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About the Author

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Dr. Ajit Johal has been providing immunizations and clinical education since 2012. As a community pharmacist, he is an accessible provider of immunizations to patients in the community. In 2018, he started an organization called immunize.io with a mission statement of "taking our best shot at immunizing the world". Through "immunize.io," he has worked with numerous organizations and communities to address "vaccine hesitancy" and improve vaccine access locally, nationally, and globally. He champions community pharmacists as leaders of immunization services and presents on this topic at a national and global level. Ajit is also a clinical assistant professor for the University of British Columbia Faculty of Sciences program. At UBC, he has coordinated an elective course for UBC pharmacy students in travel health and immunizations.

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Recommended Vaccinations for Adults: What Respirologists Need to Know

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Patients with underlying respiratory comorbidities such as chronic obstructive pulmonary disease (COPD) are at greater risk of severe manifestations of the following vaccine-preventable diseases: COVID-19, influenza, herpes zoster, pertussis, pneumococcal disease, and respiratory syncytial virus (RSV). The following case illustrates how respirologists can recommend and support important patient vaccination updates.

Case:

A 76-year-old male patient who has been living with chronic obstructive pulmonary disease (COPD) for 5 years. His current medication regimen includes salbutamol (Ventolin MDI) 100 mcg, 1–2 puffs every 4 hours as needed, tiotropium (Spiriva Respimat) 2.5 mcg, 2 inhalations once daily, atorvastatin 40 mg once daily, and ramipril 10 mg once daily. The patient has received the seasonal influenza vaccination (HD-QIIV), and 3 doses of the COVID-19 primary series (last dose 18 months ago).

Chief Complaint

The patient's chief complaint is ongoing dyspnea and increased salbutamol use despite being adherent to long-acting muscarinic antagonist (LAMA) therapy. The patient has been under the care of a respirologist following the initial diagnosis of COPD 5 years ago.

Introduction

This patient is coming to their respirologist to optimize the management of their COPD, specifically on addressing airflow limitation, which presents as shortness of breath at rest. There is an opportunity to improve bronchodilation and review and update the patient's vaccination status.

Despite the approval and subsequent recommendation from the National Advisory Committee on Immunization (NACI) for vaccinations to protect against shingles, pneumococcal disease, and respiratory syncytial virus (RSV), adult immunization rates remain low. Furthermore, even programmatic vaccinations for seasonal influenza, pneumococcal disease and updated Coronavirus Disease 2019 (COVID-19) vaccinations remain below target levels for high-risk groups.[1]

Respirologists play an important role in improving recommended vaccination rates among high-risk patients with chronic lung conditions. Given their specialist role, a vaccination assessment and subsequent recommendation from a respirologist can have a positive impact to improve vaccination uptake in these patients. This article reviews the recommended vaccinations and how respirologists can support their patients in accessing them. **Table 1** provides a summary of the vaccinations recommended by NACI for patients with chronic lung conditions, including the funding and access pathways for administration.

COVID-19

The recent NACI statement on COVID-19 vaccination, applicable for all of 2025 and the summer of 2026, recommends a COVID-19 vaccine for previously vaccinated individuals who are at increased risk of Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-COV-2) exposure or severe COVID-19 disease.[2] For patients with underlying lung conditions as defined in the "underlying medical conditions associated with more severe COVID-19 disease: a clinicians guide", including bronchiectasis, COPD, interstitial lung disease, pulmonary hypertension, and pulmonary embolism,[3] an up-to-date COVID-19 vaccine should be administered every Fall/Winter to reduce the risk of COVID-19 disease and its complications.

In this case, the patient is not up-to-date on their COVID-19 vaccinations according to their age (65+ years) and chronic conditions (COPD). Based on this, we recommend that the patient receive their updated COVID-19 KP.2 variant vaccine at the pharmacy during the 2024–2025 season.

Influenza

Seasonal influenza vaccination has been a longstanding recommendation for patients with chronic lung conditions. For patients aged 65+ years, NACI recommends a high-dose or adjuvanted vaccine to provide a better immune response.[4]

In this case, our patient has received their seasonal influenza vaccine, noting that they received the high-dose version since they are aged 65+ years.

Herpes Zoster (Shingles)

Since 2018, NACI has strongly recommended the recombinant zoster vaccine (Shingrix) for all patients aged 50+ years.[5] Herpes zoster, also known as shingles, is the reactivation of a primary chickenpox infection contracted earlier in life. It manifests as a painful blistering rash that does not cross the midline of the body. Complications can include post-herpetic neuralgia, which can occur in up to 1/5 of cases.[6] A meta-analysis of patients with chronic medical conditions shows that underlying medical conditions such as COPD and asthma increase the risk of latent reactivation of herpes zoster.[7]

In this case, our patient is aged 50+years and has the additional risk factor of COPD. Based on this, we recommend that the patient receive 2 doses of the recombinant zoster vaccine (spaced 2–6 months apart) at the pharmacy.

