INFORMATION NOTICE

The Canadian Pandemic Influenza Plan (the Plan) was developed through a collaborative process between Federal, Provincial, Territorial, local and regional governments and non-government stakeholders.

Development of the Plan was coordinated by Health Canada with direction from the Pandemic Influenza Committee, a federal, provincial and territorial advisory committee. The Plan is provided for information purposes only as an outline for the planning, preparedness and response to pandemic influenza by governments within their respective roles and responsibilities.

Terms and definitions contained in the Plan are for convenience only. It is the User's responsibility to determine if any term or definition contained in the Plan is appropriate for the purposes for which it is intended to be used by the User.

DISCLAIMER

The views and recommendations expressed in the Plan represent a collaborative effort between Federal, Provincial, Territorial, local and regional governments and non-government stakeholders.

Users should seek their own legal advice in regards to their use of the information, views and recommendations contained in the Plan.

COPYRIGHT AND PERMISSION

The Plan is protected by copyright, 2004 Her Majesty the Queen in Right of Canada.

The Plan my be used and reproduced by the User for information purposes and for the User's own purposes respecting their pandemic influenza planning. The User shall not otherwise reproduce the Plan or distribute the Plan to any third pary, in whole or in part, for commercial or for any other purposes by any means, without the prior written permission of Health Canada. Requests for permission may be made to Health Canada as follows:

Position of contact: Director of Immunization and Respiratory Infections Divisiom

Centre for Infectious Disease Prevention and Control (CIDPC)

Health Canada

Address of contact: Tunney's Pasture, A.L. 0603E1

K1A 0K9

Fax: (613) 998-6413

Canadian Pandemic Influenza Plan

Table of Contents

Pref	ace	3
Section	One: Introduction	
1.1	Goal of Influenza Pandemic Preparedness and Response	7
1.2	Overview of the Canadian Pandemic Influenza Plan	7
1.3	Roles and Responsibilities	9
	1.3.1 The Pandemic Influenza Committee	10
	1.3.2 The Pre-Pandemic Period	10
	1.3.3 The Pandemic Period	13
	1.3.4 The Post-Pandemic Period	14
Section	Two: Background	
2.1	Epidemiology of Pandemic Influenza	17
2.2	Estimated Impact of an Influenza Pandemic on Canadians	18
2.3	Terminology	20
	2.3.1 Pandemic Phases	20
	2.3.2 List of Abbreviations	21
2.4	Legal Considerations	22
2.5	Ethical Considerations	23
Section	Three: Preparedness	
3.1	Introduction	27
	3.1.1 Background	27
	3.1.2 Populations under Federal Jurisdiction	27
3.1	Components of the Preparedness Section	28
	3.2.1 Surveillance	28
	3.2.1.1 Current Status	29
	3.2.1.2 Planning Principles and Assumptions	30

	3.2.2	Vaccine	Pro	grams	30
		3.2.2.1	Cu	rrent Status	31
		3.2.2.2	Pla	nning Principles and Assumptions	32
	3.2.3	Antiviral	s.		34
		3.2.3.1	Cu	rrent Status	35
		3.2.3.2	Pla	nning Principles and Assumptions	35
	3.2.4	Health S	Serv	ices Emergency Planning	36
		3.2.4.1	Cu	rrent Status	36
		3.2.4.2	Pla	nning Principles and Assumptions	37
			i)	Infection Prevention and Control	37
			ii)	Clinical Management of Influenza	38
			iii)	Resource Management	38
			iv)	Non Traditional Workers: Health Care Workers and Volunteers	40
	3.2.5	Emerge	ncy	Services	40
				rrent Status	40
				nning Principles and Assumptions	40
	3.2.6			h Measures	41
		3.2.6.1	Cu	rrent Status	41
		3.2.6.2	Pla	nning Principles and Assumptions	42
3.2.7		Commu	ınica	ations	42
		3.2.7.1	Cu	rrent Status	43
		3.2.7.2	Pla	nning Principles and Assumptions	44
3.3	Planni	Planning and Preparedness Checklists			45
	3.3.1	Pandem	nic P	lanning Checklists	45
		3.3.1.1	Su	rveillance Checklist	46
		3.3.1.2	Va	ccine Programs Checklist	46
		3.3.1.3	An	tivirals Checklist	48
		3.3.1.4	Не	alth Services Emergency Planning	48
		3.3.1.5	Em	nergency Planning and Response	49
		3.3.1.6	Co	mmunications Checklist	50

