasts.bmj.com/bmj/2009/05/26/swine-flu-planning/>

Centre for Agriculture and Biosciences International (CABI)

Global Health database: international coverage of all aspects of human health from the Centre for Agriculture and Biosciences International.

<http://217.154.120.6/GLOBALHEALTH/searchform-quicksearch.nsp>



Related: Swine flu **dashboard from CABI.org**

<http://www.netvibes.com/cabialerts>

DynaMed

Clinical summaries on Swine Flu & H1N1: free access courtesy of EBSCO

<http://www.ebscohost.com/dynamed/swineflu/> and

<http://www.ebscohost.com/dynamed/h1n1/>

Epidemiologic Reviews

H1N1 Collection (all articles freely available)

<http://epirev.oxfordjournals.org/collections/>



Epidemiology and Infection

In the light of recent global events and the ensuing public health issues, Cambridge Journals are giving you **FREE access** to articles which are related to the Influenza A H1N1 'swine flu' virus and which are published in Epidemiology and Infection.

[Click here to access a special sample issue covering key research on influenza.](#)

Human/Swine A/H1N1 Influenza Origins and Evolution

<http://tree.bio.ed.ac.uk/groups/influenza/>

Lancet

H1N1 Flu Resource Centre (contains content from numerous Elsevier journals)

<http://www.TheLancet.com/H1N1-flu>

Medline

Medline literature search on H1N1 (current as of today). Click [here](#) to run a search.

Nature

Swine Flu Tracker

<http://www.nature.com/news/specials/swineflu/index.html>

New England Journal of Medicine (NEJM)

NEJM H1N1 Influenza Center

<http://h1n1.nejm.org/>

Science

Science Insider Swine Flu Archives

<http://blogs.sciencemag.org/scienceinsider/swine-flu/>

Thomson Reuters

Free H1N1 briefing (updated daily) from *Proux Science Integrity*® portal

<http://science.thomsonreuters.com/pharma/h1n1/>

New & Notable Research Articles



Toshihiro Tanaka, Ken Nakajima, Atsuko Murashima, Facundo Garcia-Bournissen, Gideon Koren, and Shinya Ito. Safety of neuraminidase inhibitors against novel influenza A (H1N1) in pregnant and breastfeeding women. *CMAJ* published 16 June 2009, 10.1503/cmaj.090866

<http://www.cmaj.ca/cgi/rapidpdf/cmaj.090866v2>

Laetitia Ninove, Céline Gazin, Ernest A. Gould, Antoine Nougairède, Antoine Flahault, Rémi N. Charrel, Christine Zandotti, Xavier de Lamballerie. Vector-Borne and Zoonotic Diseases. -Not available-, ahead of print. doi:10.1089/vbz.2009.0110.

<http://www.liebertonline.com/doi/pdf/10.1089/vbz.2009.0110?cookieSet=1>

Preliminary analysis of Influenza A (H1n1) Individual and aggregated case reports from EU and EFTA countries / ECDC Working Group on Influenza A (H1N1). *Eurosurveillance*, June 11, 2009 .

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19238>

Smith GJD, Vijaykrishna D, Bahl J, et al. Origins and evolutionary genomics of the 2009 swine-origin H1N1 influenza A epidemic. *Nature* 2009.

http://www.nature.com/nature/journal/vnfv/ncurrent/pdf/nature08182.pdf?_xsl=/mobil/cms-common.xsl

Nava GM, Attene-Ramos MS, Ang JK, et al. Origins of the new influenza A (H1N1) virus: time to take action. *Eurosurveillance* 2009 Jun 4;14(22).

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19228>

Development of antivirals to disrupt both neuraminidase and hemagglutinin]. *Scientific American* -

<http://www.scientificamerican.com/article.cfm?id=knocking-out-the-flu>

Update: Novel Influenza (H1N1) virus infection, Mexico, March-May 2009.

