# **Immunization Program Update**

#### **ISSUE**

Updated information on the status of BC's publicly-funded immunization program.

#### **KEY FACTS**

- BC's publicly-funded immunization program currently protects against 16 different diseases.
- New and more effective vaccines are in continual development. All new vaccines must obtain safety and effectiveness approval from Health Canada prior to being used anywhere in Canada.
- Burden of illness, implementation feasibility and population characteristics vary across Canada. For these reasons, immunization schedules also vary from province to province.
- Immunization is not mandatory in any province or territory in Canada. Everyone is strongly
  encouraged to be vaccinated to prevent illness and outbreaks from vaccine-preventable diseases.
- The public and health professionals can get the latest information on immunization and program eligibility at Immunizebc.ca or by calling HealthLinkBC at 8-1-1.

# **Strategic Direction**

- BC's strategic direction for the delivery of immunization programs is outlined in *Immunize BC:* A Strategic Framework for Immunization in BC (2007).
- BC's Strategic Framework for immunization is being renewed in the 2019/20 fiscal year.
- Changes to BC's publicly funded immunization program are recommended annually by the BC Communicable Disease Policy Advisory Committee. These recommendations are reviewed by the Ministry of Health ahead of final decision by the Minister of Health.<sup>1</sup>

#### Delivery of Vaccines by Health Care Professionals

- Immunizations in BC are delivered by regulated health professionals including physicians, registered nurses, psychiatric nurses, licensed practical nurses, pharmacists and midwives.
- On December 3, 2015, amendments to the *Pharmacists Regulation* and the *Health Professions* Act Bylaws were made to allow certified pharmacists to administer intranasal vaccines to
   individuals 2 years of age and older. Pharmacist are authorized to vaccinate children 5 years of
   age and older.
- The mixed delivery system has created challenges in the recording and accurate measurement
  of health care worker immunization rates, in particular physicians who do not work for health
  authorities and do not have electronic access to provincial occupational health records.

#### Data Collection and Reporting

- BC's Interior, Northern, and Island health authorities use the immunization modules of the Public Health Information System (formerly known as Panorama) to record immunizations.
- Vancouver Coastal and Fraser Health use the PARIS system to record and track immunization records.
- The Provincial Health Services Authority brings together all information from Public Health Information System and PARIS to report provincial immunization coverage rates on behalf of the Ministry of Health and the Provincial Health Officer.

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<sup>&</sup>lt;sup>1</sup> CD Policy is advised by BCCDC, which analyzes recommendations by the National Advisory Committee on Immunization for program feasibility in BC. Modest program changes are implemented by BCCDC with CD Policy consent. Significant alterations resulting in increased costs are presented to CD Policy for recommendation to be approved by the Minister of Health.

# Student Immunization Data and Reporting

- To date, three provinces have legislated immunization reporting policies for students. Ontario
  and New Brunswick require reporting of student immunizations for diphtheria, tetanus, polio,
  measles, mumps, and rubella immunization. Manitoba requires reporting of student measles
  vaccinations.
- If there is an outbreak of disease, an unimmunized child may be told they must stay home from school. This approach keeps unimmunized children and others from getting sick and keeps the outbreak from spreading.
- The BC Centre for Disease Control has implemented the Student Information Exchange, which
  electronically transfers student enrollment information from the Ministry of Education's
  "MyEducationBC" database to the Public Health Information System. The transfer and
  synchronizing of student information increases the efficiency and responsiveness of the health
  system for school-based outbreaks.

#### FluMist Intranasal Spray for Influenza

- Although Pharmacists are authorised to provide intranasal vaccines, e.g., FluMist,
   Pharmaceutical Services Division has not allocated a Product Identification Number (PIN) for publicly funded FluMist.
- For this reason, BC pharmacists only offer intranasal influenza vaccine for private purchase at this time.
- FluMist is offered in public health units and in physician offices in regions where physicians provide immunizations.
- Although FluMist has been found to provide comparable protection against influenza to the
  injectable vaccine, current evidence does not support the recommendation for continued
  preferential use of FluMist® in youth aged 2 to 17.

#### Improving Immunization Coverage & Uptake

- As of September 1, 2017, BC offers publicly funded human papillomavirus (HPV) vaccine to grade 6 boys.
- As of September 1, 2016, BC improved its HPV vaccine program through a technical adjustment by replacing Gardasil-4 with Gardasil-9 for school-aged females, and by offering Gardasil-4 to females aged 9 to 26 living with HIV, reflecting the same offer to males living with HIV.
- To address variances in coverage rates, RHAs send out immunization reminders, then follow-up by phone with parents and guardians to ensure people are aware of their immunization records and, if possible, to ensure immunizations are brought up-to-date.
- Resources to promote immunization in BC are coordinated by the Immunization Promotion
  Working Group (The Promotion Working Group). The Promotion Working Group reports to the
  BC Immunization Committee, up to the Communicable Disease Policy Advisory Committee, led
  by the Provinical Health Officer. Membership of the Promotion Working Group includes
  Ministry, BCCDC, HAs, FNHA, and the BC Pharmacy Association.

# 2019 Measles Catch Up Campaign

See Measles Catch Up Factsheet.

#### Mandatory Immunization Reporting

See Mandatory Immunization Reporting Regulation Factsheet.

# Immunization Rates in BC<sup>2</sup>

- 74 percent of BC children are completely up-to-date for all routine infant and toddler immunizations by the time they turn 2 years of age<sup>3</sup>.
- 70 percent of 7-year old children are up-to-date for their preschool immunizations<sup>4</sup>. This is an increase of 2 percent over the previous year.
- Grade 6 girl's HPV program coverage was 66.9 percent in 2018. HPV coverage for grade 6 males was 64.6 percent<sup>5</sup> in the program's first year (2017).

#### FINANCIAL IMPLICATIONS

- In 2018/19, the Provincial Health Services Authority incurred vaccine procurement expenditures of approximately \$47 million.<sup>6</sup>
- BC currently provides \$500,000 to support influenza and childhood immunization promotion.

#### Approved by:

April 17, 2019 - Matt Herman, Population and Public Health
May 3, 2019 - Gordon Cross obo Peter Pokorny, ADM, Finance and Corporate Services

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<sup>&</sup>lt;sup>2</sup> BC Reports immunization coverage rates for children up to Two and Seven Years of age. Two-year old coverage rates do not include VCHA as they do not collect or report this information.

<sup>&</sup>lt;sup>3</sup> BCCDC, Immunization Uptake in Children by the Second Birthday 2007-2016. Published January 15, 2018.

<sup>&</sup>lt;sup>4</sup> BCCDC, Immunization Uptake in Children by the Seventh Birthday 2012-2018. Published October 3, 2018.

<sup>&</sup>lt;sup>5</sup> BCCDC, Immunization Uptake in Grade 6 Students 2018. Published October 3, 2018.

<sup>&</sup>lt;sup>6</sup> PHSA Finance, May 1, 2019.

# **Immunization Program Update**

#### **ISSUE**

Updated information on the status of British Columbia's (BC) publicly-funded immunization program.

#### **KEY FACTS**

- BC's publicly-funded immunization program currently protects against 16 different diseases.
- New and more effective vaccines are in continual development. All new vaccines must obtain safety and effectiveness approval from Health Canada prior to being used anywhere in Canada.
- Burden of illness, implementation feasibility and population characteristics vary across Canada. For these reasons, immunization schedules also vary from province to province.
- Immunization is not mandatory in any province or territory in Canada, but immunization is encouraged to prevent illness and outbreaks from vaccine-preventable diseases.
- The health professionals and the public can get the latest information on immunization and program eligibility at Immunizebc.ca or by calling HealthLinkBC at 8-1-1.

# **Strategic Direction**

- BC's strategic direction for the delivery of immunization programs is outlined in *Immunize BC:* A Strategic Framework for Immunization in BC (2007).
- Work is currently underway to renew BC's Strategic Framework for immunization, which is anticipated to be complete by March 2020.
- Changes to BC's publicly funded immunization program are recommended annually by the BC Communicable Disease Policy Advisory Committee (CDPAC) then reviewed by the Ministry of Health (MoH) ahead of final decision by the Minister of Health.<sup>1</sup>

#### Delivery of Vaccines by Health Care Professionals

- Immunizations in BC are delivered by regulated health professionals including physicians, registered nurses, psychiatric nurses, licensed practical nurses, pharmacists and midwives.
- On December 3, 2015, amendments to the *Pharmacists Regulation* and the *Health Professions* Act Bylaws were made to allow certified pharmacists to administer intranasal vaccines to
   individuals 2 years of age and older and immunizations to children 5 years of age and older.
- Further work is occurring on timely reporting for this mixed delivery system as there are challenges with some physicians not working for health authorities without electronic access to provincial occupational health records.