Section Four: Response

4.1	Introduction	53
4.2	Phased Approach	53
4.3	Federal Emergency Response	54
4.4	Experience to Date	54
4.5	Key Response Activities by Pandemic Phase	55
	Phase 0, Level 1 Novel virus identification in a human	56
	Phase 0, Level 2 Human infection confirmed	58
	Phase 0, Level 3 Human to human transmission confirmed	61
	Phase 1 Pandemic confirmed	65
	Phase 2	
	Outbreaks in multiple geographic areas (within Canada)	69
	Phase 3 End of first wave	72
	Phase 4 Second or later waves	75
	Phase 5 Post-pandemic/recovery	76

Section Six: List of Annexes

The annexes were based on the data available and prevailing beliefs and approaches to pandemic planning at the time they were written; they may be updated separately as needed to ensure that they remain current and realistic.

Annex A:	Glossary of Terms	81
Annex B:	Pandemic Influenza Planning Considerations in First Nations Communities	93
Annex C:	Canadian Pandemic Influenza Plan: Laboratory Procedures	95 95
	WHO Phase 0, Level 1, 2 Novel Influenza Subtype Identified in One or More Human Cases	96
	Transmission Confirmed	97
	WHO Phase 1, 2, 3 Pandemic in Canada	97
	WHO Phase 4 Second or Later Waves in Canada	98
	WHO Phase 5 Post-pandemic Period in Canada	98
Annex D:	Recommendations for Pandemic Vaccine Use in a	
	Limited Supply Situation	99
	Recommended Priority Groups	99
	Group 1: Health care workers, paramedics/ambulance attendants and public health workers	99
	Group 2: Essential service providers	100
	Group 3: Persons at high risk of severe or fatal out-	
	comes following influenza infection	100
	Group 4: Healthy adults	101
	Group 5: Children 24 months to 18 years of age	101
Annex E:	Planning Recommendations for the Use of Antivirals (Anti-Influenza	
	Drugs) in Canada During a Pandemic	103
	Background	103
	General Considerations	103
	Classes of Antivirals (Anti-Influenza Drugs)	103
	Recommendations of the Antivirals Working Group	104
	Rationales for Specific Recommendations	105
	Outstanding Issues	108

Annex F:	Pandemic Influenza In Traditional and Non-Traditional Health Care Settings	111
		121
		121
		122
	Occupational Health and Infection Control Management of Pandemic Influenza in Traditional and Non-Traditional	100
	3	126
		131
	Public Health Restrictions on Public Gatherings	134
	Part B: Pandemic Influenza in Traditional Settings	136
	Management of Pandemic Influenza in Acute Care Settings	136
	Management of Pandemic Influenza in Long-term	
		141
	Management of Pandemic Influenza in Ambulatory	1 40
	3	146
	3	149
	Management of Pandemic Influenza in Community Settings	152
	Part C: Pandemic Influenza in Non-Traditional Settings	166
	Infection Control and Occupational Health in Triage	
	3	166
	3	173
	Infection Prevention and Control in Temporary	177
	Influenza Hospitals	1//
	Appendices	192
	References	200
Annex G:	Clinical Care Guidelines and Tools	211
	Chapter 1. Clinical presentations of influenza	215
	Most Common Clinical Presentations	218
	Complications of Influenza	224
	Chapter 2. Patient Management I: Initial Assessment Management	230
		230
	S S	231
		238

