CATFISH (Cumbrian Assessment of Teeth; a Fluoride Intervention Study for Health)  
A commentary from the British Fluoridation Society

1. Summary
The protocol for this study has recently been published (Goodwin et al, 2016). It seeks to evaluate the recently restarted water fluoridation scheme in Cumbria. Although the overall study is welcome, we believe the topical only (post eruptive) evaluation is unlikely to show a clinically significant benefit.

2. Overall design
This study seeks to evaluate the recently re-started community water fluoridation scheme in parts of Cumbria. The study involves two components. A study following children from fluoridated and control areas from shortly after birth up to 5 years of age; the “Systemic and topical study” (S&T study) and a second component following children from aged 5 years up to aged 11 years the “Topical only” or post eruptive (TO study). Certainly a rigorous evaluation of any new water fluoridation schemes is a research priority (Lennon, 2015) and this welcome study will make an important contribution.

3. The S&T study.
This part of the study includes a number of important features including clinical and blind photographic assessments of dental caries at ages 3 and 5 years along with intensive monitoring of other dental health related behaviours such as brushing with fluoride toothpastes and sugar intakes particularly around bedtime. The data will add to that recently published by Blinkhorn et al (2014).

4. The TO study.
This part of the study involves clinical and photographic assessments of dental caries at ages 5, 7 and 11 years. Given what we know about the pattern of development of dental caries over this age span and what we know about the effects of community water fluoridation it is unlikely that this part of the study will demonstrate any clinically significant benefit. The only study on the topical (post eruptive) effects of community water fluoridation in the UK (Hardwick et al, 1982) followed children aged 12 through to 16 years while most UK studies of the topical effects of fluoride toothpastes follow similar older age groups (O’Mullane et al, 1997)

5. Comments
Access to older schoolchildren and the narrow five year gap between the cessation and restart of water fluoridation in Cumbria complicate any assessment of the topical only (post eruptive) effects of community water fluoridation. The proposed TO study is therefore a compromise and, in our view, is unlikely to demonstrate a clinical benefit; it will complicate rather than assist policy making. If this part of the study is to provide useful information consideration should be given to following these children through to 15 or 16 years of age.
6. References


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