#### Data Collection and Reporting

- BC's Interior and Island health authorities use the immunization modules of the Public Health Information System (PHIS, formerly known as Panorama) to record immunizations.
- First Nations Health Authority (FNHA) is transitioning its immunization record system to PHIS.
- Vancouver Coastal and Fraser Health use the PARIS system to record immunization records. An interface to transfer immunization records into PHIS was implemented this year.
- Northern Health uses the CMOIS system to record and track immunization records.
- The Provincial Health Services Authority brings together all information from Public Health Information System, PARIS and CMOIS to report provincial immunization coverage rates on behalf of the Ministry of Health and the Provincial Health Officer (PHO).

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<sup>&</sup>lt;sup>1</sup> CD Policy is advised by BCCDC, which analyzes recommendations by the National Advisory Committee on Immunization for program feasibility in BC. Modest program changes are implemented by BCCDC with CD Policy consent. Significant alterations resulting in increased costs are presented to CD Policy for recommendation to be approved by the Minister of Health.

# Student Immunization Data and Reporting

- To date, four provinces, including British Columbia (BC), have legislated immunization reporting
  policies for students. BC, Ontario and New Brunswick require reporting of student
  immunizations for diphtheria, tetanus, polio, measles, mumps, and rubella immunization.
  Manitoba requires reporting of student measles vaccinations.
- The BC Vaccination Status Reporting Regulation which came into effect on July 1<sup>st</sup>, 2019, requires parents or guardians to provide health authorities (HAs) immunization records of their school-aged children (grade K to 12) in public and independent schools, as well as those home schooled in BC.
- If there is an outbreak of disease, the authority exists where an unimmunized child or with no
  known immunization record, may be told they must stay home from school to keep others from
  getting sick and the outbreak from spreading.
- Also see Mandatory Vaccination Status Reporting Regulation Factsheet #2689
- Also See Measles Catch Up Campaign Fact Sheet #2690

# Flu (Influenza) Vaccines

- Due to shortfall in production, FluMist intranasal spray is not available in Canada for the 2019/20 flu season. The injected influenza vaccines are available and being offered in public health units, pharmacies and physician offices.
- The public launch date for the 2019/20 flu vaccination campaign season is November 4, 2019.

# <u>Improving Immunization Coverage & Uptake</u>

- As of June 26, 2019, the female age eligibility to receive publicly funded human papillomavirus (HPV) vaccine was reduced from up to 26 years old to up to 19 years old.
- As of September 1, 2017, BC offers publicly funded HPV vaccine to grade 6 boys.
- As of September 1, 2016, BC improved its HPV vaccine program through a technical adjustment by replacing Gardasil-4 with Gardasil-9 for school-aged females, and by offering Gardasil-4 to females aged nine to 26 years living with HIV, reflecting the same offer to males living with HIV.
- To address variances in coverage rates, RHAs send out immunization reminders, then follow-up
  by phone with parents and guardians to ensure people are aware of their immunization records
  and, if possible, to ensure immunizations are brought up-to-date.
- The Immunization Promotion Working Group (The Working Group) coordinates resources to promote immunization reporting up to the BC Immunization Committee, and then the CDPAC, led by the PHO. Membership of the Working Group includes Ministry, BCCDC, HAs, FNHA, and the BC Pharmacy Association.

#### Immunization Rates in BC<sup>2</sup>

- 74 percent of BC children are completely up-to-date for all routine infant and toddler immunizations by the time they turn 2 years of age<sup>3</sup>.
- 70 percent of 7-year old children are up-to-date for their preschool immunizations<sup>4</sup>. This is an increase of 2 percent over the previous year.
- Grade 6 girl's HPV program coverage was 66.9 percent in 2018. HPV coverage for grade 6 males was 64.6 percent<sup>5</sup> in the program's first year (2017).

<sup>&</sup>lt;sup>2</sup> BC Reports immunization coverage rates for children up to Two and Seven Years of age. Two-year old coverage rates do not include VCHA as they do not collect or report this information.

<sup>&</sup>lt;sup>3</sup> BCCDC, Immunization Uptake in Children by the Second Birthday 2007-2016. Published January 15, 2018.

<sup>&</sup>lt;sup>4</sup> BCCDC, Immunization Uptake in Children by the Seventh Birthday 2012-2018. Published October 3, 2018.

<sup>&</sup>lt;sup>5</sup> BCCDC, Immunization Uptake in Grade 6 Students 2018. Published October 3, 2018.

#### FINANCIAL IMPLICATIONS

- In 2018/19, the Provincial Health Services Authority incurred vaccine procurement expenditures of approximately \$47 million.6
- The MoH provided \$500,000 to the Public Health Association of BC to promote and market immunization uptake province-wide to provide effective programs to protect individuals against communicable diseases

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# Approved by:

October 10, 2019 - Lorie Hrycuik, Population and Public Health October 31, 2019 - Gordon Cross obo Phillip Twyford, ADM, Finance and Corporate Services Division

<sup>&</sup>lt;sup>6</sup> PHSA Finance, Oct, 2019.

# Immunization Program and 2019-2020 Influenza Program

#### **ISSUE**

British Columbia's (BC) publicly-funded immunization program and the 2019-2020 influenza program.

#### **KEY FACTS**

- BC's publicly-funded immunization program currently protects against 16 different diseases.
- Burden of illness, population characteristics and implementation feasibility vary across Canada.
   For these reasons, immunization schedules also vary from province to province.
- Immunization is not mandatory in any province or territory in Canada. Immunization is strongly encouraged to prevent illness and outbreaks of vaccine-preventable diseases.
- Changes to BC's publicly funded immunization program are recommended annually by the BC Communicable Disease Policy Advisory Committee, led by the Provincial Health Officer, for review by the Ministry of Health, and then final decision by the Minister of Health.

#### Strategic Direction

BC's strategic direction for immunization programs delivery is outlined in *Immunize BC:* A Strategic Framework for Immunization in BC (2007). Work to renew the Strategic Framework for Immunization is underway.

## Delivery of Vaccines by Healthcare Professionals

- Immunizations in BC are delivered by regulated health professionals including physicians, registered nurses, psychiatric nurses, licensed practical nurses, pharmacists and midwives.
- Since 2009, pharmacists are authorized to administer immunization and the treatment of anaphylaxis via injections to individuals over 5 years old. In 2015, pharmacists were further authorized to administer immunizations by intranasal route to children 2 years and older.

# **Data Collection and Reporting**

- Interior Health and Island Health use Public Health Information System (PHIS) to record immunizations.
- Vancouver Coastal and Fraser Health Authority use the PARIS system to record immunization records. An interface to transfer immunization records from PARIS to PHIS was implemented in 2019.
- Northern Health uses the CMOIS ("See Moys") system to record and track immunizations.
- First Nations Health Authority (FNHA) is transitioning its immunization records to PHIS.
- The Provincial Health Services Authority (PHSA) brings together all information from PHIS, PARIS
  and CMOIS to report provincial immunization coverage rates on behalf of the Ministry of Health
  and the Provincial Health Officer (PHO).

#### Student Immunization Data and Reporting

- BC's Vaccination Status Reporting Regulation (Regulation) came into force on July 1<sup>st</sup>, 2019.
   The Regulation requires parents or guardians to provide public health officials with current immunization status records for school-age children (grades K to 12) in public and independent schools under provincial jurisdiction, including home schooled students.
- To date, four provinces, including BC, have legislated immunization reporting policies for students. BC, Ontario and New Brunswick require reporting of student immunizations for diphtheria, tetanus, polio, measles, mumps, and rubella immunization. Manitoba requires reporting of student measles vaccinations.

## Flu (Influenza) Vaccines

- The influenza season in Canada typically occurs from November to April each year.
- The 2019-2020 flu vaccination campaign season was launched on November 4, 2019.
- Due to production shortfall, FluMist intranasal spray is not available in Canada this season<sup>1</sup>.
- There was a short shipment delay for injected influenza vaccine this year due to manufacturing
  issues. Influenza vaccine is currently available and offered in public health units, pharmacies
  and physician offices.
- BC Centre for Disease Control (BCCDC) ordered 1.558 million doses of influenza vaccine for the 2019-2020 fiscal year based on last year's provincial demand and input from all HAs.<sup>2</sup> (See Appendix A for BC's total 2019-2020 influenza vaccine supply).

# Healthcare Worker Policy and Visitors to Healthcare Facilities

- The province-wide Influenza Control Program Policy was amended in December 2019<sup>3</sup> where health care workers are no longer required to receive the flu vaccine or wear a mask in patient care areas.
- Health care workers are still required to inform their employer if they have received a flu shot. Immunization Rates<sup>4</sup> and Improving Immunization Coverage and Uptake
- 74 percent of BC children are completely up-to-date for all routine infant and toddler immunizations by the time they turn 2 years of age<sup>5</sup>.
- 69 percent of 7-year old children in BC are up-to-date for their preschool immunizations<sup>6</sup>. This is 1 percent lower than in 2018.
- In 2019, HPV program coverage for grade 6 females and males was 66.1 percent and 63.5 percent, respectively<sup>7</sup>.
- As of June 26, 2019, the female age eligibility to receive publicly funded human papillomavirus (HPV) vaccine was reduced from 'up to 26 years old' to 'up to 19 years old'.
- As of September 1, 2017, BC offers publicly funded HPV vaccine to grade 6 boys.
- As of September 1, 2016, BC improved its HPV vaccine program through a technical adjustment by replacing Gardasil-4 with Gardasil-9 for school-aged females.
- The Immunization Promotion Working Group (IPWG) coordinates resources to promote immunization and reports to the BC Immunization Committee, and then the CDPAC. IPWG includes representative from Ministry, BCCDC, HAs, FNHA, and the BC Pharmacy Association.