Appendix 2.II. Assessment forms	246 266 281
Management of Patients in	285 285 285
	286
Appendix 3.I. ILI surveillance in a long term care facility	292
Chapter 4. Patient Management III: Management of patients in Non-traditional Facilities and Telephone advice	293
	294
Hospital Management: Emergency Room, Short-term observation and Ward management, Intensive Care Unit	294
_	294
Short-term observation	294
	295
Intensive Care Unit	297
Death Registration	297
Appendix 5.II. Viral Diagnostic Tests	298 306 308 314
Remote Rural areas and Aboriginal Communities	319 319 327
D. C	222

Annex H;	Background	347 350 352 358 368
Annex I:	Planning for Mass Fatalities	375 377 382 383 385
Annex J:	Non-Traditional Sites	387 390 403
Annex K:	Strategic Considerations	421 422 423 423 423 424 426 427 427 428
Annex L:	Federal Emergency Planning Documents	429

Foreword and Acknowledgements

The Canadian Pandemic Influenza Plan maps out how Canada will prepare for and respond to a pandemic influenza outbreak. It does so by clarifying the roles and responsibilities of those who would be involved in such a public health emergency – governments at all levels, public health officials and front-line health care workers. As a practical working tool, it also provides guidelines and checklists to assist various jurisdictions with their emergency planning.

The ultimate goal of the Plan is to minimize serious illness and death, in the event of an influenza pandemic, and also to ease any social or economic disruption that might be caused by a massive outbreak of the disease. Canada has had a pandemic influenza plan since 1988, and it continues to evolve based on research, evidence and lessons learned.

The **Canadian Pandemic Influenza Plan** is the product of extensive dialogue and collaboration within the *Pandemic Influenza Committee (PIC)*. Created in 2001, PIC consists of 17 voting members, including representatives from all provinces and territories. Expertise within PIC includes Chief Medical Officers of Health, epidemiologists, virologists, communicable disease specialists, clinical, public health and laboratory specialists.

Committee members, in turn, have been greatly assisted through a process of consultation with a wider group of stakeholders, including the health non-government organization community, local governments, emergency planners, and bioethicists.

For the past two years, we have had the privilege of serving as co-chairs of the Pandemic Influenza Committee. It has been an immensely enriching experience, to watch the current document take shape and to see the sheer amount of time, dedication and commitment poured into the creation of the current document. We would like to thank all those whose contribution helped bring the Plan off the "drawing board" and into reality.

Arlene King
Director
Immunization and Respiratory
Infections Division
Health Canada

Yves Robert
Ancien médecin conseil en maladies
infectieuses
Direction de la protection de la santé publique
Ministère de la Santé et des Services sociaux
du Québec

February 2004

Pandemic Influenza Committee

Federal Co-Chair

Dr. Arlene King, Director Immunization and Respiratory Infections Division Centre for Infectious Disease Prevention and Control Health Canada

Provincial Co-Chair (Past)

Dr. Yves Robert Ancien médecin conseil en maladies infectieuses Ministère de la santé et des services sociaux du Québec

Alberta

Dr. Karen Grimsrud Deputy Provincial Health Officer Alberta Health and Wellness

British Columbia

Dr. Danuta Skowronski Physician Epidemiologist British Columbia Centre for Disease Control

Manitoba

Dr. Joel Kettner Chief Medical Officer of Health Manitoba Health

Alternate

Dr. Susan Roberecki Deputy Chief Medical Officer of Health Manitoba Health

New Brunswick

Dr. Wayne MacDonald Chief Medical Officer of Health New Brunswick Department of Health

Newfoundland/Labrador

Dr. Faith Stratton Director Disease Control and Epidemiology Department of Health and Community Services

Alternate

Ms. Cathy O'Keefe
Disease Control Nursing Specialist
Department of Health and Community
Services

Nova Scotia

Dr. Jeff Scott Provincial Medical Officer of Health Nova Scotia Department of Health

