

An Integrated Needs-Based Approach to Health Service and Health Workforce Planning: Applications for Pandemic Influenza

Démarche axée sur les besoins intégrés pour les services de santé et la planification de la main-d'œuvre en santé : application à une pandémie d'influenza

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Appendix 1. List of pandemic influenza competencies

Overarching competencies

1. Identify need for and obtain guidance on cultural safety as part of pandemic planning and response
2. Provide cultural safety/guidance on pandemic planning and response
3. Incorporate respect for cultural and spiritual diversity into planning and practice
4. Work with the community to incorporate respect for cultural and spiritual diversity into planning and practice
5. Identify need for and obtain guidance on legal and regulatory considerations as part of pandemic planning and response
6. Provide legal and regulatory guidance on pandemic planning and response
7. Identify need for and obtain guidance on spiritual considerations as part of pandemic planning and response
8. Provide spiritual guidance on pandemic planning and response
9. Identify need for and obtain guidance on ethical considerations as part of pandemic planning and response
10. Provide ethical guidance on pandemic planning and response

A: LEADERSHIP AND ADMINISTRATIVE SUPPORT

I: MANAGEMENT AND LEADERSHIP COMPETENCIES

11. Oversee response to outbreaks in healthcare facilities (implementation of infection control measures, immunization clinics and provision of antiviral medications to reduce impact)
12. Organize and staff a traditional care setting for markedly changing patient volumes
13. Staff a traditional care setting (e.g., clinic or hospital ward) to manage fluctuating patient volumes

14. Establish a non-traditional care site (e.g., gymnasium set up as a vaccination centre or influenza care site)
15. Manage a non-traditional care site (e.g., gymnasium as a vaccination centre or influenza care site)
16. Provide general leadership for an area or care setting (e.g., assuming the role of leader, directing and delegating, responding to group needs, problem-solving and role-modelling)
17. Make decisions about the allocation of resources (human and non-human) based on an ethical framework
18. Coordinate with Public Health officials within the health authority to meet surveillance requirements
19. Assess staff competencies (including support staff, technical staff, volunteers, students and other staff not usually assigned to that care site)
20. Assess patient needs and match them to staff competencies
21. Deploy/redeploy staff (clinical and non-clinical; except physicians) across areas based on service needs
22. Create a staff schedule based on patient needs and available staff
23. Carry out succession and contingency planning (e.g., for possible staff illness)
24. Recruit volunteers to meet identified organizational needs
25. Screen volunteers to ensure appropriate qualifications and training to meet organizational needs
26. Collaborate with medical officer of health to deploy physicians appropriately
27. Activate and implement command and control structures in collaboration with emergency operations
28. Manage supply chain(s) for medications, including vaccines, antivirals and those specific to critical care (e.g., sedatives, analgesics, cardiac medications)
29. Manage supply chain(s) for all other supplies (cleaning/sterilization, office, etc.)
30. Manage equipment (e.g., beds, ventilators, monitors) and other non-human resources
31. Manage pharmacy services (including pharmaceutical storage and maintenance of cold chain for vaccines)
32. Manage diagnostic imaging/radiology services
33. Manage health records services (including knowledge of freedom of information and privacy policies and regulations) within traditional care sites
34. Manage health records services within non-traditional care sites (e.g., temporary vaccination centre)
35. Manage security for the protection of people, supplies and information (e.g., crowd control, parking)
36. Manage food services (for patients, families, staff)
37. Manage laundry services (commercial and/or in-house)
38. Manage housekeeping services

39. Manage waste disposal (including bio-hazardous waste)
40. Manage a care facility in terms of ventilation, creation of isolation space, etc.
41. Manage information infrastructure (telephones, e-mail, hospital information system, surveillance infrastructure)
42. Manage clinical laboratory services
43. Manage in-house morgue facilities
44. Determine need for alternate/temporary morgue sites
45. Establish alternate morgue sites/temporary morgues
46. Manage alternate morgue sites/temporary morgues
47. Manage storage and disposition of the deceased

II: PATIENT FLOW ACROSS THE SYSTEM

48. Make decisions about level of care provision to groups of patients based on clinical status and resource availability
49. Provide guidance to navigate the care delivery system
50. Direct patients to appropriate care services
51. Receive and direct patients seeking patient care (manage patient flow within a care site)
52. Coordinate with staff across sites to manage patient movement