#### FINANCIAL IMPLICATIONS

- In 2018/19, PHSA spent approximately \$48 million to purchase vaccines for BC.8
- As of November 8, 2019, PHSA spent \$9.9 million on 1.52 million doses of flu vaccine for the 2019/2020 influenza season. This represents 100% of the planned doses for purchase this flu season.
- The Ministry of Health provides \$500,000 annually to the Public Health Association of BC to promote and market immunization uptake province-wide to provide effective programs to protect individuals against communicable diseases.

<sup>&</sup>lt;sup>1</sup> CTV News. "Canada won't offer flu vaccine nasal spray due to global shortage". Published October 1, 2019. https://www.ctvnews.ca/health/canada-won-t-offer-flu-vaccine-nasal-spray-due-to-global-shortage-1.4619558

<sup>&</sup>lt;sup>2</sup> BC Centre for Disease Control, [EMAIL] Sinclair, Jim; Vaccine Warehouse Manager, October 16, 2019.

<sup>&</sup>lt;sup>3</sup> CBC News. "B.C. nurses no longer need to get flu vaccine or wear masks, can rely on 'professional judgment'. Published December 4, 2019. https://www.cbc.ca/news/canada/british-columbia/b-c-nurses-no-longer-required-to-get-flu-vaccine-or-wear-mask-1.5384902

<sup>&</sup>lt;sup>4</sup> BC Reports immunization coverage rates for children up to Two and Seven Years of age. Two-year old coverage rates do not include VCHA as they do not collect or report this information.

<sup>&</sup>lt;sup>5</sup> BCCDC, p 5. Retrieved February 3, 2020 from <u>Immunization Uptake in Children by the Second Birthday 2007-2018</u>. Published April 4, 2019.

<sup>&</sup>lt;sup>6</sup> BCCDC, p 5. Retrieved February 3, 2020 from <u>Immunization Uptake in Children by the Seventh Birthday 2012-2019</u>. Published November 6, 2019.

<sup>&</sup>lt;sup>7</sup> BCCDC, p 10. Retrieved February 4, 2020 from <u>Immunization Uptake in Grade 6 Students 2019</u>. Published November 12, 2019.

<sup>&</sup>lt;sup>8</sup> PHSA Finance, Oct, 2019.

# Approved by:

February 3, 2020 – Lorie Hrycuik, Population and Public Health
February 14, 2020 – Gordon Cross obo Phillip Twyford, ADM, Finance and Corporate Services Division

Appendix A: B.C.'s 2019-2020 Total Influenza Vaccine Supply, by Vaccine  $Type^9$ 

Product	Total
TIV GSK Fluviral multi dose vial	875,000
TIV Seqirus Agriflu prefilled syringe	474,320
QIV GSK FluLaval-Tetra multi dose vial	202,440
QIV Sanofi FluZone prefilled syringe	6,040
BC Total Doses to be Delivered to Health Units	1,557,800

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<sup>&</sup>lt;sup>9</sup> BC Centre for Disease Control, [EMAIL] Sinclair, Jim; Vaccine Warehouse Manager, October 16, 2019.

# **Immunization Program Update**

#### ISSUE

Information and update on the status of BC's publicly-funded immunization program.

#### **KEY FACTS**

- BC's publicly-funded immunization program currently protects against 16 different diseases.
- New and more effective vaccines are in continual development. All new vaccines must obtain safety and effectiveness approval from Health Canada prior to being used in Canada.
- Burden of illness, implementation feasibility and population characteristics vary across Canada. For these reasons, immunization schedules also vary from province to province.
- BC's strategic direction for the delivery of immunization programs is outlined in *Immunize BC*: A Strategic Framework for Immunization in BC (2007). Immunizations in BC are delivered by regulated health professionals including physicians, registered nurses, psychiatric nurses, licensed practical nurses, pharmacists and midwives. The mixed delivery system has created challenges in the recording and accurate measurement of immunization rates, in particular with physicians, who do not have electronic access to provincial patient record files.
- The *strategic framework* is being renewed in the 2018/19 fiscal year.
- BC's Interior, Northern and Vancouver Island health authorities use the immunization components of the Public Health Information System or PHIS (formerly known as Panorama). Vancouver Coastal and Fraser Health use the Paris system to record and track immunization records. The Provincial Health Service Authority uses PHIS to report immunization coverage rates on behalf of the Ministry of Health and the Provincial Health Officer.
- The public and health professionals can get the latest information on immunization and program eligibility at Immunizebc.ca or by calling HealthLinkBC at 8-1-1.
- Immunization is not mandatory in any province or territory in Canada; however, everyone is encouraged to be vaccinated to prevent illness and outbreaks from vaccine-preventable diseases.
- If there is an outbreak of disease, an unimmunized child may be told they must stay home from school. This approach is designed to keep unimmunized children from getting sick and to keep the outbreak from spreading.
- The BC Centre for Disease Control has implemented the Student Information Exchange, which
  electronically transfers information pertaining to student enrollment from the Ministry of
  Education's, MyEducationBC data base to PHIS. The student information being provided is the same
  as approved under existing legislation and should increase the efficiency and responsiveness for mass
  immunization and clinical documentation purposes. To date Interior, Vancouver Island, Fraser and
  Northern Health Authorities are enrolled; Vancouver Coastal Health is not participating in this
  project.<sup>1</sup>
- Changes to BC's publicly funded immunization program are recommended annually by the BC Communicable Disease Policy Advisory Committee, which is chaired by the Provincial Health Officer. These recommendations are reviewed by the Ministry of Health ahead of final decisions.<sup>2</sup>
- On December 3, 2015, amendments to the *Pharmacists Regulation* and the *Health Professions Act*Bylaws were made to allow certified pharmacists to administer intranasal vaccines to individuals
  2 years of age and older. Pharmacist administration of injectable vaccines are restricted to children
  5 years of age and older.

<sup>&</sup>lt;sup>1</sup> Vancouver Coastal Health uses Paris, which to date is not compatible with the Student Information Exchange.

<sup>&</sup>lt;sup>2</sup> CDPA is advised by BCCDC, which analyzes recommendations by the National Advisory Committee on Immunization for program feasibility in BC. Modest program changes are implemented by BCCDC with CDPA consent; significant alterations resulting in increased costs are presented to CDPA for recommendation to be approved by the Minister of Health.

- Although Pharmacists are authorised to provide intranasal vaccines, e.g. FluMist®, Pharmaceutical
  Services Division has not allocated a Product Identification Number (PIN) for publicly funded
  FluMist®; therefore, pharmacists only offer intranasal influenza vaccine for private purchase.
  FluMist® is offered in public health units and in physician offices in regions where physicians provide
  immunizations, but not from a pharmacist.
- In June 2016, the US Advisory Committee on Immunization Practices recommended against the use of FluMist® vaccine for the 2016/17 flu season due to evidence suggesting poor vaccine effectiveness. In August 2016, after careful review of the available vaccine effectiveness data over the last several influenza seasons, Canada's National Advisory Committee on Immunization (NACI) concluded that FluMist® provides comparable protection against influenza to the injectable vaccine, but that the evidence does not support the recommendation for continued preferential use of FluMist® in youth aged 2 to 17. For the 2017/18, flu season, NACI recommended any of the available influenza vaccines for this cohort.

# Recent improvements to BC's Immunization Program

- As of September 1, 2017, BC offers publicly funded human papillomavirus (HPV) vaccine to grade 6 boys.
- As of September 1, 2016, BC improved its HPV vaccine program through a technical adjustment by replacing Gardasil-4 with Gardasil-9 for school-aged females, and by offering Gardasil-4 to females aged 9 to 26 living with HIV, reflecting the same offer to males living with HIV.

#### Immunization Rates in BC

- 73% of BC children are completely up-to-date for all routine infant and toddler immunizations by the time they turn 2 years of age<sup>3</sup>;
- 66% of 7-year old children are up-to-date for their preschool immunizations<sup>4</sup>;
- The grade 6 girl's HPV program was at 64.8% coverage in 2015; however, some pockets in the province have reported uptake at or below 50%.<sup>5</sup>

#### FINANCIAL IMPLICATIONS

In 2016/17, the Provincial Health Services Authority incurred vaccine procurement expenditures of approximately \$43 million.<sup>6</sup>

#### Approved by:

March 8, 2018 - Matt Herman, Population and Public Health Division February 19, 2017 - Brian Sagar, Population and Public Health Division

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<sup>&</sup>lt;sup>3</sup> BCCDC, Immunization Uptake in Children by the Second Birthday 2007-2016, February 9, 2017.

