

Fluoride Varnish

Queensland Health Guideline

QH-GDL-410:2013

1. Purpose

This guideline provides recommendations regarding best practice to support the use of fluoride varnish in Queensland Health settings.

2. Scope

This guideline applies to dental practitioners and health practitioners endorsed to administer fluoride varnish. Compliance with this guideline is not mandatory, but sound reasoning must exist for departing from the recommended principles within this guideline.

3. Related documents

- *Fluoride – Prevention of Dental Caries and Maintenance of Oral Health, Queensland Health Guideline*, Office of the Chief Dental Officer, Clinical Excellence Queensland, March 2021.
- *Guidelines for use of fluorides in Australia: update 2019*. Australian Research Centre for Population Oral Health, Australian Dental Journal 2019; 65: (1): 30-38.
- *Use of dental item numbers, Oral Health Services Guideline*, Office of the Chief Dental Officer, Clinical Excellence Queensland, December 2020.
- *Australian Dental Association (ADA) Policy Statement 2.2.1 – Community Oral Health Promotion: Fluoride Use (Including ADA Guidelines for the Use of Fluoride*, Australian Dental Association, March 2023).

4. Guideline for the use of Fluoride Varnish

Fluoride varnish contains 22.6 mg/mL / 22 600 ppm fluoride ion suspended in an alcohol and resin base. Many fluoride varnish products are available on the Australian market however only one is currently registered to prevent caries and treat dentine hypersensitivity. All other varnishes are currently only registered to treat dentine hypersensitivity. As such, use of these alternative fluoride varnishes to prevent dental caries is considered off-label¹.

¹ Off-label use refers to the use of a registered medicine outside of the indications, dose, route of administration or patient group set out in the relevant Therapeutic Goods Administration Product Information. Dental practitioners are encouraged to use caution when considering off-label use and to clearly communicate the potential risks and benefits to patients and / or their parent / guardian / carer before deciding on treatment.

Fluoride varnish is applied to tooth surfaces where it sets rapidly on contact with saliva forming a waxy coating. This coating is worn off over time by chewing and toothbrushing.

Fluoride varnish is well tolerated by patients, including children.

4.1. Indications for use

Fluoride varnish is indicated for use for dental caries prevention and desensitising sensitive teeth in the deciduous and permanent dentitions. It is particularly useful in preventing dental caries in young children e.g. fluoride varnish programs, and for individuals determined to be at high risk including people with special needs, patients undergoing orthodontic treatment, patients with partial dentures; aged-care residents and vulnerable populations.

4.2. Contraindications for use

- Hypersensitivity/allergic reactions to colophony (natural resin) e.g. sticking plasters or medical adhesives
- Ulcerative gingivitis, stomatitis or other pathology of the soft tissues e.g. herpetic outbreaks or aphthous ulceration
- Severe / uncontrolled bronchial asthma

Note: Contact allergic reactions related to the resinous component of varnishes are rare.

4.3. Application frequency

The recommended frequency of application is twice per year however more frequent applications are indicated for children and adults at higher risk of dental caries i.e. up to four applications per year.

4.4. Dosage

- For young children (primary teeth only): up to 0.25mL (5.65mg fluoride).
- For older children (mixed dentition stage): up to 0.40mL (9.04mg fluoride).
- For the permanent dentition: up to 0.75mL (16.95mg fluoride).

4.5. Application procedure

1. Gain informed consent.
2. Remove plaque from the teeth by wiping with cotton gauze or by brushing with a wet toothbrush (DO NOT use toothpaste).
3. Dispense the appropriate amount of fluoride varnish.
4. Dry the teeth using cotton gauze and isolate teeth. Thorough drying is not necessary as the varnish sets in contact with saliva.
5. Apply the varnish using a probe / disposable brush / applicator. Apply a thin layer of the varnish to tooth and / or exposed root surfaces. If possible, begin with the upper posterior teeth. Dry two or three teeth at a time with cotton gauze and apply the varnish immediately.

Note: Fluoride varnish is extremely viscous. Do not to overload the probe / brush tip / applicator.

4.6. Post application instructions and advice

- Fluoride varnish works best if it can be left undisturbed for as long as possible.
- Soft foods and fluids can be consumed 30 minutes after application.
- Do not chew food for at least four hours after application.
- Do not brush for at least four hours after application.
- Teeth will look yellow for a few days if the varnish applied is tinted.
- Best results are obtained if varnish is applied twice per year, about once every six months or more often for patients at higher risk.

4.7. Recording a fluoride varnish application

Appropriate notes should be recorded in the patient's clinical record including consent details, teeth treated, dosage, product details and post application instructions / advice.

Item 121 Topical application of remineralisation agents, one treatment is the relevant Australian Dental Association Inc. *Australian Schedule of Dental Services and Glossary* dental item number to record the application of fluoride varnish. Note this item number has a limit of one (1) per appointment.

5. Document approval details

Document custodian

Chief Dental Officer, Clinical Excellence Queensland

Approval officer

Deputy Director-General, Clinical Excellence Queensland

Approval date: 6 September 2023

Version Control

| Version | Date | Comments |
|---------|------------------|---|
| 1.0 | 3 September 2013 | New guideline |
| 2.1 | 5 March 2021 | New template; revised title; updated related documents; advice regarding off-label use; expanded dosage information; expanded post application instructions / advice; expanded information regarding recording, updated approval officer. |
| 2.2 | 6 September 2023 | New template - item number definition updated to reflect the ADA Schedule of Dental Services and Glossary |