III: MANAGING COMMUNICATIONS

53. Develop internal communications plans (e.g., status of pandemic) in collaboration with other agencies such as Ministry of Health/Department of Health & Wellness (MoH/DHW)
54. Implement internal communications plans (e.g., status of pandemic) in collaboration with other agencies such as MoH/DHW
55. Develop external communications plans (e.g., with other levels of care, Public Health Agency of Canada [PHAC], community and non-healthcare organizations) in collaboration with other agencies such as MoH/DHW
56. Implement external communications plans (e.g., with other levels of care, PHAC, community [including non-healthcare organizations]) in collaboration with other agencies such as MoH/DHW
57. Liaise with other agencies and public institutions (e.g., First Nations health authority) to ensure they have adequate pandemic plans in place

IV: LOGISTICS AND ANALYTICS

58. Determine resource (human and non-human) requirements using analytical techniques (e.g., statistical modelling)
59. Develop and implement active, passive and enhanced population surveillance
60. Plan and conduct epidemiological analysis (design databases, coordinate data collection, conduct descriptive analyses, summarize outbreak progression, prepare reports)
61. Maintain databases on resource supply and location

B: MANAGEMENT AND FLOW OF PEOPLE AND MATERIALS

I: MATERIAL TRANSPORTATION COMPETENCIES

62. Coordinate transportation of laboratory specimens
63. Coordinate transportation and disposal of bio-hazardous waste (including sharps)
64. Coordinate transportation of dangerous goods
65. Handle and move lab specimens
66. Handle and move bio-hazardous waste
67. Handle and move dangerous goods

II: HUMAN TRANSPORTATION COMPETENCIES

68. Coordinate transportation of staff between care sites
69. Coordinate transportation of patients between care sites and discharge destination
70. Coordinate preparation and transportation of bodies for burial/cremation
71. Assess and provide care to patients during ground transport
72. Assess and provide care to patients during air transport
73. Prepare bodies for transportation

III: MECHANICAL TRANSPORTATION COMPETENCIES

74. Drive an ambulance
75. Drive water transport
76. Pilot air ambulance
77. Drive a class-2 (passenger transport) vehicle
78. Drive a class-3 (non-passenger transport) vehicle

C: EDUCATION AND LEARNING

I: EDUCATING HEALTHCARE PROVIDERS

79. Develop health education strategies and associated materials for providers
80. Identify learning needs of volunteers and match with appropriate resources
81. Educate healthcare providers (HCPs) about influenza in general and pandemic influenza in particular
82. Educate HCPs about the jurisdictional emergency measures preparedness and its pandemic health services delivery model
83. Educate HCPs about the ethical considerations and decision-making framework of the jurisdictional Health System Pandemic Influenza Plan
84. Educate HCPs about providing culturally and spiritually sensitive care in the context of a flu pandemic
85. Educate HCPs about the jurisdictional Pandemic Influenza Plan
86. Educate HCPs about the chain of command and responsibilities within the jurisdictional emergency response plan
87. Educate HCPs about the use of assessment, triage and management protocols (for patients with and without co-morbidities)

88. Educate HCPs about advance directives (i.e., medical consent and durable powers of attorney)
89. Educate HCPs about personal protective equipment (PPE) (i.e., what to wear, when and how)
90. Educate HCPs about immunization (safety, side effects, indications, etc.)
91. Educate HCPs about provision of immunization (assessment, delivery and monitoring)
92. Educate HCPs about self-screening for influenza illness or other illness (physical, psychological)
93. Educate HCPs about individual preparedness (e.g., family support while working, care for ill family members, wills, etc.)
94. Educate HCPs about making the decision to discontinue/continue working (e.g., based on the health of the provider and/or their families)
95. Educate members of the public (e.g., students, retirees etc.) who have volunteered to assist in various care settings