<sup>&</sup>lt;sup>4</sup> BCCDC, Immunization Uptake in Children by the Seventh Birthday 2012-2016, February 8, 2017.

<sup>&</sup>lt;sup>5</sup> BCCDC, Immunization Uptake in Grade 6 Students 2002-2015.

<sup>&</sup>lt;sup>6</sup> PHSA Finance, October 6, 2017.

# Immunization Program Update + Influenza Seasonal Program

#### **TOPIC**

BC's publicly funded immunization program, including the 2021/22 seasonal influenza program.

#### **CURRENT SITUATION**

- On September 9, 2020, the Province announced measures to protect the most vulnerable British Columbians by augmenting the provincial influenza immunization campaign.<sup>1</sup>
- As part of this, 45,000 Fluzone High Dose immunizations funded by the federal government were made available to all long-term care and seniors assisted living residents. On January 19, 2021, the Government of Canada confirmed this offer will be repeated for the 2021/22 influenza season.
- For the 2021/22 season, BC will be purchasing 2.5 million doses of influenza vaccine, a 10% increase from 2020/21.
- A provincially coordinated action plan to address the unique challenges of delivering immunization services
  during the pandemic is being developed by the Ministry of Health (HLTH), BC Centre for Disease Control
  (BCCDC) and the Office of the Provincial Health Officer in partnership with health authorities and community
  vaccine providers.

# **KEY FACTS**

- BC's publicly funded immunization program currently protects against 16 different diseases.
- The burden of illness, population characteristics and implementation feasibility vary across Canada. For these reasons, immunization schedules vary between provinces and territories.
- Immunization is not mandatory in any province or territory in Canada. Immunization is strongly encouraged to prevent illness (including severe disease and death) and outbreaks of vaccine-preventable diseases.
- Changes to BC's publicly funded immunization program are recommended by the BC Communicable Disease Policy Advisory Committee, reviewed by HLTH, with the final decision made by the Minister of Health.

### **Strategic Direction**

• BC's strategic direction for immunization program delivery is outlined in *Immunize BC: A Strategic Framework* for *Immunization in BC* (2007). Work to renew the *Strategic Framework for Immunization* is underway.

#### Delivery of Vaccines by Health Care Professionals

- Immunizations in BC are delivered by regulated health professionals including physicians, registered nurses, psychiatric nurses, licensed practical nurses, pharmacists, naturopathic physicians, and midwives.
- Since 2009, pharmacists are authorized to administer vaccines and treat anaphylaxis for individuals over 5
  years old. In 2015, pharmacists were further authorized to administer intranasal drugs, including vaccines, to
  children 2 years and older.

# "Flu" (Influenza) Vaccines

• The influenza season in Canada can last two to three months, and typically occurs at some point between November and April each year.

#### 2020/21:

 For the 2020/21 influenza season, the province secured 2,241,600 doses of influenza vaccine to meet the increased demand during the pandemic. This order represented a 47% increase compared to the 2019-20 season (1,522,400).<sup>2,3</sup>

#### 2021/22:

- For the 2021/22 influenza season, BC will be purchasing 2.5 million doses of vaccine, a 10% increase from 2020/21.
- Aligned with all other provinces, BC will be transitioning from a trivalent to a quadrivalent influenza immunization program in 2021/22 to provide added protection from four strains of influenza virus.

#### **Data Collection and Reporting**

• Interior Health and Island Health use Public Health Information System (PHIS; a.k.a. Panorama) to record immunizations.

<sup>&</sup>lt;sup>1</sup> Government of BC. "News release: investment brings new support to those most vulnerable to COVID-19 and communities where they live". September 9, 2020. https://news.gov.bc.ca/releases/2020PREM0050-001694

<sup>&</sup>lt;sup>2</sup> Ministry of Health Summary – Comparison between 2019 and 2020/21. Influenza Vaccine Measures: Vaccine Supply & Doses Administered January 6, 2021. Data report from BCCDC.

<sup>&</sup>lt;sup>3</sup> MoH Summary – 2020/21 Influenza Vaccine Measures: Vaccine Supply & Doses Administered Report 10 – Jan 7, 2021

- Vancouver Coastal Health and Fraser Health use the PARIS system to record immunization records administered by pharmacists and public health.
- Northern Health uses the CMOIS ("See Moys") system to record and track immunizations.
- An interface to transfer immunization data from PARIS and CMOIS to PHIS was implemented in 2019.
- The Provincial Health Services Authority (PHSA) brings together all information from PHIS, PARIS and CMOIS
  into the Provincial Immunization Registry to report provincial immunization coverage rates.
- First Nations Health Authority is transitioning its immunization records to PHIS.
- As part of the BC COVID-19 vaccination planned rollout, a digital solution for COVID-19 immunization is being contemplated. This could be expanded to support the overall immunization program scheduling, data collection and reporting, including influenza immunization in the future.

#### Student Immunization Data and Reporting

- BC's Vaccination Status Reporting Regulation (the Regulation) came into force on July 1, 2019.
   The Regulation requires parents or guardians to provide public health officials with current immunization status records for school-age children (grades Kindergarten to Grade 12) in public and independent schools under provincial jurisdiction, including home-schooled students.
- To date, three provinces, including BC, have legislated immunization reporting policies for students. BC,
  Ontario, and New Brunswick require reporting of student immunizations for diseases with a high potential
  for causing outbreaks in school settings (e.g., measles).

#### Health Care Worker Influenza Control Program Policy

- The province-wide Influenza Control Program Policy was amended in December 2019<sup>4</sup> such that there is no longer any disciplinary action for health care workers required to receive the influenza vaccine or wear a mask in patient care areas. This has been replaced by a more collaborative approach to immunization.
- Health care workers are required to inform their employer if they have received an influenza shot. Immunization Coverage Rates<sup>5</sup>
- In 2018, 74% of BC children are up-to-date for all routine infant and toddler immunizations by the time they turn 2 years of age<sup>6</sup>.
- In 2019, 69% of 7-year-old children in BC are up-to-date for their preschool immunizations.<sup>7</sup>
- In 2019, human papillomavirus (HPV) program coverage for grade 6 females and males was 66.1% and 63.5%, respectively.<sup>8</sup>
- As of June 26, 2019, female age eligibility to receive publicly funded HPV vaccine was reduced from 'up to 26 years old' to 'up to 18 years old.'
- As of September 1, 2017, BC offers publicly funded HPV vaccine to grade 6 boys.
- As of September 1, 2016, BC improved its HPV vaccine program by replacing Gardasil-4 with Gardasil-9 (protects against 9 strains of HPV).

#### FINANCIAL IMPLICATIONS

- In 2019/20, PHSA spent approximately \$50.26 million to purchase vaccines for BC.9
- In 2020/21, PHSA spent \$15.63 million on influenza vaccines for the 2020/21 influenza season.
- The Ministry provides \$500,000 annually to the Public Health Association of BC to promote and market immunization uptake province-wide to provide effective programs to protect individuals against communicable diseases. In 2020-21, the Ministry has increased the funding from \$500,000 to \$750,000 to create additional capacity for promoting influenza immunizations during the COVID-19 pandemic.

#### Approved:

#### Only Divisional ADM, FCS and HSIAR approval required.

February 1, 2021 - Martin Lavoie, Deputy PHO, Office of the PHO

September 22, 2020 - Lorie Hrycuik, Executive Lead, Population and Public Health

September 22, 2020 - Haley Miller, Project Director, Office of the Provincial Health Officer

February 19, 2021 – Eric Larson obo Martin Wright, ADM, Health Sector Information, Analysis & Reporting

February 28, 2021 – Gordon Cross obo Philip Twyford, ADM, Finance and Corporate Services Division

<sup>&</sup>lt;sup>4</sup> CBC News. "B.C. nurses no longer need to get flu vaccine or wear masks, can rely on 'professional judgment'. Published December 4, 2019. https://www.cbc.ca/news/canada/british-columbia/b-c-nurses-no-longer-required-to-get-flu-vaccine-or-wear-mask-1.5384902

<sup>&</sup>lt;sup>5</sup> BC Reports immunization coverage rates for children up to Two and Seven Years of age. Two-year old coverage rates do not include VCHA as they do not collect or report this information.

<sup>&</sup>lt;sup>6</sup> BCCDC, p 5. Retrieved June 4, 2020 from <u>Immunization Uptake in Children by the Second Birthday 2007-2018</u>. Published April 4, 2019.

<sup>&</sup>lt;sup>7</sup> BCCDC, p 5. Retrieved June 4, 2020 from <u>Immunization Uptake in Children by the Seventh Birthday 2012-2019</u>. Published November 6, 2019.