Alternate

Dr. Joanne Langley Clinical Trials Research Centre Department of Pediatrics Dalhousie University

Nunavut

Ms. Carolina Palacios Communicable Disease Consultant Health Protection Unit, Department of Health and Social Services

North West Territories

Ms. Cheryl Case Communicable Diseases Consultant Department of Health and Social Services

Alternate

Ms. Wanda White Population Health Health Protection Unit Department of Health and Social Services

Ontario

Dr. Karim Kurgi (Acting) Chief Medical Officer of Health Ontario Ministry of Health and Long-Term Care

Alternate

Dr. Erika Bontovics Ontario Ministry of Health and Long-Term Care

Prince Edward Island

Dr. Lamont Sweet Chief Health Officer Department of Health and Social Services

Quebec

Dr. Monique Landry Médicin conseil en maladies infectieuses Direction générale de la santé publique

Alternates

Dr. Horacio Arruda Directeur de la Protection de la santé publique Ministère de la Santé et des Services sociaux Louise Alain, Épidémiologiste Bureau de Surveillance et de Vigie sanitaire Ministère de la santé et des services sociaux du Québec

Saskatchewan

Dr. Eric Young Deputy Chief Medical Officer Saskatchewan Health

Yukon

Dr. Bryce Larke Yukon Medical Health Officer

Bioethicist

Dr. Caroline Alfieri, Virologist/Bioethicist Centre de recherche, Hôpital Ste-Justine Montreal. Quebec

Liaison Members

Dr. Ezzat Farazad Community Medicine Specialist First Nation's and Inuit Health Branch Health Canada

Dr. Theresa Tam, Medical Specialist Immunization and Respiratory Infections Division Health Canada

Mr. Frank Welsh, Director Office of Emergency Preparedness Planning and Training Health Canada

Past Members

Quebec Dr. Yves Robert

(Past Provincial Co-Chair)

Ontario Dr. Colin D'Cunha
Nunavut Ms. Mehrun Forth
Dr. Victor Marchessault, Past Chair*

National Advisory Committee on Immunization (NACI)

Working Groups

Infection Control and Occupational Health Working Group

Dr. Mary Vearncombe - Chair Sunnybrook and Women's College Health Sciences Centre

Ms. Merle Agard

Occupational Health Nurse Association

Ms. Patricia Bleacklev

Yukon Communicable Disease Control

Mr. Blair Cutcliffe

Funeral Services Association of Canada

Mrs. Rolande D'Amour Health Canada

Dr. Patty Daly

Vancouver Richmond Health Board

Dr. Bonnie Henry Toronto Public Health

Ms. Judy Morrison Health Canada

Ms. Laurie O'Neil

Infection Control and Prevention Consultant

Ms. Shirley Paton Health Canada Ms. Joan Rannie

Canadian Red Cross

Dr. Ross Upshur Sunnybrook and Women's College Health Sciences Centre

Dr. Thomas Wilson Regional Coroner, London, Ontario

Dr. Alice Wong Royal University Hospital Saskatoon, Saskatchewan

Health Services Working Group

Ms. Merle Agard Ontario Occupational Health Nurses Association

Jeannine Banack Mt-Sinai Hospital

Ms. Sandra Callery

Canadian Hospital Infection Control

Association (CHICA)