II: EDUCATING THE GENERAL PUBLIC

96. Develop health education strategies and associated materials for the general public
97. Educate the public about influenza in general and pandemic influenza in particular
98. Develop and coordinate, in collaboration with other agencies such as the PHAC, public education programs regarding pandemic influenza
99. Educate the public about the jurisdictional pandemic health services delivery model, for example, vaccination programs
100. Educate the public about the ethical considerations and decision-making framework of the jurisdictional Health System Pandemic Influenza Plan
101. Educate the public about disease prevention strategies (e.g., mode of transmission, hand hygiene, isolation, immunization)
102. Educate the public about self-care (includes responding to questions by phone, in-person, web)
103. Educate the public about individual preparedness (e.g., caring for ill family members, palliative care, wills)

D: INFECTION CONTROL AND OCCUPATIONAL HEALTH AND SAFETY

104. Implement a site-/area-specific surveillance program for influenza and influenza-like illness (coordinate data collection, summarize outbreak progression, submit report to care site officials and/or Public Health officials)
105. Advise HCPs (in hospital or community settings) regarding appropriate patient placement to minimize/prevent infectious disease transmission
106. Administer influenza immunization to staff
107. Monitor staff for adverse events (e.g., anaphylaxis) associated with immunization and report

108. Manage adverse events associated with immunization
109. Screen staff for illness
110. Screen for eligibility for antiviral treatment/prophylaxis
111. Administer antiviral prophylaxis to staff
112. Monitor staff for adverse events (such as an allergic reaction) associated with prophylaxis and report
113. Manage adverse events associated with prophylaxis
114. Identify staff who, due to illness or burnout, need assistance, rest or other support
115. Provide psychosocial support for staff
116. Recognize the logistical support needs of staff (e.g., food, family support, pet care) and respond/staff accordingly
117. Systematically monitor absenteeism (by various causes)
118. Identify workplace hazards related to risks from influenza as well as influenza care (e.g., needle sticks)
119. Provide on-going education and training related to workplace hazards
120. Rectify identified workplace hazards
121. Respond to exposure incidents (e.g., needle sticks)
122. Manage fit-testing (booking, supply, records)
123. Perform fit-testing
124. Advise HCPs, patients and visitors regarding barrier precautions, hand hygiene and other measures to minimize infectious disease transmission
125. Advise on appropriate cleaning, disinfection and sterilization of medical equipment

E: PUBLIC HEALTHCARE FOR WELL PERSONS

I: IMMUNIZATION

126. Conduct mass immunization clinics in a community setting
127. Screen for eligibility for immunization
128. Take a medical history relevant to immunization, noting contraindications, allergies, etc.
129. Obtain informed consent for immunization
130. Dispense vaccine for administration
131. Implement measures to ensure vaccine integrity (e.g., maintenance of cold chain)
132. Administer vaccine
133. Document vaccination according to policy and regulations
134. Recognize initial adverse events (e.g., anaphylaxis) occurring in community immunization clinics
135. Monitor for adverse events associated with immunization among members of the public (surveillance)
136. Manage adverse events associated with immunization among members of the public
137. Provide psychosocial support to the public
138. Provide pastoral/spiritual support/guidance to the public

II: PROPHYLAXIS

139. Screen members of the public for eligibility for antiviral treatment/prophylaxis
140. Administer antiviral prophylaxis to members of the public
141. Manage adverse events associated with prophylaxis among members of the public