<sup>&</sup>lt;sup>8</sup> BCCDC, p 10. Retrieved June 4, 2020 from <u>Immunization Uptake in Grade 6 Students 2019</u>. Published November 12, 2019.

<sup>&</sup>lt;sup>9</sup> PHSA Finance, October 2019.

# **Immunization Program Update**

#### **ISSUE**

Updated information on the status of BC's publicly-funded immunization program.

#### **KEY FACTS**

- BC's publicly-funded immunization program currently protects against 16 different diseases.
- New and more effective vaccines are in continual development. All new vaccines must obtain safety and effectiveness approval from Health Canada prior to being used in Canada.
- Burden of illness, implementation feasibility and population characteristics vary across Canada. For these reasons, immunization schedules also vary from province to province.
- BC's strategic direction for the delivery of immunization programs is outlined in *Immunize BC*:
   A Strategic Framework for Immunization in BC (2007). Immunizations in BC are delivered by
   regulated health professionals including physicians, registered nurses, psychiatric nurses, licensed
   practical nurses, pharmacists and midwives. The mixed delivery system has created challenges in the
   recording and accurate measurement of immunization rates, in particular with physicians, who do
   not have electronic access to provincial patient records.
- BC's Strategic Framework for immunization is being renewed in the 2018/19 fiscal year.
- BC's Interior, Northern and Island health authorities use the immunization components of the Public Health Information System or PHIS (formerly known as Panorama) to record immunizations.
   Vancouver Coastal and Fraser Health use the Paris system to record and track immunization records, but have been instructed to enter provincial data on the PHIS too. The Provincial Health Service Authority uses PHIS to report immunization coverage rates on behalf of the Ministry of Health and the Provincial Health Officer.
- The public and health professionals can get the latest information on immunization and program eligibility at Immunizebc.ca or by calling HealthLinkBC at 8-1-1.
- Immunization is not mandatory in any province or territory in Canada; however, everyone is encouraged to be vaccinated to prevent illness and outbreaks from vaccine-preventable diseases.
- If there is an outbreak of disease, an unimmunized child may be told they must stay home from school. This approach is designed to keep unimmunized children and others from getting sick and to keep the outbreak from spreading.
- The BC Centre for Disease Control has implemented the Student Information Exchange, which
  electronically transfers information pertaining to student enrollment from the Ministry of
  Education's "MyEducationBC" database to PHIS. The student information being provided is the same
  as approved under existing legislation and is intended to increase the efficiency and responsiveness
  in the event of a school-based outbreak. To date Interior, Vancouver Island, Fraser and Northern
  Health Authorities are enrolled; Vancouver Coastal Health is not participating in this project.<sup>1</sup>
- Changes to BC's publicly funded immunization program are recommended annually by the BC Communicable Disease Policy Advisory Committee. These recommendations are reviewed by the Ministry of Health ahead of final decisions.<sup>2</sup>
- On December 3, 2015, amendments to the *Pharmacists Regulation* and the *Health Professions Act*Bylaws were made to allow certified pharmacists to administer intranasal vaccines to individuals
  2 years of age and older. Pharmacist administration of injectable vaccines are restricted to children
  5 years of age and older.

<sup>&</sup>lt;sup>1</sup> Vancouver Coastal Health uses Paris, which to date is not compatible with the Student Information Exchange.

<sup>&</sup>lt;sup>2</sup> CDPA is advised by BCCDC, which analyzes recommendations by the National Advisory Committee on Immunization for program feasibility in BC. Modest program changes are implemented by BCCDC with CDPA consent; significant alterations resulting in increased costs are presented to CDPA for recommendation to be approved by the Minister of Health.

- Although Pharmacists are authorised to provide intranasal vaccines, e.g. FluMist<sup>®</sup>, Pharmaceutical Services Division has not allocated a Product Identification Number (PIN) for publicly funded FluMist<sup>®</sup>; therefore, pharmacists only offer intranasal influenza vaccine for private purchase. FluMist® is offered in public health units and in physician offices in regions where physicians provide immunizations.
- Although FluMist® has been found to provide comparable protection against influenza to the injectable vaccine, the evidence does not support the recommendation for continued preferential use of FluMist® in youth aged 2 to 17.

## Recent improvements to BC's Immunization Program

- As of September 1, 2017, BC offers publicly funded human papillomavirus (HPV) vaccine to grade 6 boys.
- As of September 1, 2016, BC improved its HPV vaccine program through a technical adjustment by replacing Gardasil-4 with Gardasil-9 for school-aged females, and by offering Gardasil-4 to females aged 9 to 26 living with HIV, reflecting the same offer to males living with HIV.

### Immunization Rates in BC

- 74% of BC children are completely up-to-date for all routine infant and toddler immunizations by the time they turn 2 years of age<sup>3</sup>;
- 68% of 7-year old children are up-to-date for their preschool immunizations<sup>4</sup>;
- The grade 6 girl's HPV program coverage was at 66.5% in 2017.<sup>5</sup>

#### FINANCIAL IMPLICATIONS

In 2017/18, the Provincial Health Services Authority incurred vaccine procurement expenditures of approximately \$45 million.6

# Approved by:

October 4, 2018 - Matt Herman, Population and Public Health October 11, 2018 - Gordon Cross obo Manjit Sidhu, ADM, Finance and Corporate Services

<sup>6</sup> PHSA Finance, October 9, 2018.

<sup>&</sup>lt;sup>3</sup> BCCDC, Immunization Uptake in Children by the Second Birthday 2007-2016, January 15, 2018.

<sup>&</sup>lt;sup>4</sup> BCCDC, Immunization Uptake in Children by the Seventh Birthday 2012-2016, November 6, 2017.

<sup>&</sup>lt;sup>5</sup> BCCDC, Immunization Uptake in Grade 6 Students 2002-2017., August 31, 2017.

# Immunization Program Update + Influenza Seasonal Program

#### **TOPIC**

BC's publicly funded immunization program, including the 2021/22 seasonal influenza program.

#### **CURRENT SITUATION**

- On September 9, 2020, the Province announced measures to protect the most vulnerable British Columbians by augmenting the provincial influenza immunization campaign.<sup>1</sup>
- As part of this, 45,000 Fluzone High Dose immunizations funded by the federal government were made available to all long-term care and seniors assisted living residents. On January 19, 2021, the Government of Canada confirmed this offer will be repeated for the 2021/22 influenza season.
- For the 2021/22 season, BC will be purchasing 2.5 million doses of influenza vaccine, a 10% increase from 2020/21.
- A provincially coordinated action plan to address the unique challenges of delivering immunization services
  during the pandemic is being developed by the Ministry of Health (HLTH), BC Centre for Disease Control
  (BCCDC) and the Office of the Provincial Health Officer in partnership with health authorities and community
  vaccine providers.

# **KEY FACTS**

- BC's publicly funded immunization program currently protects against 16 different diseases.
- The burden of illness, population characteristics and implementation feasibility vary across Canada. For these reasons, immunization schedules vary between provinces and territories.
- Immunization is not mandatory in any province or territory in Canada. Immunization is strongly encouraged to prevent illness (including severe disease and death) and outbreaks of vaccine-preventable diseases.
- Changes to BC's publicly funded immunization program are recommended by the BC Communicable Disease Policy Advisory Committee, reviewed by HLTH, with the final decision made by the Minister of Health.

### **Strategic Direction**

• BC's strategic direction for immunization program delivery is outlined in *Immunize BC: A Strategic Framework* for *Immunization in BC* (2007). Work to renew the *Strategic Framework for Immunization* is underway.

#### Delivery of Vaccines by Health Care Professionals

- Immunizations in BC are delivered by regulated health professionals including physicians, registered nurses, psychiatric nurses, licensed practical nurses, pharmacists, naturopathic physicians, and midwives.
- Since 2009, pharmacists are authorized to administer vaccines and treat anaphylaxis for individuals over 5
  years old. In 2015, pharmacists were further authorized to administer intranasal drugs, including vaccines, to
  children 2 years and older.

# "Flu" (Influenza) Vaccines

• The influenza season in Canada can last two to three months, and typically occurs at some point between November and April each year.

#### 2020/21:

 For the 2020/21 influenza season, the province secured 2,241,600 doses of influenza vaccine to meet the increased demand during the pandemic. This order represented a 47% increase compared to the 2019-20 season (1,522,400).<sup>2,3</sup>

#### 2021/22:

- For the 2021/22 influenza season, BC will be purchasing 2.5 million doses of vaccine, a 10% increase from 2020/21.
- Aligned with all other provinces, BC will be transitioning from a trivalent to a quadrivalent influenza immunization program in 2021/22 to provide added protection from four strains of influenza virus.

#### **Data Collection and Reporting**

• Interior Health and Island Health use Public Health Information System (PHIS; a.k.a. Panorama) to record immunizations.

