

# Tailored action planning improved decontamination best practice when providers were greatly variant in implementing guidance



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## 1. Background

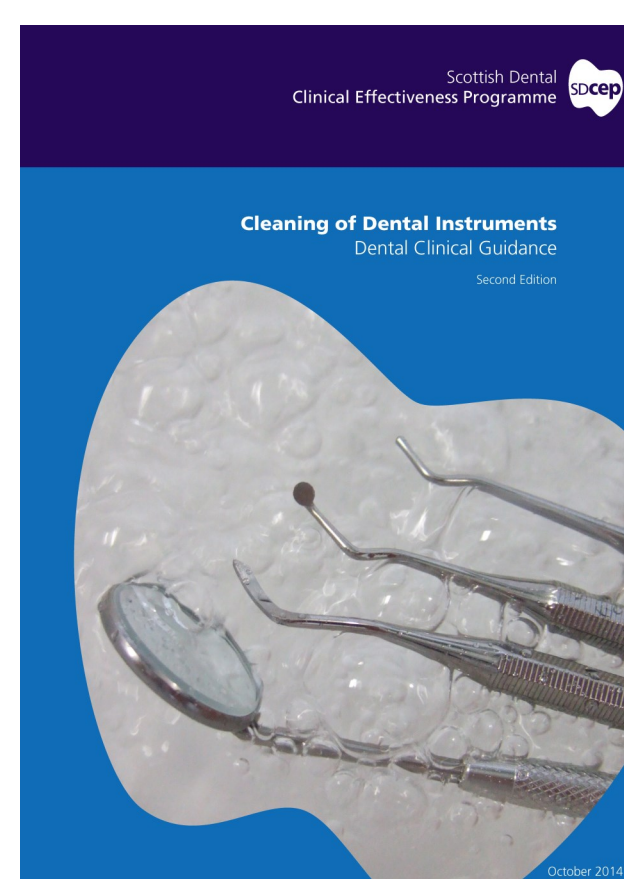
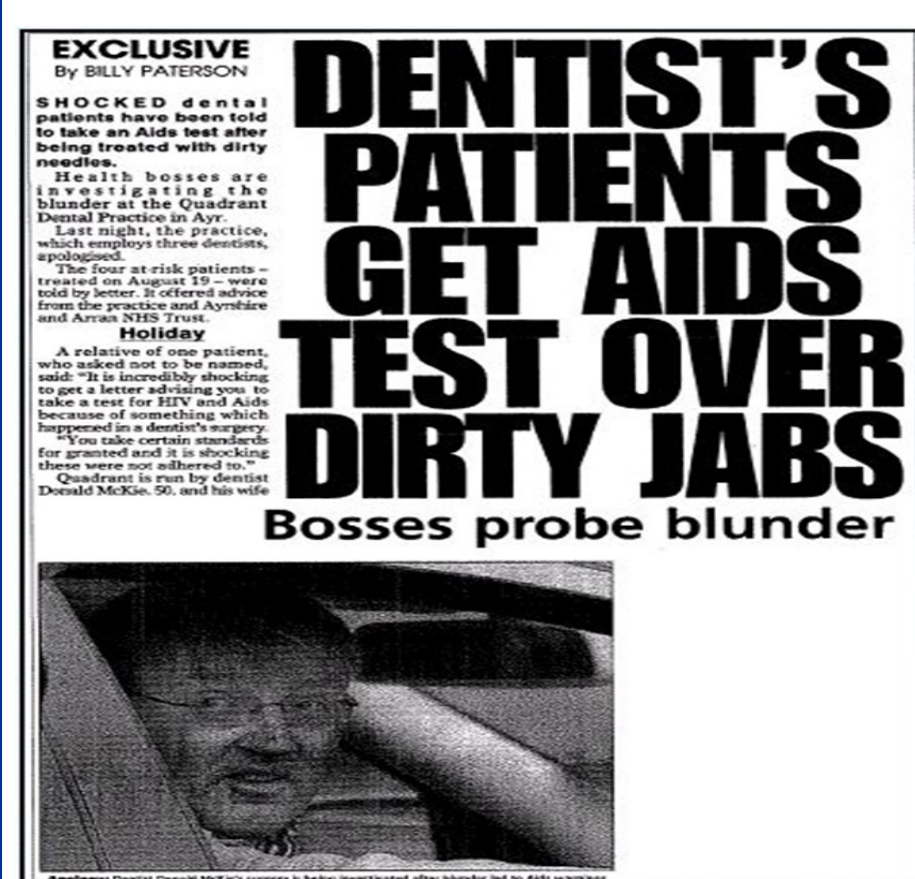
- In Scotland, 180 million dental instruments are decontaminated yearly.<sup>2</sup>
- Evidence suggests that dentists were greatly variant in if, when, and how they implemented decontamination best practice recommendations.<sup>3</sup>
- Surveys showed few dentists had plans to change even when they knew their current practice did not include all the key decontamination behaviours recommended for best practice (see below).
- It was hypothesized that an action planning intervention<sup>4</sup> could be a way of addressing these issues, particularly if dentists and their practices were given help to develop action plans tailored to their specific concerns and challenges in a consistent, structured way.

