Oral health care (OHC) is a deceptively simple task. For many people with stroke-related limitations, the routine practice of OHC becomes a challenge and they become partially or totally reliant on others for their OHC. Poor oral health contributes to discomfort, pain, infection, and systematic health problems. Evidence-based OHC interventions are essential for this vulnerable patient group. Our recent Cochrane review update synthesized the randomized control trial evidence relating to the effectiveness of staff-led OHC interventions for individuals after a stroke.

### Search Strategy

In this update, we searched a range of sources, including the trial registers of the Cochrane Stroke Group (last searched April 2010) and Cochrane Oral Health Group (last searched May 2010), the Cochrane Central Register of Controlled Trials (CENTRAL; The Cochrane Library May 2010), MEDLINE (1966 to May 2010), CINAHL (1982 to May 2010), ISI Science and Technology Proceedings (July 2010), Zetoc (2000 to July 2010), and Proquest Dissertations and Theses (2000 to July 2010). We included trials with a mixed population in which stroke-specific data were available.

### Methods

Two review authors independently classified trials according to the inclusion and exclusion criteria, assessed the trial quality, and extracted data. We sought clarification or unpublished data from study authors when required.

### Results

We included 3 trials, which randomized 470 participants and evaluated an OHC education training program (n=110), a decontamination gel (n=203), and an OHC-augmented ventilator-associated-pneumonia bundle of care (n=200) by comparing them with a deferred intervention, a placebo gel, or standard care, respectively. The OHC educational intervention delivered within a nursing home setting demonstrated a significant reduction in denture plaque scores up to 6 months (P<0.00001) after the intervention but not dental plaque (Figure 1). Staff knowledge (P=0.002) and attitudes (P=0.001) toward oral care also improved and were maintained 6 months after the intervention (P=0.0008 and P<0.0001, respectively). Decontamination gel applied to patients’ oral mucous membranes 4 times daily reduced the incidence of pneumonia (P=0.03; Figure 2). Similarly, the augmented bundle of care was reported to have reduced the incidence of pneumonia among a ventilated population, but the trial was terminated early and data suitable for inclusion within the review were unavailable from the published report and from the author.

### Implications for Clinical Practice

We found limited evidence relating to OHC interventions after stroke. One small trial suggested that OHC training...
improves staff knowledge and attitudes and the cleanliness of patients’ dentures, but improvements did not extend to the cleanliness of patients’ teeth. A decontamination gel reduced the incidence of pneumonia, but the highly intensive application procedure is unlikely to be achievable within the resources of a standard stroke ward.

Implications for Research
OHC interventions must be designed to be clinically feasible within stroke care settings. Delivery and evaluation of OHC interventions should occur within 1 (or a range of) clinical contexts, thus facilitating translation into clinical practice should it prove effective.

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