<sup>&</sup>lt;sup>1</sup> Government of BC. "News release: investment brings new support to those most vulnerable to COVID-19 and communities where they live". September 9, 2020. https://news.gov.bc.ca/releases/2020PREM0050-001694

<sup>&</sup>lt;sup>2</sup> Ministry of Health Summary – Comparison between 2019 and 2020/21. Influenza Vaccine Measures: Vaccine Supply & Doses Administered January 6, 2021. Data report from BCCDC.

<sup>&</sup>lt;sup>3</sup> MoH Summary – 2020/21 Influenza Vaccine Measures: Vaccine Supply & Doses Administered Report 10 – Jan 7, 2021

- Vancouver Coastal Health and Fraser Health use the PARIS system to record immunization records administered by pharmacists and public health.
- Northern Health uses the CMOIS ("See Moys") system to record and track immunizations.
- An interface to transfer immunization data from PARIS and CMOIS to PHIS was implemented in 2019.
- The Provincial Health Services Authority (PHSA) brings together all information from PHIS, PARIS and CMOIS
  into the Provincial Immunization Registry to report provincial immunization coverage rates.
- First Nations Health Authority is transitioning its immunization records to PHIS.
- As part of the BC COVID-19 vaccination planned rollout, a digital solution for COVID-19 immunization has been implemented. This could be expanded to support the overall immunization program scheduling, data collection and reporting, including influenza immunization in the future.

#### Student Immunization Data and Reporting

- BC's Vaccination Status Reporting Regulation (the Regulation) came into force on July 1, 2019.
   The Regulation requires parents or guardians to provide public health officials with current immunization status records for school-age children (grades Kindergarten to Grade 12) in public and independent schools under provincial jurisdiction, including home-schooled students.
- To date, three provinces, including BC, have legislated immunization reporting policies for students. BC,
  Ontario, and New Brunswick require reporting of student immunizations for diseases with a high potential
  for causing outbreaks in school settings (e.g., measles).

#### Health Care Worker Influenza Control Program Policy

- The province-wide Influenza Control Program Policy was amended in December 2019<sup>4</sup> such that there is no longer any disciplinary action for health care workers required to receive the influenza vaccine or wear a mask in patient care areas. This has been replaced by a more collaborative approach to immunization.
- Health care workers are required to inform their employer if they have received an influenza shot. Immunization Coverage Rates<sup>5</sup>
- In 2018, 74% of BC children are up-to-date for all routine infant and toddler immunizations by the time they turn 2 years of age<sup>6</sup>.
- In 2019, 69% of 7-year-old children in BC are up-to-date for their preschool immunizations.<sup>7</sup>
- In 2019, human papillomavirus (HPV) program coverage for grade 6 females and males was 66.1% and 63.5%, respectively.<sup>8</sup>
- As of June 26, 2019, female age eligibility to receive publicly funded HPV vaccine was reduced from 'up to 26 years old' to 'up to 18 years old.'
- As of September 1, 2017, BC offers publicly funded HPV vaccine to grade 6 boys.
- As of September 1, 2016, BC improved its HPV vaccine program by replacing Gardasil-4 with Gardasil-9 (protects against 9 strains of HPV).

#### FINANCIAL IMPLICATIONS

- In 2019/20, PHSA spent approximately \$50.26 million to purchase vaccines for BC.9
- In 2020/21, PHSA spent \$15.63 million on influenza vaccines for the 2020/21 influenza season.
- The Ministry provides \$500,000 annually to the Public Health Association of BC to promote and market immunization uptake province-wide to provide effective programs to protect individuals against communicable diseases. In 2020-21, the Ministry increased the funding from \$500,000 to \$750,000 to create additional capacity for promoting influenza immunizations during the COVID-19 pandemic. The Ministry anticipates providing up to \$500,000 to support promotion in 2021/22.

#### Approved:

April 22, 2021 – Lorie Hrycuik, Executive Lead, Population and Public Health April 27, 2021 – Gordon Cross obo Philip Twyford, ADM, Finance and Corporate Services Division

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<sup>&</sup>lt;sup>4</sup> CBC News. "B.C. nurses no longer need to get flu vaccine or wear masks, can rely on 'professional judgment'. Published December 4, 2019. https://www.cbc.ca/news/canada/british-columbia/b-c-nurses-no-longer-required-to-get-flu-vaccine-or-wear-mask-1.5384902

<sup>&</sup>lt;sup>5</sup> BC Reports immunization coverage rates for children up to Two and Seven Years of age. Two-year old coverage rates do not include VCHA as they do not collect or report this information.

<sup>&</sup>lt;sup>6</sup> BCCDC, p 5. Retrieved June 4, 2020 from Immunization Uptake in Children by the Second Birthday 2007-2018. Published April 4, 2019.

<sup>&</sup>lt;sup>7</sup> BCCDC, p 5. Retrieved June 4, 2020 from <u>Immunization Uptake in Children by the Seventh Birthday 2012-2019</u>. Published November 6, 2019.

<sup>&</sup>lt;sup>8</sup> BCCDC, p 10. Retrieved June 4, 2020 from <u>Immunization Uptake in Grade 6 Students 2019</u>. Published November 12, 2019.

<sup>&</sup>lt;sup>9</sup> PHSA Finance, October 2019.

# **Immunization Program Update**

#### **ISSUE**

Updated information on the status of BC's publicly-funded immunization program.

#### **KEY FACTS**

- BC's publicly-funded immunization program currently protects against 16 different diseases.
- New and more effective vaccines are in continual development. All new vaccines must obtain safety and effectiveness approval from Health Canada prior to being used anywhere in Canada.
- Burden of illness, implementation feasibility and population characteristics vary across Canada. For these reasons, immunization schedules also vary from province to province.
- Immunization is not mandatory in any province or territory in Canada. Everyone is strongly
  encouraged to be vaccinated to prevent illness and outbreaks from vaccine-preventable diseases.
- The public and health professionals can get the latest information on immunization and program eligibility at Immunizebc.ca or by calling HealthLinkBC at 8-1-1.

# Strategic Direction

- BC's strategic direction for the delivery of immunization programs is outlined in *Immunize BC:* A Strategic Framework for Immunization in BC (2007).
- BC's Strategic Framework for immunization is being renewed in the 2019/20 fiscal year.
- Changes to BC's publicly funded immunization program are recommended annually by the BC Communicable Disease Policy Advisory Committee. These recommendations are reviewed by the Ministry of Health ahead of final decision by the Minister of Health.<sup>1</sup>

#### Delivery of Vaccines by Health Care Professionals

- Immunizations in BC are delivered by regulated health professionals including physicians, registered nurses, psychiatric nurses, licensed practical nurses, pharmacists and midwives.
- On December 3, 2015, amendments to the *Pharmacists Regulation* and the *Health Professions* Act Bylaws were made to allow certified pharmacists to administer intranasal vaccines to
   individuals 2 years of age and older. Pharmacist are authorized to vaccinate children 5 years of
   age and older.
- The mixed delivery system has created challenges in the recording and accurate measurement
  of health care worker immunization rates, in particular physicians who do not work for health
  authorities and do not have electronic access to provincial occupational health records.

#### Data Collection and Reporting

- BC's Interior, Northern, and Island health authorities use the immunization modules of the Public Health Information System (formerly known as Panorama) to record immunizations.
- Vancouver Coastal and Fraser Health use the PARIS system to record and track immunization records.
- The Provincial Health Services Authority brings together all information from Public Health Information System and PARIS to report provincial immunization coverage rates on behalf of the Ministry of Health and the Provincial Health Officer.

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<sup>&</sup>lt;sup>1</sup> CD Policy is advised by BCCDC, which analyzes recommendations by the National Advisory Committee on Immunization for program feasibility in BC. Modest program changes are implemented by BCCDC with CD Policy consent. Significant alterations resulting in increased costs are presented to CD Policy for recommendation to be approved by the Minister of Health.

# Student Immunization Data and Reporting

- To date, three provinces have legislated immunization reporting policies for students. Ontario
  and New Brunswick require reporting of student immunizations for diphtheria, tetanus, polio,
  measles, mumps, and rubella immunization. Manitoba requires reporting of student measles
  vaccinations.
- If there is an outbreak of disease, an unimmunized child may be told they must stay home from school. This approach keeps unimmunized children and others from getting sick and keeps the outbreak from spreading.
- The BC Centre for Disease Control has implemented the Student Information Exchange, which
  electronically transfers student enrollment information from the Ministry of Education's
  "MyEducationBC" database to the Public Health Information System. The transfer and
  synchronizing of student information increases the efficiency and responsiveness of the health
  system for school-based outbreaks.

#### FluMist Intranasal Spray for Influenza

- Although Pharmacists are authorised to provide intranasal vaccines, e.g., FluMist,
   Pharmaceutical Services Division has not allocated a Product Identification Number (PIN) for publicly funded FluMist.
- For this reason, BC pharmacists only offer intranasal influenza vaccine for private purchase at this time.
- FluMist is offered in public health units and in physician offices in regions where physicians provide immunizations.
- Although FluMist has been found to provide comparable protection against influenza to the
  injectable vaccine, current evidence does not support the recommendation for continued
  preferential use of FluMist® in youth aged 2 to 17.

