

# **Universal Provision of Oral Health Prevention**

Marsha Butler

# Upstream + Downstream

To achieve optimal oral health, oral health care provision must be paired with caries prevention strategies and infrastructure

These include:

1. Available and affordable preventive interventions
2. Effective and evidence-based public oral health message and campaign

***“Universal Provision of Oral Health Prevention”***

# Fluoride

- Dental caries
- Potential caries reduction effects of fluoride
- Science: effectiveness and safety of fluoride toothpaste



**Effectiveness:** prevented fraction of D(M)FS comparing to placebo were ranged from 23% to 36% (Cochrane)

**Safety:** Fluoride toothpaste is safe and effective. 1000 or 1500 ppm F for general use (0.5-0.75 mg of fluoride in 0.5 gm of toothpaste)

# Fluoride Varnish

- Science: effectiveness and safety of fluoride varnish

## **Effectiveness:**

Pooled prevention fractions were 46% for D(M)FS and 33% for d(e/m)fs  
(Cochrane)

Caries-preventive effect for permanent teeth in children demonstrated a preventive fraction of 30% (0-69%) when compared with untreated controls (systematic review for the NIH Consensus Conference)

# Advantage of Fluoride Application

The simplest form of fluoride application: fluoridated toothpaste

Trained health workers can apply fluoride varnish without full dental laboratory facility

Fluoride is available, affordable, and possible primary prevention for dental caries in various global health settings



# Fluoride Delivery Model

ChildSmile program: In-school daily supervised toothbrushing program in Scotland

- At the two-year follow-up, children in the intervention group exhibited significantly fewer caries in the first permanent molars than the control group

