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THE DOSE

Thames Valley Family Health Team's Quarterly Drug Information Newsletter

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Pneumococcal vaccine coverage updates

Ontario now funds new vaccines PCV-20 (Prevnar 20) and PCV-15 (Vaxneuvance) for adults and children. PCV-13 (Prevnar 13) is no longer available.

Pneumococcal vaccines available in Ontario:

- PCV-15 (Vaxneuvance)
- PCV-20 (Prevnar 20)
- PCV-21 (Capvaxive)
- PPSV-23 (Pneumovax)

Ontario publicly funds immunizations for[1]:

- ✓ Paeds 6 weeks to 4 years old: PCV-15
- ✓ Adults age 65+: PCV-20
- ✓ High-risk paeds or adults 6 weeks or older: PCV-20

Adults who previously received…

- PCV-13 (Prevnar 13) → Wait 1 year before PCV-15 or PCV-20/21
- PPSV-23 (Pneumovax 23) → Wait 5 years before PCV-15 or PCV-20/21

Currently there are no hard outcomes (efficacy) data for PCV-15, PCV-20, or PCV-21 vaccines. Recommendations are made based on serotype coverage and titre response.[6]

NACI's updated recommendations **now include PCV-21**, but Ontario does not pay for PCV-21 (Capvaxive).[2,3,4]

- PCV-15 or PCV-20 are recommended for:
  - Routine or high-risk paeds age 6 wks-17 yrs
- PCV-20 or **PCV-21** are recommended for:
  - All adults age 65+
  - High-risk adults age 50-64
  - Immunocompromised adults age 18+

See page 5 for guidance in specific clinical situations.

ODB transitions to biosimilars of Prolia and Xgeva

Effective November 29, 2024, ODB starts to transition coverage of Prolia and Xgeva (both denosumab) to biosimilars Jubbonti and Wyost, respectively.[7]

Coverage of brand-name Prolia and Xgeva ends on August 29, 2025.

What does this mean for my patient who…

- → **needs to be switched?** A **new prescription for the biosimilar product** is required by August 29, 2025 with the corresponding biosimilar LU code. Biosimilars cannot be interchanged by the pharmacist.
- → **is newly starting**? Only the biosimilar product will be covered via LU code. LU codes for Jubbonti are different than Prolia (see pg. 3). Recall that **bisphosphonates are first-line**.
- → **requests brand name?** An EAP application is required for coverage of Prolia or Xgeva beyond August 29, 2025, otherwise patients pay the cost difference.

What's Jubbonti? See page 3 for a brief overview!

In this issue:

RSV season is here! Who is eligible?[8]

Starting this 2024-2025 season, Ontario expanded its RSV prevention programs to target high-risk populations: infants and older adults. Full eligibility criteria is on the RSV program website. *See page 5 for FAQs.

RSV season runs from November to April, peaking in December.

What is new?	What is unchanged?
▪ **All** infants born during the '24-'25 season are now eligible ▪ Expanded eligibility for high-risk adults 60+ ▪ New infant (Beyfortus, mAb) and adult (Abrysvo) vaccines ▪ Adults can be vaccinated in community pharmacies (requires prescription, may need to pay injection fee) ▪ Coadministration with all routine vaccines is acceptable	▪ Includes high-risk adults 60+ ▪ Includes high-risk children up to 24 months ▪ Publicly funded RSV vaccine for adults

Infants & children: Only one product is needed for RSV prevention. The monoclonal antibody for infants (Beyfortus) is preferred over vaccinating pregnant people due to efficacy and safety data.[9]

Infants & children[9]

- **Product**: Beyfortus (nirsevimab)
- **Dose**: Single IM dose given shortly before or during active RSV season.
- **Eligibility**: Infants <8 months old entering or born during their **first** RSV season and/or high-risk children up to 24 months old
- **Efficacy**: 79-90% in preventing severe RSV
- **Cost**: Not available for private purchase

Pregnant individuals[9]

Only recommended if the infant will not be vaccinated or in certain circumstances*.

- **Product**: Abrysvo
- **Dose**: Single IM dose at 32+0 to 36+6 weeks
- **Eligibility**: Due date during RSV season
- **Efficacy**: 57-82% in preventing severe RSV
- **Safety***: Slightly higher rate (NS) of preterm births in one trial, not seen in subsequent trials.

Duration of effect (Beyfortus and Abrysvo): 6 months. No long-term immunity. Infants are protected from severe RSV (hospitalizations, ICU admissions).

High-risk older adults (60+ years old)[8]

- **Product**: Abrysvo or Avrexy
- **Eligibility**: See website
- **Dose**: Single IM dose
- **Cost**: ~$300 if not covered
- **Efficacy**: 77-81% against RSV-associated ER visits, hospitalizations, and severe disease (ICU admission or death)
- **Duration of effect**: studies are ongoing to determine length of protection. Current data supports 18-23 months.[10]

Practice tool spotlight: Essential Medicines program[11]

Note: TVFHT does not endorse any specific insurance provider.

What is it? GreenShield's Essential Medicines program provides patients with $1000 of prescription medication coverage for 12 months.