#### Improving Immunization Coverage & Uptake

- As of September 1, 2017, BC offers publicly funded human papillomavirus (HPV) vaccine to grade 6 boys.
- As of September 1, 2016, BC improved its HPV vaccine program through a technical adjustment by replacing Gardasil-4 with Gardasil-9 for school-aged females, and by offering Gardasil-4 to females aged 9 to 26 living with HIV, reflecting the same offer to males living with HIV.
- To address variances in coverage rates, RHAs send out immunization reminders, then follow-up by phone with parents and guardians to ensure people are aware of their immunization records and, if possible, to ensure immunizations are brought up-to-date.
- Resources to promote immunization in BC are coordinated by the Immunization Promotion
  Working Group (The Promotion Working Group). The Promotion Working Group reports to the
  BC Immunization Committee, up to the Communicable Disease Policy Advisory Committee, led
  by the Provinical Health Officer. Membership of the Promotion Working Group includes
  Ministry, BCCDC, HAs, FNHA, and the BC Pharmacy Association.

# 2019 Measles Catch Up Campaign

See Measles Catch Up Factsheet.

#### Mandatory Immunization Reporting

See Mandatory Immunization Reporting Regulation Factsheet.

# Immunization Rates in BC<sup>2</sup>

- 74 percent of BC children are completely up-to-date for all routine infant and toddler immunizations by the time they turn 2 years of age<sup>3</sup>.
- 70 percent of 7-year old children are up-to-date for their preschool immunizations<sup>4</sup>. This is an increase of 2 percent over the previous year.
- Grade 6 girl's HPV program coverage was 66.9 percent in 2018. HPV coverage for grade 6 males was 64.6 percent<sup>5</sup> in the program's first year (2017).

#### FINANCIAL IMPLICATIONS

- In 2018/19, the Provincial Health Services Authority incurred vaccine procurement expenditures of approximately \$47 million.<sup>6</sup>
- BC currently provides \$500,000 to support influenza and childhood immunization promotion.

#### Approved by:

April 17, 2019 - Matt Herman, Population and Public Health
May 3, 2019 - Gordon Cross obo Peter Pokorny, ADM, Finance and Corporate Services

<sup>&</sup>lt;sup>2</sup> BC Reports immunization coverage rates for children up to Two and Seven Years of age. Two-year old coverage rates do not include VCHA as they do not collect or report this information.

<sup>&</sup>lt;sup>3</sup> BCCDC, Immunization Uptake in Children by the Second Birthday 2007-2016. Published January 15, 2018.

<sup>&</sup>lt;sup>4</sup> BCCDC, Immunization Uptake in Children by the Seventh Birthday 2012-2018. Published October 3, 2018.

<sup>&</sup>lt;sup>5</sup> BCCDC, Immunization Uptake in Grade 6 Students 2018. Published October 3, 2018.

<sup>&</sup>lt;sup>6</sup> PHSA Finance, May 1, 2019.

# Immunization Program Update + Influenza Seasonal Program

#### TOPIC

BC's publicly funded immunization program, including the 2021/22 seasonal influenza program.

#### **CURRENT SITUATION**

- For the 2021/22 season, BC has purchased 2,460,000 doses of influenza vaccine, a 10% increase from 2020/21.<sup>1</sup>
- On January 19, 2021, the Government of Canada confirmed it is purchasing 45,500 doses of Fluzone High Dose vaccine for all seniors (65+) in BC Long Term Care (LTC) and Assisted Living (AL) facilities for the 2021/22 influenza season.<sup>2</sup>
- In addition, BC is working in partnership with the First Nations Health Authority to provide 10,700 doses of Fluzone High Dose vaccine for Indigenous seniors (65+) residing in First Nations communities for the 2021/22 influenza season.
- A provincially coordinated action plan to address the unique challenges of delivering immunization services
  during the pandemic has been developed by the Ministry of Health (HLTH), BC Centre for Disease Control
  (BCCDC) and the Office of the Provincial Health Officer in partnership with health authorities and community
  vaccine providers.

#### **KEY FACTS**

- BC's publicly funded immunization program currently protects against 16 different diseases.
- The burden of illness, population characteristics and implementation feasibility vary across Canada.
   For these reasons, immunization schedules vary between provinces and territories.
- Immunization is strongly encouraged to prevent illness (including severe disease and death) and outbreaks of vaccine-preventable diseases.
- Changes to BC's publicly funded immunization program are recommended by the BC Communicable Disease Policy Advisory Committee, reviewed by HLTH, with the final decision made by the Minister of Health.

#### Strategic Direction

• BC's strategic direction for immunization program delivery is outlined in *Immunize BC: A Strategic Framework* for *Immunization in BC* (2007). Work to renew the *Strategic Framework for Immunization* is underway.

#### <u>Delivery of Vaccines by Health Care Professionals</u>

- Immunizations in BC are delivered by regulated health professionals including physicians, registered nurses, psychiatric nurses, licensed practical nurses, Nurse Practitioners, and pharmacists.
- Since 2009, pharmacists have been granted the authority to administer subcutaneous, intra-dermal and intra-muscular injections for immunization and for the treatment of anaphylaxis to residents 5 years of age and older in BC. Since 2015, pharmacists have the authority to also administer immunizations by intranasal route to children 2 years and older.<sup>3</sup>

#### Influenza Vaccines

#### 2020/21:

- For the 2020/21 influenza season, the province secured 2,241,600 doses of influenza vaccine to meet the increased demand during the pandemic. This order represented a 47% increase compared to the 2019/20 season (1,522,400).<sup>4,5</sup>
- Approximately 1.5 million doses of influenza were administered in the 2020/21 influenza season.

#### 2021/22:

- For the 2021/22 influenza season, BC has purchased 2,460,000 doses of vaccine, a 10% increase from 2020/21. The goal is to administer 2 million or more doses of vaccine in 2021/22.
- Aligned with all other provinces, BC will be transitioning from a trivalent to a quadrivalent influenza immunization program in 2021/22 to provide added protection from four strains of influenza virus.

#### Data Collection and Reporting

<sup>&</sup>lt;sup>1</sup> Personal communication Zaahira Lalani at BCCDC on August 20, 2021.

<sup>&</sup>lt;sup>2</sup> Canadian Immunization Committee Meeting. Personal communication from Dr. Monika Naus at BCCDC on April 20, 2021.

<sup>&</sup>lt;sup>3</sup> Pharmacists and Publicly Funded Vaccines in B.C. General Information. Pharmacists and Immunization Working Group (PIWG). March 2021. Accessed September 14, 2021 from <a href="https://www2.gov.bc.ca/assets/gov/health/health-drug-coverage/pharmacare/vaccine-guide.pdf">https://www2.gov.bc.ca/assets/gov/health/health-drug-coverage/pharmacare/vaccine-guide.pdf</a>.

<sup>&</sup>lt;sup>4</sup> Ministry of Health Summary – Comparison between 2019 and 2020/21. Influenza Vaccine Measures: Vaccine Supply & Doses Administered January 6, 2021. Data report from BCCDC.

<sup>&</sup>lt;sup>5</sup> MoH Summary – 2020/21 Influenza Vaccine Measures: Vaccine Supply & Doses Administered Report 10 – Jan 7, 2021

<sup>&</sup>lt;sup>6</sup> Personal communication Zaahira Lalani at BCCDC on August 20, 2021.

- Interior Health and Island Health use Public Health Information System (PHIS; a.k.a. Panorama) to record immunizations.
- Vancouver Coastal Health and Fraser Health use the PARIS system to record immunization records administered by pharmacists and public health.
- Northern Health uses the CMOIS ("See Moys") system to record and track immunizations.
- An interface to transfer immunization data from PARIS and CMOIS to PHIS was implemented in 2019.
- The Provincial Health Services Authority (PHSA) brings together all information from PHIS, PARIS and CMOIS into the Provincial Immunization Registry to report provincial immunization coverage rates.
- The First Nations Health Authority is transitioning its immunization records to PHIS (Panorama).
- As part of the BC COVID-19 vaccination rollout, a digital solution called ImmsBC for COVID-19 immunization
  was implemented. Pilots are underway to determine how ImmsBC might be expanded to support overall
  immunization program scheduling, data collection, inventory management and reporting.

## **School Immunization Data and Reporting**

- BC's Vaccination Status Reporting Regulation (VSRR) came into force on July 1, 2019. The VSRR requires
  parents or guardians to provide public health officials with current immunization status records for schoolage children (grades Kindergarten to Grade 12) in public and independent schools under provincial
  jurisdiction, including home-schooled students.
- To date, BC, Ontario, and New Brunswick have legislated immunization reporting of student immunizations for diseases with a high potential for causing outbreaks in school settings (e.g., measles).

