Vaccines Available
Influenza vaccine options available in the United States this season include the following: Afluria®, Fluarix®, Flulaval®, Fluzone®, Flucelvax®, FluZone High-Dose®, Fluid®, Flublok®, and FluMist®. The Alaska Immunization Program will supply 7 presentations of quadrivalent influenza vaccine this season (Table).

2021–22 Influenza Vaccine Composition
Egg-based influenza vaccines (i.e., vaccines other than ccIIV4 and RIV4) will contain hemagglutinin (HA) derived from:
- influenza A/Victoria/250/2018 (H1N1) pdm09-like virus
- influenza A/Hong Kong/4801/2019 (H3N2)-like virus
- influenza B/Washington/02/2019 (Victoria lineage)-like virus
- influenza B/Phuket/3073/2013 (Yamagata lineage)-like virus

Cell culture–based inactivated (ccIIV4) and recombinant (RIV4) influenza vaccines will contain HA derived from:
- influenza A/Hong Kong/4801/2019 (H3N2)-like virus
- influenza A/Hong Kong/4801/2019 (H3N2)-like virus
- influenza B/Washington/02/2019 (Victoria lineage)-like virus
- influenza B/Phuket/3073/2013 (Yamagata lineage)-like virus

Influenza Vaccine Abbreviations
- IIV: inactivated influenza vaccine
- RIV: recombinant influenza vaccine
- LAIV: live attenuated influenza vaccine
- cc: prefix indicating cell culture-based vaccine (e.g., ccIIV4)
- a: prefix indicating adjuvanted inactivated vaccine (e.g., aIIV3)
- Numeric suffix: specifies the number of hemagglutinin (HA) antigens in the vaccine (e.g., IIV4=quadrivalent)

Storage
All influenza vaccine should be stored at 36°–46°F (2°–8°C), and should not be frozen.  

Inactivated Influenza Vaccines (IIV)
Inactivated influenza vaccine contains inactivated viruses. The IIV vaccines available this season are as follows:
- Egg-based (IIV4): Afluria®, Fluarix®, FluLaval®, and Fluzone®
- Egg-based (IIV4): Fluad® and Fluzone® are licensed for persons aged ≥6 months.  
- Cell culture-based (ccIIV4): Flucelvax® is licensed for persons aged ≥2 years (note: the influenza viruses are propagated in Madin–Darby canine kidney cells instead of eggs).
- Egg-based high dose (HD-IIV4): Fluzone High-Dose® is licensed for persons aged ≥65 years.  
- Egg-based with MF59 adjuvant (adIIV4): Fluid® is licensed for persons aged ≥65 years.  

Recombinant Influenza Vaccine (RIV)
Flublok® (RIV4) contains recombinant HA produced in an insect cell line using genetic sequences from cell-derived influenza viruses and is manufactured without the use of influenza viruses or eggs. Flublok® (RIV4) may be used in persons aged ≥18 years.

Live-Attenuated Influenza Vaccine (LAIV)
Flumist® (LAIV4) contains live, attenuated (weakened), temperature-sensitive (cold-adapted) viruses that are able to replicate efficiently only at temperatures present in the nasal mucosa. If the recipient sneezes immediately after administration, the dose should not be repeated.  

References
2. U.S. Food and Drug Administration, Vaccines, Blood, and Biologics: Manufacturer Package Inserts. Available at: https://www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states

Table. Alaska Immunization Program Supplied Influenza Vaccines

<table>
<thead>
<tr>
<th>Trade Name</th>
<th>Manufacturer</th>
<th>Presentation</th>
<th>Age Indication</th>
<th>HA (IIV4/ RIV4) or virus count (VAlIV4) for each vaccine virus (per dose)</th>
<th>Route</th>
<th>Mercury (from thimerosal) µg/0.5 mL dose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard dose, egg based (IIV4)</strong></td>
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<tr>
<td>Afluria®</td>
<td>Seqirus</td>
<td>0.25 mL PFS</td>
<td>6–35 months</td>
<td>7.5 µg/0.25 mL dose</td>
<td>IM</td>
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</tr>
<tr>
<td>Fluarix®</td>
<td>GlaxoSmithKline</td>
<td>0.5 mL PFS</td>
<td>≥6 months</td>
<td>15 µg/0.5 mL dose</td>
<td>IM</td>
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</tr>
<tr>
<td>Fluzone®</td>
<td>Sanofi Pasteur</td>
<td>5.0 mL MDV*</td>
<td>≥6 months</td>
<td>15 µg/0.5 mL dose</td>
<td>IM</td>
<td>25</td>
</tr>
<tr>
<td><strong>Standard dose, cell culture based (ccIIV4)</strong></td>
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<tr>
<td>Flucelvax®</td>
<td>Seqirus</td>
<td>0.5 mL PFS</td>
<td>≥2 years</td>
<td>15 µg/0.5 mL dose</td>
<td>IM</td>
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<tr>
<td><strong>High dose, egg based (HD-IIV4)</strong></td>
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<tr>
<td>Fluzone HD®</td>
<td>Sanofi Pasteur</td>
<td>0.7 mL PFS</td>
<td>≥65 years</td>
<td>60 µg/0.7 mL dose</td>
<td>IM</td>
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<tr>
<td><strong>Standard dose, egg-based vaccine with MF59 adjuvant (adIIV4)</strong></td>
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<tr>
<td>Fluid®</td>
<td>Seqirus</td>
<td>0.5 mL PFS</td>
<td>≥65 years</td>
<td>15 µg/0.5 mL dose</td>
<td>IM</td>
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<tr>
<td><strong>Egg based (LAIV4)</strong></td>
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<tr>
<td>FluMist®</td>
<td>AstraZeneca</td>
<td>0.2 mL PFS</td>
<td>2–49 years</td>
<td>10 fluorescent focus units/0.2 mL</td>
<td>NAS</td>
<td>--</td>
</tr>
</tbody>
</table>

Abbreviations: IM = Intramuscular; MDV = Multi-Dose Vial; NAS = Nasal; PFS = Pre-Filled Syringe; PFIS = Pre-Filled Intranasal Spray

*Fluzone Quadrivalent is currently approved for ages 6 through 15 months at either 0.25 mL or 0.5 mL per dose; however, 0.25 mL prefilled syringes are not expected to be available for the 2021-22 influenza season. If a prefilled syringe of Fluzone Quadrivalent is used for a child in this age group, the dose volume will be 0.5 mL per dose.