Who is eligible? Ontario residents aged 25-64, who are **employed** (including self-employment) with a household income below the program threshold, and **no drug coverage** (private or provincial/national).

How does it work? Patients transfer to The Health Depot pharmacy and medications are filled and delivered for free. Patients may re-apply after the initial 12-month period.

What is covered? The program formulary is regularly updated and includes common medications.

Bottom line: The Essential Medicines program helps fill an important gap in medication coverage.

Essential Medicines Program overview | **Online application (ON residents)**

New products on the market

See The Dose W24 for highlights of the 2023 osteoporosis guidelines

Jubbonti® (denosumab, 60 mg/mL prefilled syringe)[12]

Jubbonti is a biosimilar to Prolia, meaning it has demonstrated similarity, but is not interchangeable.

Use/dose: Indications, dose, contraindications, adverse effects, and monitoring are the same as Prolia.[13]

LU criteria: Postmenopausal females (LU 687) or males (LU 688) with osteoporosis (OP) at high risk for fractures who have failed, not tolerated, or cannot take a bisphosphonate.

New prescriptions for Jubbonti with an LU code are required for ongoing ODB coverage.

Cost: ~$125 per syringe (Prolia is >$500 per syringe)

Evenity® (romosozumab, 105 mg/1.17 mL prefilled syringe)[14]

A sclerostin inhibitor, first of its class. Increases bone formation and decreases resorption.[15]

Use: Indicated only for treatment of OP in **postmenopausal women** with high fracture risk. Showed decreased fractures in trials vs. placebo.[16] Specialist consultation is suggested.[17]

Dose: Two prefilled syringes subcutaneously **monthly** for 12 doses. **After 12 months, another anti-resorptive should be used**. No renal dose adjustment.

Caution: Not recommended in those with a history of MI or stroke, due to higher rates of events vs. alendronate. Adverse effects similar to denosumab.

Cost: $800/month (EAP coverage for **treatment-naïve** OP patients)

Insujet® (needle-free insulin injection device system)[18,19]

A refillable injection device for patients >6 years old with type 1 or type 2 diabetes.

Administered like an insulin pen into SC tissue, a thin, high-pressure stream of insulin exits through a small hole in the nozzle and penetrates skin.

Dose: Insulin doses of 4-50 units at a time. An insulin cartridge or vial is inserted into the injector. Only 100 IU/mL insulins can be used. One device per insulin type.

Common adverse effects: Bleeding, bruising, raised white bumps on the skin.

Replace: Nozzles after 56 injections or 14 days, and injectors after 5000 injections.

Cost: $500 per device (not covered)

Rapid fire: quick updates for busy primary care providers

Diabetes Canada 2024 Update – Pharmacologic Glycemic Management

Link to guidelines. Key takeaways:[20]

- Metformin remains first-line and can be started, with dosage adjustment, **down to eGFR 15-30 mL/min/1.73m²**.
- At diagnosis, it is reasonable to start an agent with CV or renal evidence in combination with metformin in those with high CV risk, heart failure, or chronic kidney disease.
- The above agents should be considered for patients with these comorbidities even if A1C is at target. They can replace an agent with less CV and/or renal evidence.
- There is no statement on once-weekly insulin, as its approval occurred after the guideline writing. See The Dose S/S 2024 for a brief overview of this product.

New – 2024 CCSMH BPSD Guidelines[21]

Link to guidelines. Covers five behavioural and psychological symptoms of dementia (BPSD): agitation, psychosis, depressive symptoms/depression, anxiety, and sexual expressions of potential risk. Can apply to community, inpatient, and residential settings.

Key messages:

- Nonpharmacological strategies are first-line
- Citalopram is preferred in moderate - severe BPSD
- **Atypical** antipsychotics an option in severe BPSD
- Routinely assess for deprescribing psychotropics

DOACs now general benefits on ODB[23]

As of July 2024, direct-oral anticoagulants (DOACs) are newly designated as general benefits by ODB. Prior to this, all DOACs required Exceptional Access Program approval for coverage.

All brand and generic DOACs are now covered: apixaban, dabigatran, edoxaban, and rivaroxaban. See page 4 for a comparison of these agents.

CEP academic detailing updates

Pharmacotherapy for obesity management

Help streamline your appointments and book an accredited detailing visit (open to physicians and nurse practitioners). Reach out to your TVFHT pharmacist or to CEP if you are not at a TVFHT site.

Did you know? "Best Weight" is a free informative online program open to patients and the general public. Link to register for TVFHT group programs.

COPD: As winter draws closer, stay up to date with guidelines and available inhalers using the CEP COPD tool. Academic detailing visits are available for this topic.

Type 2 diabetes: Use the online CEP diabetes tool to compare evidence for different antihyperglycemics. Insulin and non-insulin pharmacotherapies are available for academic detailing topics.

Are all DOACs created equal? Spotlight on safety and special populations

Is a DOAC appropriate for everyone?

