NAVIGATING THE MAZE OF VACCINATIONS FOR THE OLDER ADULT

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ABSTRACT:
GUIDELINES FOR VACCINATIONS IN OLDER ADULTS IN VARIOUS SETTINGS

Older adults are more susceptible to infectious diseases & have an altered immune response to vaccinations; therefore, all Advanced Practice Registered Nurses (APRNs) need to be up to date with current immunization recommendations for older adults in various settings. Influenza & pneumonia remain common causes of death in older adults, & most recently, Covid-19, has the potential to result in premature mortality for all age groups, including those who are older & especially for those who live in congregate settings. This presentation will describe the rationale for the vaccination of older adults throughout their lifespan, including the timing, contraindications, & adverse effects of vaccines used to prevent influenza, pneumonia, herpes zoster, pertussis, & tetanus in older adults. An update on the efficacy of the Covid-19 vaccine in the elderly, especially those in nursing homes & congregate settings will be provided as well as current statistical data on how many have been immunized.

Current guidelines for the advanced practice nurse to follow for vaccination of the older adult when the vaccine history is incomplete or not available will be presented. The need & implications for vaccination of special populations such as the homeless, older immigrants, international travelers, cancer patients, men who have sex with men, renal patients, nursing home & hospice patients will be discussed. Vaccination is critical in promoting healthy aging.
### Background & Significance

Older adults are more susceptible to infectious diseases & have an altered immune response to vaccinations; APRNs must be up-to-date on current vaccination recommendations.

### Objectives

A review of CDC & scientific literature was performed to explore the most current recommendations for immunizations in the older adult in various situations including the covid-19 vaccine.

### Influenza Vaccine

Three types: inactivated influenza vaccine (IIV), recombinant (RIV), live attenuated (LAIV). High-dose IIVs & all RIVs are trivalent approved for 65+ adults. Timing: prior to flu season in Sept. Risk: egg allergy; GB for IIV3 & aIIV3 are approved for 65+ older adults.

### Pneumococcal Vaccine

S. Pneumoniae causes meningitis, septic arthritis, endocarditis, CAP in older adults. PPSV23: all pts 65yrs.+ should receive one dose. ACIP rec. in 2014 PCV13 be given to all 65yrs.+ – prior to PPSV23. If PPSV23 given first – give PCV13 12 mos. + later.

### Herpes Zoster Vaccine

Reactivation of varicella zoster. Lifetime risk is 30%; 1 mill new cases yrly U.S. Zoster can result in PHN w/severe neuropathic pain. Zoster vaccine live (ZVL): ACIP: 2008 60+ one dose. Efficacy is 49% but wanes over time.

### HSV: Recombinant zoster vaccine (RVZ):

FDA 2017 rec. ACIP for 50 yrs.+ Efficacy >90% - 89% for prevention of PHN. Two doses 0-2-6mos (2nd dose: up to 5 yrs. later) ZVL contraindicated: pregnancy, or immunocompromised. Adverse reactions >ZVL, fever, myalgia, HA, GI sx.

### Tetanus / Pertussis Vaccine

Tetanus now rare due to vaccination, however rate of vaccination in older adults is decreasing. FDA rec. Boostrix (Tdap - GSK). One dose Tdap, then Td every 10 yrs. Contraindications: encephalopathy within 7 days of prior Tdap, severe allergic reaction. Pertussis increasing in elders. Be sure older adult has at least one dose of Tdap.

### Covid-19 Vaccine

Recommended for all older adults. Two mRNA vaccines: Pfizer/Moderna with 94-95% efficacy & FDA emergency use auth. Two doses. Thought to be effective against the Delta variant. Janssen/Johnson&Johnson: Vector vaccine, 66% – 85% efficacy. FDA emergency use auth. One dose. The Delta SARS-CoV-2 virus variant B.1.617.2. is now the dominant strain in the U.S.; spreads quickly, more contagious esp. in unvaccinated.

### When Vaccine Status is Unknown

Serologic testing for tetanus / diphtheria antitoxin or give vaccine. One dose Tdap then Td 4 wks. later 2nd Td 6-12 mos. later.

### Immunocompromised Elders

Pneumococcal: ACIP clarified max 3 doses of PPSV23 rec. for high-risk elders. first booster given 5 yrs.+ after 1st dose & one more dose is given if 2nd dose given prior to age 65 years. HIV Infected: same immunizations as older adults, except ZVL: only given if CD4 > 200/mm3. Cancer: chimera within 3 mos. can receive same except ZVL can receive RZV. Solid Organ Transplant: Same except ZVL. Can have RZV. MSM: Same as all older adults with addition of 2 doses Hep. A. Renal disease: Add Hep. B vaccine, test for immune response in HD pts 1-2 mos. after 3rd dose to check anti-HBs level. LTC: same as all elders esp. influenza & Covid vaccines. Hospice: address on case-by-case basis. Influenza vaccine maintains efficacy even with decreased immune response.

### International Travel

Check the CDC Destination Pages by country, yellow fever risky >65 & not given to immunocompromised elders: https://wwwnc.cdc.gov/travel/destinations/list

### Homeless Elders

Receive the same vaccinations as other older adults. ACIP 2018 rec. Hep. A at least once (95% immunity after 1st dose).

### Implications for Practice

Vaccination is a critical component of healthy aging for the older adult population. APRNs should know the recommended vaccines & their schedules for elders.