#### Health Care Worker Influenza Control Program Policy

- The province-wide Influenza Control Program Policy was amended in December 2019, <sup>7</sup> such that there is no longer any disciplinary action for health care workers required to receive the influenza vaccine or wear a mask in patient care areas if unimmunized. This has been replaced by a more collaborative approach to immunization and COVID-19 infection control practices.
- Health care workers are required to inform their employer if they have received their annual influenza vaccination.

## Immunization Coverage Rates<sup>8</sup>

- In 2018, 74% of BC children are up-to-date for all routine infant and toddler immunizations by the time they turn 2 years of age<sup>9</sup>.
- In 2019, 69% of 7-year-old children in BC are up-to-date for their preschool immunizations.
- In 2019, human papillomavirus (HPV) program coverage for grade 6 females and males was 66.1% and 63.5%, respectively. 11
- As of June 26, 2019, female age eligibility to receive publicly funded HPV vaccine was reduced from 'up to 26 years old' to 'up to 19 years old.'
- As of September 1, 2017, BC offers publicly funded HPV vaccine to grade 6 boys.
- As of September 1, 2016, BC improved its HPV vaccine program by replacing Gardasil-4 with Gardasil-9 (protects against 9 strains of HPV).

#### FINANCIAL IMPLICATIONS

- In 2019/20, PHSA spent approximately \$50.26 million to purchase vaccines for BC.
- In 2020/21, PHSA spent \$15.63 million on influenza vaccines for the 2020/21 influenza season.
- The Ministry provides \$500,000 annually to the Public Health Association of BC (PHABC) to promote and market immunization uptake province-wide to provide effective programs to protect individuals against communicable diseases.
- In 2020-21, the Ministry increased the funding to PHABC from \$500,000 to \$750,000 to create additional capacity for promoting influenza immunizations during the COVID-19 pandemic.

#### Approved:

September 16, 2021 – Trish Sterloff, A/Executive Lead, Population and Public Health

September 22, 2021 – Gordon Cross obo Philip Twyford, ADM, Finance and Corporate Services Division

<sup>&</sup>lt;sup>7</sup> CBC News. "B.C. nurses no longer need to get flu vaccine or wear masks, can rely on 'professional judgment'. Published December 4, 2019. https://www.cbc.ca/news/canada/british-columbia/b-c-nurses-no-longer-required-to-get-flu-vaccine-or-wear-mask-1.5384902

<sup>&</sup>lt;sup>8</sup> BC Reports immunization coverage rates for children up to Two and Seven Years of age. Two-year old coverage rates do not include VCHA as they do not collect or report this information.

<sup>9</sup> BCCDC, p 5. Retrieved June 4, 2020 from Immunization Uptake in Children by the Second Birthday 2007-2018. Published April 4, 2019.

<sup>&</sup>lt;sup>10</sup> BCCDC, p 5. Retrieved June 4, 2020 from Immunization Uptake in Children by the Seventh Birthday 2012-2019. Published November 6, 2019.

<sup>&</sup>lt;sup>11</sup> BCCDC, p 10. Retrieved June 4, 2020 from Immunization Uptake in Grade 6 Students 2019. Published November 12, 2019.

# Estimates Question - Spring 2020

\*\*REVISED - July 21, 2020\*\*

#### **COVID-19 Immunization Planning**

# 1. What is the minister's best estimate of the total cost to immunize the population once a vaccine is available?

- At this time, it is not possible to forecast the costs of immunizing the population against COVID-19 until a safe and effective vaccine has been produced and the costs of the vaccine are known.
- For anticipated costs, we can look to both the previous 2009 Pandemic /H1N1
  vaccinations costs for B.C., and to the current pricing for standard vaccines to potentially
  anticipate what future costs and planning considerations need to be.

# Costs of H1N1 / 2009 Pandemic:

- For the costs to B.C. for the H1N1 vaccine during the 2009 Pandemic, the
  initial estimated cost of buying and delivering the H1N1 vaccine was \$16 per dose<sup>1</sup>. The
  actual cost was approximately \$30 per dose<sup>2</sup>.
- Costs for purchasing the H1N1 vaccine was shared between the Government of Canada and provinces and territories.
- The Government of Canada ordered 50.4 million doses of H1N1 vaccine for a total of \$403.2 million<sup>3</sup>.
- British Columbia budgeted \$13.7 million for its share of this H1N1 vaccine purchase<sup>4</sup>.
- The H1N1 vaccine was offered to every British Columbia who wanted or needed to be immunized<sup>5</sup>.
- Overall provincial uptake of the H1N1 vaccine was approximately 42%.
- Based on federal and provincial estimates, total national spending to buy and administer the H1N1 vaccine in Canada during the 2009 pandemic was \$1-billion<sup>6</sup>.
- There would be increased costs of delivering this vaccine today.

<sup>&</sup>lt;sup>1</sup> Globe and Mail. "Cost of vaccinating the nation hits \$1.5-billion and climbing". November 12, 2009. https://www.theglobeandmail.com/life/health-and-fitness/health/conditions/cost-of-vaccinating-the-nation-hits-15-billion-and-climbing/article1318824/ Accessed July 20, 2020.

<sup>&</sup>lt;sup>2</sup> Ibid.

<sup>&</sup>lt;sup>3</sup> Ibid.

<sup>&</sup>lt;sup>4</sup> Ibid.

<sup>&</sup>lt;sup>5</sup> Office of the Provincial Health Officer. "BC's response to the H1N1 pandemic: a summary report". June 2010. https://www.health.gov.bc.ca/library/publications/year/2010/PHO\_Report\_BC\_Response\_to\_the\_H1N1\_Pandemic\_June2010.pdf Accessed July 20, 2020.

<sup>&</sup>lt;sup>6</sup> National Post. "Ottawa H1N1 spending was too high, ineffective: critics". April 6, 2010. http://www.nationalpost.com/Ottawa+H1N1+spending+high+ineffective+critics/2770570/story.html Accessed July 20, 2020.

# Current Vaccines Costs (including associated costs):

- The current costs of pricing for standard vaccines range from \$8 per dose for measles, mumps and rubella to \$110 per dose for Zoster-Shingles.
- Some vaccines require more than one dose to be effective (e.g., Zoster).
- Based on these prices and assuming that a single dose would be sufficient, the projected cost of vaccine to immunize every British Columbian against COVID-19 could range from \$41 million to \$1.12 billion.
- In addition to vaccine purchase costs, immunization services for a mass COVID-19 immunization program, including clinician fees, records administration, vaccine transport and cold chain storage, are conservatively estimated at \$10 to 15 per person, or \$51.1 million to \$76.7 million for the province.
- Injection equipment for a potential mass COVID-19 immunization program is being purchased by the Government of Canada on behalf of all provinces and territories.
- The Province has been actively engaged in the planning for a COVID vaccine with the federal government and other provinces and territories and have indicated the intention to order for B.C.'s population as soon as a vaccine is available to order.

# Current Flu (Influenza Vaccine Costs):

- The influenza season in Canada typically occurs from November to April each year
- 1.919 million flu vaccine doses have been ordered by the BC Centre for Disease Control for 2020/21 flu season.
- In addition, 45, 500 Fluzone High Dose are being provided by the federal government of Canada for Seniors in Long Term Care in B.C.
- This is 397,000 more doses than were ordered for the 2019/20 flu season in anticipation there may be a greater demand this year due to COVID-19
- The costs of delivering the flu vaccine for this year are still being estimated. Last year, PHSA spent approximately \$50.26 million to purchase vaccines for B.C. (confirmed from 2020 DM estimates fact sheet Immunization Program and 2020-21 Influenza Program).

#### 2. Is there currently a plan in place outlining the order of vaccination priority?

- Canada's National Advisory Committee on Immunization (NACI), which includes representatives from BC, is actively developing a national prioritization framework (the Framework) to establish priority criteria for delivering a potential COVID-19 vaccine.
- The Framework will consider, for example, those who are most vulnerable to COVID-19, those who will benefit most from early immunization and those who perform critical functions in our province, such as health care workers and first responders.
- The Framework has not yet been approved and/or endorsed by the Public Health Agency of Canada, the Government of Canada, or the provinces and territories.
- The Framework is expected to be completed by September 2020.

• The Minister of Health will ultimately decide on the implementation of a mass COVID-19 immunization program in BC, as informed by the national priority framework.

# 3. Will government use the existing private sector distribution network of pharmacies and their suppliers to administer the vaccine or some other form of distribution?

- Currently there are many health professionals that can administer vaccines in B.C, such as primary care physicians, nurses, LPN's and pharmacists.
- Pharmacists will be considered as immunizers within BC's COVID-19 immunization program wherever possible.
- Some potential COVID-19 vaccines require specialized infrastructure, such as minus 20°C refrigeration, that are not commonly available in pharmacies.
- A decision whether or not to distribute a COVID-19 vaccine through pharmacies will be made when the details of a vaccine become known.
- If there are no specialized feasibility or infrastructure requirements, pharmacies will be included in the provincial distribution of COVID-19 vaccine.