### Research Question

Can a tailored action planning intervention improve decontamination best practice more than standard support i.e. a NES S63 education course on the guidance topic?

## 2. Methods

- This was a pragmatic RCT. Dentists who registered for the decontamination S63 course were sent an invitation to participate in the trial, as well as a questionnaire about their current decontamination procedures. Respondents were stratified by their size of practice and baseline compliance with decontamination best practice, then randomised to receive (intervention arm) or not (control arm), a 3 hour, in-practice visit by a member of the Infection Control Dental Support (ICDS) team (deliverers of the S63 education course).
- During the visit, participating dentists and their practice team were asked to identify barriers and facilitators of implementing each of the 13 key behaviours, then complete the Action Planning Form (see below) to address identified problems. One month later, the ICDS team made a follow-up phone call in case there were any issues in progressing action plans.
- A questionnaire, posted 12 months after the S63 course, assessed the **Primary Outcome**: Best practice (always performing all 13 key behaviours).



Action Planning Form

Problem	Goal	Action Plan	Who (tick)	Monitoring Progress	Has the action plan been achieved (by this time)?
Wearing jewellery during clinical sessions	Remove jewellery	When I change into my uniform then I will take off my jewellery	Dentist(s) DCP(s) Non-clinical Other (Names):	Who? How? When?	Date _____ Always <input type="checkbox"/> Some-times <input type="checkbox"/> Never <input type="checkbox"/> Comments/problems? e.g. Action plan needs revising
		Reminder? Sign on the lockers			

### The 13 key behaviours that SDCEP guidance recommends should always be performed for best decontamination practice

- Remove jewellery
- Clean hands before putting on gloves
- Change gloves between patients
- Use single use items once (e.g. masks)
- Ensure a clutter-free environment
- Follow manufacturer instructions on equipment
- Keep a dirty to clean workflow
- Use the appropriate detergent
- Protective equipment when cleaning
- Use the correct containers for transportation
- Use disposable non-linting towels for drying
- Inspect instruments with an illuminated magnifier
- Follow written policies

## 3. Findings

N = 103 practices across Scotland. Analysis was by intention to treat. Group differences were compared using generalized linear models. While participating practices showed a trend toward performing more decontamination key behaviours at the end of 12 months than they did at baseline, experiencing the in-practice action planning visit in addition to the standard S63 education course significantly increased compliance with all 13 key decontamination behaviours compared to attending the course without the addition of the in-practice action planning visit (see below).

Proportion of practices always performing all 13 key decontamination behaviours 12 months after experiencing the intervention

Control Group = 11% (6/56)  
Intervention Group = 30% (14/47)  
Odds Ratio=3.53, 95% CI=1.19 to 10.48, p=0.02

There was no evidence that baseline compliance (above and below the median: Odds Ratio = 1.41, 95% CI = 0.09 to 21.23, p = 0.81) or whether practices were multi- or single-handed (Odds Ratio = 1.73, 95% CI = 0.04 to 72.86, p = 0.77) moderated intervention effects.

## 4. Conclusions

Decontamination best practice includes many behaviours, not necessarily performed by any one member of the practice. Tailored action planning proved a successful way to address the implementation challenges faced by diverse primary dental care practices throughout Scotland. It is also possible that the intervention had a greater impact than demonstrated, since performing all 13 key behaviours was a stringent primary outcome. Further work will focus on identifying mediators of the intervention's effect and explore the relationship between the nature and number of the action plans and behaviour change. Nevertheless, this result has already been fed back at policy level and this intervention is now a routine part of service support and delivery.

## 5. References

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## 6. Acknowledgements

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