Pertussis

In Canada, it is recommended that adults receive a booster dose of the Tetanus/Diphtheria vaccine every 10 years as part of routine immunization programs. At least 1 of these booster doses should contain pertussis and be administered as a combination vaccine that

Vaccination	Dosing	Products	Funding	Access
COVID-19	Updated Vaccination in the Fall	Comirnaty® Spikevax	Publicly funded across all provinces	Community Pharmacy
Influenza	Updated Vaccination in the Fall	Fluad® (Adj-TIV) Fluzone® HD (HD-QIIV)	Publicly funded across all provinces	Community Pharmacy
TDAP	Every 10 years	Boostrix® Adacel®	Publicly funded in some provinces, some private pay	Community Pharmacy (British Columbia, Quebec) Doctor's Office Public Health Unit
Herpes zoster	2 doses (IM) at 0, 2–6 months *No booster recommended at this time	Shingrix®	Publicly funded in some provinces for select age groups, most are private pay	Community Pharmacy Doctor's Office
Pneumococcal	1 dose (IM) *No booster recommended at this time	Prevnar ®20 CapvaxieTM	Publicly funded in some provinces for select age groups, most are private pay	Community Pharmacy Doctor's Office
RSV	1 Dose (IM) *No booster recommended at this time	Arexvy® Abrysvo®	Publicly funded in some provinces for select age groups, most are private pay	Community Pharmacy Doctor's Office

Table 1. Vaccinations recommended by the National Advisory Committee on Immunization (NACI) for patients with chronic lung conditions; *courtesy of Ajit Johal, BSP, RPh, BCPP, CTH.*

Abbreviations: COVID-19: Coronavirus Disease 2019, **TDAP:** tetanus, diphtheria, pertussis, **IM:** intramuscular, **RSV** respiratory syncytial virus.

includes tetanus, diphtheria, and pertussis (TDAP). Pertussis, also known as "whooping cough," can be problematic in patients with underlying respiratory comorbidities.[8]

In this case, our patient has not received a tetanus/diphtheria vaccine since childhood. Based on this, we recommend a TDAP booster, which may be administered at the pharmacy, depending on the province.

Pneumococcal Disease

The bacterial pathogen Streptococcus pneumoniae (*S. pneumoniae*) is a common culprit of respiratory and invasive disease in adult patients. In a recently updated NACI statement on pneumococcal vaccination in adults, the multi-valent conjugate vaccines PCV20 (Prevnar 20) or PCV21 (Capvaxive) are strongly recommended for adults aged 65+ years and for those aged 18+ years with certain underlying conditions. For patients with chronic lung conditions, those with COPD, emphysema, bronchiectasis, interstitial lung disease, cystic fibrosis, and asthma that required medical care

in the preceding 12 months, are prioritized for vaccination.[9]

In this case, our patient is aged 65+ years and has an underlying chronic lung condition. The patient has also not received a pneumococcal vaccination in the past. Note that even if the patient had previously received a pneumococcal vaccination, NACI recommends PCV20/21 for updated protection if at least a year has passed since their last vaccination. We recommend that the patient receive a dose of PCV20 or PCV21 at the pharmacy.

Respiratory Syncytial Virus

RSV is a well-known illness in the pediatric population, but it can also lead to hospitalization for older adults, especially those with comorbidities. A review of RSV hospitalizations over 3 seasons in New York demonstrated that patients with underlying COPD were 4–13 times more likely to be hospitalized from an RSV infection compared to their age-matched peers.[10] The most recent statement from NACI on RSV strongly recommends adjuvanted (Arexvy) or bivalent (Abrysvo) RSV vaccines for older adults aged 75+ years, especially those with underlying medical risk factors.[11] Providers may also recommend vaccination to a broader population with the adjuvanted (Arexvy) RSV vaccination approved for adults 50+ and bivalent (Abrysvo) RSV vaccination indicated for adults 60+ as per the Health Canada product label and updated NACI statement on RSV vaccination in older adults.[12]

In this case, our patient is both aged 75+ years and has underlying COPD. We recommend that the patient receive an RSV vaccine at the pharmacy.

Supporting Vaccine Access in Specialist Care

In our case, the following vaccinations are recommended based on the patient's immunization history, age, and medical risk factors according to guidance from NACI.

- **Updated COVID-19 KP.2 vaccine**
- **Recombinant Zoster Vaccine – 1 dose now then the second dose in 2–6 months**
- **TDAP vaccine**
- **Pneumococcal Conjugate (PCV20/21) vaccine**
- **RSV (Adjuvated/Bivalent) vaccine**

While it is not expected that medical specialists such as respirologists maintain a vaccine refrigerator and administer vaccinations in their practice, a strong recommendation from a medical professional has been shown to increase vaccine uptake.[13]

Discussing recommended vaccinations and providing a prescription or consult note to the patient's primary care provider can support the pathway to administration. In some jurisdictions (British Columbia, Alberta, Quebec), pharmacists can independently administer vaccinations without a prescription.

Many medical professionals abstain from recommending vaccinations that are not covered by public programs. In these situations, patients must pay out of pocket for recommended vaccinations such as shingles, pneumococcal, and RSV. Ironically, despite most medical professionals considering cost as the greatest barrier for patients accepting a non-funded vaccine, the greatest barrier is, in fact, the absence of their recommendation.[14] Therefore, healthcare professionals who interact with patients diagnosed with chronic lung conditions should recommend all relevant vaccinations to provide an opportunity to mitigate risk.

As with any case report, the results should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's circumstances and condition.

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