MMWR: Vol. 58, no. 21 June 5, 2009

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5821a2.htm?s_cid=mm5821a2_x

M. Lipsitch, et al. Managing and Reducing Uncertainty in an Emerging Influenza Pandemic *NEJM* 2009 May 28: 360(22)

<http://content.nejm.org/cgi/reprint/NEJMp0904380v2.pdf>

V. Trifonov, et al. Geographic Dependence, Surveillance, and Origins of the 2009 Influenza A (H1N1) Virus *NEJM* 2009 May 28: 360(22)

<http://content.nejm.org/cgi/reprint/NEJMp0904572v1.pdf>

Garten Rj et al. Antigenic and Genetic Characteristics of Swine-Origin 2009 A(H1N1) Influenza Viruses Circulating in Humans. Published Online May 22, 2009 *Science* DOI: 10.1126/science.1176225. Abstract only.

<http://www.sciencemag.org/cgi/content/abstract/1176225>

Hobday RA, Cason. The Open-Air Treatment of Pandemic Influenza. *Am J Public Health*. 2009 May 21. [Epub ahead of print]

<http://www.ajph.org/cgi/content/abstract/AJPH.2008.134627v1>

Serum Cross-Reactive Antibody Response to a Novel Influenza A (H1N1) Virus After Vaccination with Seasonal Influenza Vaccine. 2009 May 22;58(19):521-524.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5819a1.htm>

J.A. Belser et al. Past, Present, and Possible Future Human Infection with Influenza Virus A Subtype H7. *Emerging Infectious Diseases*. 2009 June;15(6):859-865.

<http://www.cdc.gov/eid/content/15/6/pdfs/859.pdf>

R. Proff et al. Case-based Surveillance of Influenza Hospitalizations during 2004–2008, Colorado, USA. 2009 June;15(6):892-898.

<http://www.cdc.gov/eid/content/15/6/pdfs/892.pdf>

P.K.C. Cheng et al. Oseltamivir- and Amantadine-Resistant Influenza Viruses A (H1N1). 2009 June;15(6):966-968.

<http://www.cdc.gov/eid/content/15/6/pdfs/966.pdf>

L.J. Radonovich et al. Stockpiling Supplies for the Next Influenza Pandemic. 2009 June;15(6): online only.

<http://www.cdc.gov/eid/content/15/6/e1.htm>

Shetty P. Preparation for a pandemic: influenza A H1N1. *Lancet Infectious Diseases*. 2009 June;9(6):339-340. Abstract only.

[http://www.lancet.com/journals/laninf/article/PIIS1473-3099\(09\)70130-6/fulltext](http://www.lancet.com/journals/laninf/article/PIIS1473-3099(09)70130-6/fulltext)

Putting influenza A H1N1 in its place [editorial]. *The Lancet Infectious Diseases*. 2009 June;9(6):331. Abstract only.

[http://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(09\)70134-3/fulltext](http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(09)70134-3/fulltext).

Cohen J. Past Pandemics Provide Mixed Clues to H1N1's Next Moves. *Science*. 2009 May 22;324:996-997. Abstract only.

<http://tinyurl.com/scienceh1n1>

Clinical and Public Health Practice Tools

[JUNE 15] Algorithms from 18 US states to assist in decisions regarding testing and treatment of H1N1

<http://www.smh.com/sections/services-procedures/medlib/Pandemic/Algorithms/Algorithms.html>

Historical Resources



Howard Markel, MD, PhD; Harvey B. Lipman, PhD; J. Alexander Navarro, PhD; Alexandra Sloan, AB; Joseph R. Michalsen, BS; Alexandra Minna Stern, PhD; Martin S. Cetron, MD. Nonpharmaceutical Interventions Implemented by US Cities During the 1918-1919 Influenza Pandemic. *JAMA*. 2007;298(6):644-654.

<http://jama.ama-assn.org/cgi/content/full/298/6/644>

Interview: Swine flu of 1976: lessons from the past. Interview with Harvey V Fineberg (*WHO Bulletin* June 2009)

<http://www.who.int/bulletin/volumes/87/6/09-040609.pdf>

The Swine Flu Affair: Decision-Making on a Slippery Disease [1978]

http://www.nap.edu/catalog.php?record_id=12660&utm_medium=etmail&utm_source=National%20Academies%20Press&utm_campaign=Swine%20Flu%203&utm_content=Downloader&utm_term

Travel Advisories

Public Health Agency of Canada no longer recommends Canadians postpone elective or non-essential travel to Mexico [May 19]
<http://www.phac-aspc.gc.ca/tmp-pmv/2009/h1n1-mexico-090518-eng.php>