



## **Fluoride Varnish**

### Brief Summary

#### **Description and Use:**

Fluoride varnish is a concentrated topical fluoride usually containing 5% sodium fluoride (NaF) in a resin or synthetic base. Varnish when brushed onto the teeth, provides a highly concentrated dose of fluoride and maintains prolonged contact to inhibit caries.

#### **Effectiveness and Efficacy:**

The caries preventive fraction ranges from 20-50%.

#### **Recommendations:**

For high-caries patients or communities, The World Health Organization (WHO) recommends 5% NaF varnish application 2-4 times in a year for children. For low caries communities based on the children's histories of caries, WHO recommends 2-4 applications in a year. Thorough drying of the tooth is not required.

#### **Cost Effectiveness:**

The estimated cost for varnish is \$1-\$4 per application, depending on the brand. The cost for fluoride varnish programs have been reported to be lower than mouth-rinse programs.

#### **Safety:**

On average, the amount of varnish applied to treat one child is 0.5 ml which delivers 3-11 mg of fluoride ion. A Cochrane review reported that this dose is far below the probable toxic dose (PTD) of 5mg/kg body weight.