Mrs. Rolande D'Amour

Dr. Theresa Tam Health Canada

Health Canada

Dr. Mike Tarrant**

University of Calgary, Alberta

Dr. Ross Upshur

Sunnybrook and Women's College Health Sciences Centre

Sciences Centre

Dr. Robin Williams

Regional Municipality of Niagara

Surveillance Working Group

Ms. Cathy O'Keefe - Chair

Department of Health and Community Services, Newfoundland and Labrador

Ms. Louise Alain

Ministère de la santé et des services sociaux du Québec

Dr. Nathalie Bastien

National Microbiology Laboratory

Ms. Carole Beaudoin Manitoba Health

Mr. Ken Brandt

Provincial Laboratory, Saskatchewan

Ms. Ann Coombs

Nova Scotia Department of Health

Monique Douville-Fradet

Ministère de la santé et des services sociaux du Québec

Dr. Margaret Fearon

Canadian Public Health Laboratory Network

Ms. Jamie Jensen

College of Family Physicians of Canada

Dr. Theodore Kuschak

National Microbiology Laboratory

Mr. Marc LeCouffe

Department of Health and Wellness

New Brunswick

Dr. Yan Li

National Microbiology Laboratory

Shelley Lothian

College of Family Physicians of Canada

Ms. Jeannette Macey Health Canada

Ms. Teresa Mersereau

Alberta Health and Wellness

Dr. Tracey Parnell

Provincial coordinator/recruiter for

British Columbia

Dr. Danuta Skowronski

British Columbia Centre for Disease Control

Ms. Susan Squires Health Canada

Dr. Lamont Sweet

Department of Health and Social Services

Prince Edward Island

Dr. Theresa Tam Health Canada Dr. Mike Tarrant**

University of Calgary, Alberta

Ms. Wanda White

Government of Northwest Territories

Dr. Wikke Walop Health Canada

Mr. Brian Winchester Health Canada

Laboratory Working Group

Dr. Margaret Fearon - Chair

Canadian Public Health Laboratory Network

Dr. Michel Couillard

Institut national de santé publique du

Québec

Dr. Francisco Diaz-Mitoma

Children's Hospital of Eastern Ontario

Dr. Theodore I. Kuschak

Health Canada

Dr. Spencer Lee

Nova Scotia Department of Health

Dr. Yan Li

Health Canada

Dr. Jim Talbot

Provincial Laboratory of Public Health, Alberta

Non-Traditional Sites Working Group

Ms. Sandra Callery - Chair

Canadian Hospital Infection Control

Association (CHICA)

