### Interrupted schedules
- If vaccination schedule is interrupted, the series does not need to be restarted
- No additional dose recommended when any HPV vaccine series has been completed using the recommended dosing intervals.

### Shared clinical decision-making
- Some adults age 27–45 years: Based on shared clinical decision-making, 2- or 3-dose series as above

### Special situations
- Age ranges recommended above for routine and catch-up vaccination or shared clinical decision-making also apply in special situations
- Immune-compromising conditions, including HIV infection: 3-dose series, even for those who initiate vaccination at age 9 through 14 years
- Pregnancy: Pregnancy testing is not needed before vaccination; HPV vaccination is not recommended until after pregnancy; no intervention needed if inadvertently vaccinated while pregnant

### Notes
- Recommended Adult Immunization Schedule, United States, 2022

#### Measles, mumps, and rubella vaccination

**Routine vaccination**
- No evidence of immunity to measles, mumps, or rubella: 1 dose
- Evidence of immunity: Born before 1957 (health care personnel, see below), documentation of receipt of MMR vaccine, laboratory evidence of immunity or disease (diagnosis of disease without laboratory confirmation is not evidence of immunity)

**Special situations**
- Pregnancy with no evidence of immunity to rubella: MMR contraindicated during pregnancy; after pregnancy (before discharge from health care facility), 1 dose
- Nonpregnant women of childbearing age with no evidence of immunity to rubella: 1 dose
- HIV infection with CD4 percentages ≥15% and CD4 count ≥200 cells/mm² for at least 6 months and no evidence of immunity to measles, mumps, or rubella: 2-dose series at least 4 weeks apart; MMR contraindicated for HIV infection with CD4 percentage <15% or CD4 count <200 cells/mm²
- Severe immunocompromising conditions: MMR contraindicated

**Influenza vaccination**

**Routine vaccination**
- Age 19 years or older: 1 dose any influenza vaccine appropriate for age and health status annually
- For the 2021–2022 season, see www.cdc.gov/mmwr/volumes/70/rr/rr7005a1.htm
- For the 2022–23 season, see the 2022–23 ACIP influenza vaccine recommendations.

**Special situations**
- Egg allergy, hives only: any influenza vaccine appropriate for age and health status annually
- Egg allergy–any symptom other than hives (e.g., angioedema, respiratory distress) or required epinephrine or another emergency medical intervention: see Appendix listing contraindications and precautions
- Severe allergic reaction (e.g., anaphylaxis) to a vaccine component or a previous dose of any influenza vaccine: see Appendix listing contraindications and precautions
- History of Guillain-Barré syndrome within 6 weeks after previous dose of influenza vaccine: Generally, should not be vaccinated unless vaccination benefits outweigh risks for those at higher risk for severe complications from influenza

**Meningococcal vaccination**

**Special situations for MenACWY**
- Anatomical or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use: 2-dose series MenACWY-D (Menactra, Menveo, or MenQuadfi) at least 8 weeks apart and revaccinate every 5 years if risk remains
- Travel in countries with hyperendemic or epidemic meningococcal disease, or microbiologists routinely exposed to Neisseria meningitidis: 1 dose MenACWY (Menactra, Menveo, or MenQuadfi) and revaccinate every 5 years if risk remains
- First-year college students who live in residential housing (if not previously vaccinated at age 16 years or older) or military recruits: 1 dose MenACWY (Menactra, Menveo, or MenQuadfi)

**Shared clinical decision-making for MenB**
- Adolescents and young adults age 16–23 years (age 16–18 years preferred) not at increased risk for meningococcal disease: For the 2022–23 season, see the 2022–23 ACIP influenza vaccine recommendations.

**Special situations for MenB**
- Anatomical or functional asplenia (including sickle cell disease), persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use, or microbiologists routinely exposed to Neisseria meningitidis:
  - 2-dose primary series MenB-4C (Bexsero) at least 1 month apart or 3-dose primary series MenB-FHbp (Trumebna) at 0, 1–2, 6 months (if dose 2 was administered at least 6 months after dose 1, administer dose 3 at least 4 months after dose 2); MenB-4C and MenB-FHbp are not interchangeable (use same product for all doses in series)
  - 1 dose MenB booster 1 year after primary series and revaccinate every 2–3 years if risk remains