

COMMENT



Dental public health

What is the evidence on the effectiveness of strategies to integrate oral health into primary care?

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A COMMENTARY ON**Christian B, George A, Veginadu P et al.**Strategies to integrate oral health into primary care: a systematic review. *BMJ Open* 2023; <https://doi.org/10.1136/bmjopen-2022-070622>.**PRACTICE POINTS**

- Integration of oral health into primary healthcare offers great potential for reducing the burden of dental disease.
- Adopting integrated approaches can improve a number of aspects of oral health including referral pathways, operating efficiency, increased visits for oral health issues, higher preventative treatment rates for children, and more visits to oral health professionals.
- Integration of oral health care into primary health care can be achieved by enhancing competency through oral health education, re-orientating responsibilities of health professionals at an organisational level, and/or introducing policy changes.
- Political will, leadership and change at all levels of the healthcare system are required to fully realise the potential benefits of integration.

DATA SOURCES AND SEARCH STRATEGY: Seven databases (MEDLINE, CINAHL, Embase, Scopus, ProQuest, Cochrane and Google Scholar) were searched up to the third week in June 2022. Keyword search terms were based on four key concepts: oral health, primary health, strategies, and integration.

STUDY SELECTION: Peer-reviewed studies that evaluated any strategies to integrate oral health into primary care (e.g., guidelines, policies, workforce programmes) were included in the review. Eligibility was restricted to papers written in English language. Papers in non-primary care settings or which did not describe an evaluation were excluded. Two reviewers independently screened titles and abstracts and thereafter full texts. Disagreements were resolved by consulting a third reviewer.

DATA EXTRACTION AND SYNTHESIS: Data were extracted by one reviewer; a second person verified accuracy. Covidence was used for data extraction. Two independent reviewers critically appraised the papers using the relevant tools (e.g. Critical Appraisal Skills Programme, Cochrane Collaboration, and STrengthening the Reporting of Observational studies in Epidemiology). PRISMA flow diagram was used to present the study selection process. Review findings were reported using a narrative synthesis approach. The Health System Building Blocks (HSBB) was used as a basis for structuring the results/discussion. Heterogeneity among the included studies was high and therefore no meta-analysis was conducted.

RESULTS: Forty-nine studies were included, of which two were RCTs. Most studies described oral healthcare delivered by non-dental primary care professionals within primary care services. Other settings included community, schools, and care homes. Outcomes of interest included: access to oral healthcare, knowledge/attitudes/perceptions, change in dental caries estimates. Almost all studies, except two studies which found no difference in the outcomes measured, favoured an integration strategy. Integration was achieved by enhancing competency (e.g. oral health promotion-trained educators), re-orientating responsibilities of health professionals at an organisation level and/or policy changes (e.g. expanded health insurance policy coverage to include oral health). Integration strategies enhanced access through improved referral pathways, documentation processes, operating efficiency, the number of health staff on hand, increased visits for oral health issues, higher fluoride varnish application rates for children, and more visits to dental health professionals.

CONCLUSIONS: In this review, promoting an integrated approach for oral health was associated with improvements across a range of outcomes. Integrating oral health into primary care is complex but holds promise for reducing the burden of dental diseases. Identifying the best practice models of service integration requires further research and evaluation.

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COMMENTARY

Oral health is an integral part of general health and wider wellbeing¹. Dental diseases can adversely affect quality of life, burden healthcare systems and have a negative impact on the global economy^{1–3}. The WHO estimates that oral diseases affect 3.5 billion people worldwide⁴. Oral diseases and other systemic non-communicable diseases (NCDs) share modifiable risk factors and are largely preventable⁵. Therefore, adopting integrated approaches to tackling oral diseases and other NCDs is essential⁵. Despite calls to integrate dental care into healthcare services^{6–8}, a key global barrier is the historical isolation of oral healthcare from primary medical care³.

The aim of the systematic review by Christian et al.⁹ was to synthesise evidence on the effectiveness of strategies to integrate oral health into primary care. Integration strategies were defined as any individual or combination of activities or interventions that aimed to directly or indirectly support oral health inclusion in primary care. Following deduplication and screening of title/abstract and then full text, 49 studies were included.

The authors have ensured transparency in the review process by registering a priori on PROSPERO and following the Cochrane Handbook for Systematic Reviews standards and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The authors undertook a comprehensive search strategy enacted on seven electronic databases. However, unpublished/grey literature and studies published in any other language than English were not included; as a result there is an increased risk of publication bias. Experts were consulted, and forward citation searches were conducted thereby reducing the risk of missing potentially relevant studies. Although critical appraisal was conducted, it was not used to weigh evidence from included studies. As quality assessment may impact on the synthesis and interpretation of data, this diminishes confidence in the conclusions. High heterogeneity between the included studies precluded a meta-analysis. Most included studies originated from high income countries, thus generalisability to low-income countries must be done with caution.

The key finding of the systematic review was that strategies for integration of oral health into primary health care holds great potential across a number of different outcomes. Undoubtedly, integrating dental care systems with primary care services holds a great potential to reduce the burden of oral diseases. Most studies described oral healthcare delivered by non-dental primary care professionals within primary care services. Integration of oral health care into primary health care was achieved by enhancing competency, re-orientating responsibilities of health professionals at an organisational level and/or policy changes. Integrated approaches to oral health were associated with positive outcomes, including improvements in referral pathways, documentation processes, operating efficiency, number of available health staff, increased visits for oral health issues, higher fluoride varnish applications/preventative treatment rates for children, and more visits to oral health professionals.

Integration in healthcare is complex. Common barriers included time and staff constraints, resource limitations, and the absence of

organisational support. To reorient healthcare systems towards integration the authors recommend political action, leadership, and changes at all levels. Facilitators included improvements in healthcare professionals' knowledge and attitude. Intervention studies can improve oral health knowledge among healthcare providers (HCPs). Future research could use qualitative methods to explore how positive attitudes can be fostered.

What the review does not cover, and thus limits the usability of the review in practice, is which integration system is most effective. In addition, there is limited insight as to the generalisability / transferability of the interventions between geographical locations and populations. Therefore, further research is needed to identify best practice models to promote integration of oral health into primary care and generalisability and transferability of findings to low-income countries. Research into health economics of integration remains a significant gap and one which is pivotal in influencing policy and decision-makers.

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COMPETING INTERESTS

The authors declare no competing interests.

ADDITIONAL INFORMATION

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