DOACs are not approved for patients with a mechanical heart valve or valvular atrial fib (moderate to severe mitral stenosis, rheumatic heart disease). DOACs showed harm vs. warfarin in the RE-ALIGN and PROACT-Xa trials.[23,24]

The first head-to-head DOAC trial is underway: *CO*mparison of *B*leeding *R*isk between *R*ivaroxaban and *A*pixaban (COBRRA) trial is studying patients with acute VTE.[25]

Older adults

Older adults are more likely to have frailty, polypharmacy, and drug interactions. Calculate CrCL using body weight to more accurately gauge kidney function.

Did you know? Dabigatran and rivaroxaban are on the 2023 Beers Criteria due to observational data showing more major and GI bleeding than other DOACs.[26,27,28] Drugs on the Beers Criteria should be assessed on a case-by-case basis.[26,29]

Apixaban: safer and more effective

Therapeutics Initiative (BC) conducted a systematic review of observational studies comparing apixaban and other DOACs in non-valvular atrial fibrillation.[30] Apixaban demonstrated[30]:

- Similar efficacy and lower risks of major bleeds compared to rivaroxaban and dabigatran.
- Lower risks of mortality, ischemic stroke, and intracranial hemorrhage compared to rivaroxaban.
- Similar risks of death and ICH, and superior efficacy compared to dabigatran.
- Insufficient data to compare to edoxaban.

Chronic kidney disease (CKD)

Did you know? Renal dose adjustments for most DOACs rely on **CrCL**. eGFR is reported by default, so CrCL must be calculated for dose adjustments.

Apixaban has the most evidence in CKD, including an analysis of patients with severe CKD from the ARISTOTLE trial and two small studies in hemodialysis. It also has the lowest renal excretion.[23,31]

Practical differences and considerations for DOACs[23]

Apixaban (Eliquis)	▪ Lowest renal excretion (25%) ▪ Most data in chronic kidney disease[31] ▪ Observational data: safer than rivaroxaban, dabigatran[30]	▪ Twice daily dosing ▪ Generic: $50/month
Dabigatran (Pradaxa)	▪ Highest renal excretion (80%) ▪ Needs acidic environment for absorption ▪ Beers Criteria: "Use with caution"[26]	▪ Twice daily dosing ▪ Generic: $100/month
Edoxaban (Lixiana)	▪ No generic availability	▪ Once daily dosing ▪ Brand: $110/month
Rivaroxaban (Xarelto)	▪ Beers Criteria: "Avoid for long-term use"[26] ▪ Doses ≥15 mg: take with food for adequate absorption	▪ Once daily dosing ▪ Generic: $50/month

Pneumococcal vaccines cont. – FAQs

Conjugate (PCV) vs. polysaccharide (PPSV) vaccines[5]

- Conjugate vaccines provide **more durable immunity** that **can be boosted**
- Polysaccharide vaccines provide less robust immunity that wanes over 5 years and cannot be boosted. Some populations do not respond as well (infants, older adults, immunocompromised)

Serotype coverage – PCV-20 vs. PPSV-23[5]

- PPSV-23 covers more serotypes, but has **less durable immunity**
- PCV-20 covers ~90% of the serotypes in PPSV-23, and has more durable immunity
- The difference in serotypes may be more relevant in higher-risk populations

Q: What if my patient 65+ cannot receive PCV-20?[2,4]

NACI discretionary recommendation: If PCV-20 unavailable, an alternative is PCV-15 followed by PPSV-23

Q: Should anyone receive both PCV-20 and PCV-21?[5]

This is not currently recommended in most adults, except in some hematopoietic stem cell recipients.

Q: How do we manage certain clinical situations?[5]

Current vaccination status	What now?
Age <4 and has started but not completed vaccine series with PCV-13	Complete the series by giving either PCV-15 or PCV-20 for the remaining doses.
Previously received a complete series of publicly funded doses of other pneumococcal vaccines	Not eligible for newly funded vaccines under the same age group criteria.
High-risk patient age 18-64 who previously received publicly funded PPSV-23 or PSV-13	May be eligible for PCV-20 if now age 65+ and it has been ≥5 years since last pneumococcal vaccine.
Privately purchased prior doses of pneumococcal vaccines	Eligible for publicly funded vaccines. If not meeting criteria for public funding, may purchase and receive PCV-20 or PCV-21 (if it has been ≥5 years since last pneumococcal vaccine).

RSV vaccines cont. – FAQs

Q: Why is administering Beyfortus recommended over Abrysvo?[9]

- Beyfortus has higher efficacy rates in preventing severe infact RSV than Abrysvo
- One trial showed a slightly higher, non-statistically significant increased risk of preterm births when the gestational parent received Abrysvo
    - Subsequent trials showed no increased risk of preterm birth

Q: When would we give Beyfortus if the pregnant individual already received Abrysvo?[9]

- Infants born within 14 days of Abrysvo administration
- Infants who meet criteria for increased risk from severe RSV disease
    - See "Infant RSV Guidance – Abrysvo" fact sheet

Q: Where can Beyfortus be accessed in the community?

- Middlesex-London Health Unit
- RSV immunization clinic at LHSC's Children's Hospital for **patients with no primary care provider**

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