Mr. Bill Alexander

St John Ambulance

Mr. Mark Allen

Department of Health and Wellness

New Brunswick

Ms. Lynn Cochrane

Department of Health and Wellness

New Brunswick

Ms. Judy Dougherty

Health Canada

Mr. Ron Fenwick

Family Services and Housing, Manitoba

Ms. Mehrun Forth

Health and Social Services, Nunavit

M. Patrice Guyard

Ministère de la Santé et des Services

sociaux, Québec

Mr. Kelly Hart

Health Canada

Mr. Garnet Matchett Saskatchewan Health

Mr. Don Shropshire

Canadian Red Cross Society

Clinical Care Working Group

Dr. Jim Kellner - Co-Chair Alberta Children's Hospital

Dr. Jo-Anne Langley - Co-Chair Clinical Trials Research Centre

Dalhousie University
Ms. Joanne Brubacher
Nurse Practitioner

Ms. Judy Dougherty Health Canada

Dr. Charles Frenette Hôpital Charles Lemoyne

Mr. Brad Gregor

Hay River Community Health Board

Dr. Thomas J. Marrie University of Alberta Dr. Allison McGeer

Mount Sinai Hospital

Dr. Lindsay Nicolle University of Manitoba

Dr. Rose Marie Ramsingh

Health Canada

Dr. Martha Ruben-Campione Biomedical writer

Dr. Mike Tarrant**

University of Calgary, Alberta

Dr. Robin Williams

Regional Niagara Public Health Department

Public Health Measures

Dr. Karen Grimsrud - Chair Alberta Health and Wellness

Dr. Maureen Baikie

Government of Nova Scotia

Ms. Margaret Bodie-Collins

Health Canada

Ms. Lynn Cochrane

Department of Health and Wellness

New Brunswick

Dr. Brent Friesen Calgary Health Region

Dr. Ian Gemmill

Kingston, Frontenac and Lennox and Addington Health Unit, Ontario

Dr. Digby Horne Manitoba Health

Dr. Marcia M. Johnson Capital Health Authority, Alberta

Ms. Kay MacIsaac

Department of Health, Nova Scotia

Ms. Kathy Mestery Manitoba Health

Ms. Peggy Richardson

Health Canada

Dr. Susan Roberecki Manitoba Health

Ms. Jill Sciberras Health Canada Dr. Theresa Tam

Health Canada

Dr. Susan Tamblyn

Perth District Health Unit, Ontario

Dr. Dave Williams Health Canada

Vaccine Working Group

Dr. Susan Tamblyn - Chair Perth District Health Unit, Ontario

Ms. Janet Cooper

Canadian Pharmacists Association

Dr. Karen Grimsrud

Alberta Health and Wellness

Dr. Monika Naus

British Columbia Centre for Disease Control

Ms. Cathy O'Keefe

Department of Health and Community

Services. Newfoundland

Dr. Pamela Orr

Health Sciences Center, Winnipeg, Manitoba

Dr. Yves Robert

Ministère de la santé et des services sociaux du Québec

D., A., Daham

Dr. Ann Roberts

Department of Health and Social Services

Nunavit

Dr. Theresa Tam Health Canada

Antivirals Working Group

Dr. Susan Tamblyn - Chair Perth District Health Unit, Ontario

Dr. Fred Aoki

University of Manitoba

Dr. Charles Bayliff Canadian Pharmacists Association

Dr. Charles Frenette Hôpital Charles-Lemoyne Université de Sherbrooke, Québec

Dr. Victor Marchessault, Past Chair National Advisory Committee on Immunization (NACI)*

Dr. Monika Naus British Columbia Centre for Disease Control

Jill Scibarras Health Canada

Dr. Danuta Skowronski British Columbia Centre for Disease Control

Dr. Theresa Tam Health Canada

Dr. Geoffrey Taylor Alberta Health and Wellness

Additional Health Canada Contributors

Leonor Alvarado
Estelle Arsenault
Lisa Belzak
Shelley Deeks
Margie Lauzon
Jeannette Macey
Sarah Poirier
John Rainford
Jennifer Rendall
Carole Robinson-Oliver
Andrew Swift
John Spika
Lorretta Scott
Nicholas Trudel
Tom Wong

With special thanks to the:

- Advisory Committee for Public Health and Health Security (ACPHHS)
- Council of Chief Medical Officers of Health (CCMOH)

The Pandemic Influenza Committee would like to express its appreciation for the input received from numerous organizations, including the following:

- Biologics and Genetic Therapies Directorate
- Canadian Association of Clinical Microbiology and Infectious Disease
- Canadian Association of Chiefs of Police
- Canadian Association of Fire Chiefs
- Canadian College of Family Physicians

- · Canadian Geriatrics Society
- Canadian Hospital Epidemiology Committee
- · Canadian Infectious Disease Society
- Canadian Medical Association
- Canadian Nurses Association
- Canadian Nursing Coalition for Immunization
- Canadian Occupational Health Nurses Association
- Canadian Public Health Association
- Canadian Public Health Laboratory Forum
- Canadian Paediatric Society
- Canadian Pharmacists Association
- Canadian Police Association
- College of Family Physicians
- Community and Hospital Infection Control Association
- Department of National Defense
- Fédération des médecins omnipracticiens du Québec
- Funeral Service Association of Canada
- National Advisory Committee on Immunization (NACI)
- Office of Critical Infrastructure Protection and Emergency Preparedness (OCIPEP)
- Pan American Health Organization
- Royal Canadian Mounted Police
- St. John Ambulance
- Solicitor General Canada
- The Salvation Army
- The Adventist Development and Relief Agency Canada
- The Mennonite Disaster Service
- The Christian Reformed World Relief Committee of Canada
- The Red Cross Society of Canada
- VON Nurses
- World Health Organization

The Pandemic Influenza Committee extends its gratitude to the staff of the Scientific Publication and Multimedia Services, Health Canada for their contribution to the publication of the Plan.