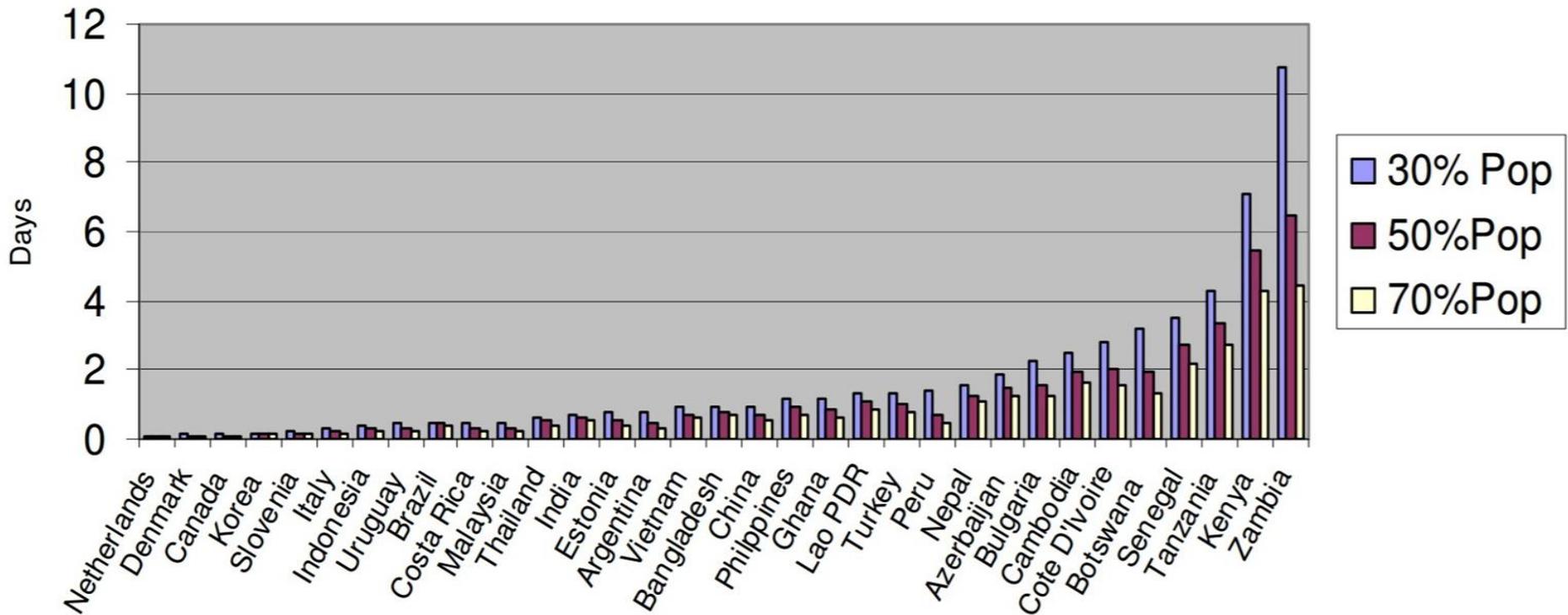
Australian model in rural communities

- Children in 15 remote communities received fluoride varnish twice per year along with health education for their parents
- Children who received fluoride varnish experienced significantly fewer caries than children without fluoride varnish with a preventive fraction of 31%

# Reality Check

“How many workdays needed to pay for one annual dose of toothpaste per person?”

(at the lowest price for the poorest 30% of the population)?



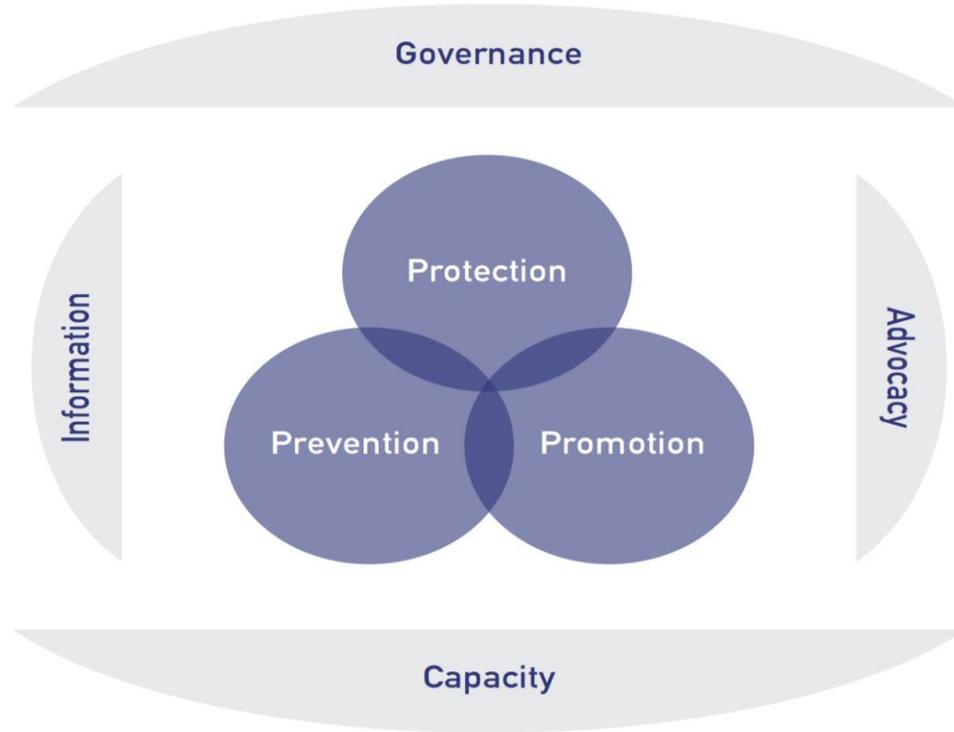
- 0.03 days in the United Kingdom to 9.34 days in Kenya (while for the same countries over the total population the range was 0.01–2 days)
- For an average U.S. household, this would be equal to spending approximately **\$1,731 a year** on toothpaste.

# Reality Check

- Only about 12.5% of the world's population benefit from the caries preventive possibilities of fluoride toothpaste (2007).
- Toothpastes are usually classified as a cosmetic product with high taxation (2008).
- In many cities and countries essential preventive products are exempt from import taxes or benefit from partial tax relief (insecticide treated mosquito nets, vaccines, contraceptives, female sanitary products and oral rehydration salts)
- WHO also recommends to reduce or remove taxes and tariffs on fluoride toothpastes

What is the burden of oral disease? [website]. Geneva: World Health Organization; 2014 ([http://www.who.int/oral\\_health/disease\\_burden/global/en/](http://www.who.int/oral_health/disease_burden/global/en/), accessed 2 December 2015).

# Aligning with Global Charter



**+ Universal Provision of  
Oral Health Prevention**

Thank you