F: CARE FOR PATIENTS WITH INFLUENZA

I: COMPETENCIES ACROSS CARE SETTINGS

142. Conduct a screening history of the chief complaint and relevant aspects of the past medical history (e.g., current medications, co-morbidities)
143. Triage patients according to acuity of illness and need for care and refer to appropriate care setting (primary and secondary assessment, hospital, emergency dept., non-traditional care site, community)
144. Develop care plan with patients/families and other HCPs on team
145. Develop discharge plan with patients/families and other HCPs on team
146. Take a complete health history
147. Perform a physical exam including a respiratory assessment (heart rate, respiratory rate, inspection, percussion, palpation, auscultation, etc.)
148. Order clinical diagnostic tests (e.g., X-rays or computed tomography [CT] scans)
149. Perform point of care tests for laboratory (e.g., hemoglobin, electrolytes, glucose)
150. Measure temperature
151. Take pulse
152. Take blood pressure
153. Take venous blood samples
154. Obtain nasal samples
155. Perform nasopharyngeal wash to obtain sample
156. Obtain throat swabs (with tip touching posterior pharynx)
157. Obtain clinical specimens for other cultured diagnostic laboratory tests (e.g., urine, stool, wound)
158. Interpret the results of history, physical exam, chest X-ray and lab tests, leading to a diagnosis
159. Obtain consent for medications (e.g., antiviral treatment/prophylaxis)
160. Prescribe medication (including antivirals for treatment/prevention of influenza)
161. Monitor for adverse events associated with treatment/prophylaxis
162. Manage adverse events associated with treatment/prophylaxis
163. Admit a patient or discharge a patient to home or to another care setting
164. Recommend supports in the home for personal care/activities of daily living (ADLs) as required
165. Recommend/assist to arrange any self-care or mobility equipment required post discharge from hospital
166. Assist to mobilize/progress activity to recover strength and exercise tolerance
167. Assess the need for pressure relief equipment/positioning as required

168. Order therapeutic diets
169. Adjust therapeutic diets
170. Provide pharmacy services (i.e., check prescriptions for conflicts and dispense them)
171. Prepare total parenteral nutrition
172. Identify need for palliative/end-of-life care (including withdrawal of treatment)
173. Pronounce cessation of life
174. Identify cause of death for death certificate
175. Sign death certificate
176. Provide post-mortem care
177. Store and manage bodies
178. Dispose of bodies

II: SUPPORTIVE CARE ACROSS SETTINGS

179. Assess nutritional and hydration needs of patient
180. Perform oral feeding of patients
181. Assess swallowing ability
182. Initiate and maintain enteral feeding
183. Initiate and maintain parenteral feeding
184. Manage potential influenza cases identified in the community (refer for formal assessment, triage)
185. Educate the patient and family re: hand hygiene routine/use of PPE (e.g., masks)
186. Perform hand hygiene according to provincial policy
187. Don and remove appropriate PPE according to provincial policy
188. Keep patient area, equipment, etc., clean and disinfected
189. Clean the patient room upon discharge of the patient according to level of sanitization required during a pandemic
190. Provide assistance with ADLs (including personal care such as bathing and toileting) to patients
191. Provide psychosocial support to ill patients and families
192. Provide pastoral/spiritual support/guidance to ill patients and families
193. Provide support to patients in their homes (e.g., delivery of meals, groceries, medication, care for dependents, etc.)
194. Educate the patient re: self-care to promote recovery and to regain previous activity levels
195. Educate the patient/family re: community resources available post discharge from hospital (e.g., grocery delivery services)

III: COMPETENCIES WITHIN HEALTHCARE FACILITIES

196. Provide a clinical laboratory testing service (hematology, chemistry, etc.)
197. Provide diagnostic imaging services
198. Measure oxygen saturation

199. Order electrocardiogram (ECG)
200. Perform ECG
201. Interpret ECG
202. Perform intramuscular injections
203. Perform subcutaneous injections
204. Start intravenous lines
205. Maintain intravenous lines (site and tubing)
206. Set up and administer oxygen via nasal prongs and mask
207. Set up and administer oxygen via non-rebreather mask
208. Check oxygen administration set-ups to ensure integrity
209. Administer medication by inhalation
210. Administer medication orally
211. Manage sedation of influenza patients requiring critical care/ICU care
212. Administer medication by intravenous route
213. Administer medication by intravenous push
214. Perform oral suction for patients who are not intubated or trached
215. Perform deep suction for patients who are not intubated or trached
216. Insert and maintain Foley catheters
217. Insert an oral or nasal airway, etc., as part of basic life support techniques
218. Perform intubation
219. Set up ventilation, including establishment of ventilation parameters
220. Monitor ventilation
221. Insert a central line
222. Maintain a central line
223. Insert an arterial line
224. Maintain an arterial line
225. Administer medication by continuous infusion
226. Suction intubated/ventilated patients
227. Undertake advanced cardiac life support interventions
228. Manage inotropes and vasopressors
229. Manage insulin infusions
230. Recommend insulin adjustments
231. Perform peritoneal dialysis
232. Perform hemodialysis
233. Manage dialysis
234. Perform basic life support techniques (CPR)
235. Use Automated External Defibrillator