A scoping review of interventions to improve oral health in prison settings

Booth, Joelle; O'Malley, Lucy; Meek, Rosie ; Mc Goldrick, Niall; Maycock, Matthew; Clarkson, Janet

Published in:
Community Dentistry and Oral Epidemiology

DOI:
10.1111/cdoe.12811

Publication date:
2022

Received: 4 August 2022 | Revised: 14 October 2022 | Accepted: 31 October 2022

DOI: 10.1111/cdoe.12811

COMMUNITY DENTISTRY AND ORAL EPIDEMIOLOGY WILEY

ORIGINAL ARTICLE

A scoping review of interventions to improve oral health in prison settings

Joelle Booth[1] | Lucy O'Malley[2] | Rosie Meek[3] | Niall Mc Goldrick[4] | Matthew Maycock[4] | Janet Clarkson[4] | Kristina Wanyonyi-Kay[1,5]

[1]Queen Mary University of London/NIHR, London, UK

[2]The University of Manchester, Manchester, UK

[3]Royal Holloway University of London, Egham, UK

[4]University of Dundee, Dundee, UK

[5]Queen Mary University of London, London, UK

Correspondence
Joelle Booth, Queen Mary University of London/NIHR, London, UK.
Email: j.booth@qmul.ac.uk

Abstract

Objective: To describe the characteristics of oral health interventions implemented in prison settings and explore the barriers and facilitators towards implementation.

Methods: Following Joanna Briggs Institute scoping review methodology, six databases were searched including Medline (R), Emcare, Embase, AMED, Cochrane and PsycINFO. A total of 978 studies were returned and screened. The inclusion criteria were those studies conducted in a prison population, with an intervention to address oral health and published since 2000.

Results: Ten studies published between 2008 and 2021 were included. All were conducted in high-income countries. Three intervention types were identified: health education ($n = 5$), teledentistry ($n = 3$) and screening or triaging ($n = 2$). The barriers and facilitators to successful implementation were grouped into a framework of four overarching concepts. These included prison environment, population makeup, compliance and staffing.

Clinical Significance: Evidence suggests that oral health interventions in prisons are focused on improving access to services and oral health messages. A range of drivers including the prison environment, staffing levels, recruitment and intervention compliance influence implementation and the success of interventions.

KEYWORDS
adults, dental Health, oral health, health behaviour, oral health, Psychosocial aspects of oral health, Special care

1 | INTRODUCTION

In England and Wales, 132 per 100 000 of the national population are incarcerated in prisons, in Scotland 138, Northern Ireland 83, France 102 and Germany 71. The highest prison population rate is the United States of America (USA) at 629 per 100000.[1] The prison population are a vulnerable group with high risk factors for poor oral and general health.[2] A survey by Public Health England in England, Wales and Northern Ireland uncovered barriers to optimal oral health in prisons, such as long waiting times to access dental care, limited referrals and access to secondary care, which at times is due to a lack of escorts.[3] Studies in the United States mirror these barriers, with finances and staffing levels contributing.[4]

In comparison with the general population, the rate of dental decay is estimated to be four times higher for those in prison in England.[3] In Scotland, this is three times for males and 14 times for females.[5] This compares with the United States where prisoners are 8.4 times worse in terms of oral health than the general population.[6] Oral Health Related Quality of Life is low; all prisoners included in the Oral Health Survey of Scottish Prisoners reported occasional painful aching in the mouth.[7] A study looking at older prisoners in Hong Kong found over half of prisoners' lives were impacted by their poor oral health,[8] and a population sampled from France showed prisoners experienced difficulties chewing.[9]

Whilst poor oral health of those incarcerated can be partly linked to the challenges in providing dental care in prison, those convicted of crimes or on remand have high dental needs prior to entering prison.[10] This subgroup at higher risk of disease may not have previously engaged with health services, and their admission to prison provides a unique opportunity for oral health rehabilitation.[11]

A known distrust of healthcare professionals by prisoners further hinders access to dental care whilst in prison.[12] Improving oral health should be an important part of the rehabilitative experience for those in prison. This should be carried forward post-liberation in order to support social integration. The introduction of oral health promotion in prisons is in line with the World Health Organization's Health in Prison's Programme (HIPP), which emphasizes the importance of creating healthy prisons. HIPP envision an environment with a focus towards promoting public health, reducing health inequalities and utilizing prison health services to reduce reoffending.[13] Unfortunately, at present there are no standard oral health preventive interventions in the United Kingdom (UK) making it important to consider what the best way to introduce this is.

The aim of this scoping review was to facilitate a better understanding of oral health interventions in prison settings, synthesize the theoretical frameworks utilized and map the barriers and facilitators for implementation. This review discusses how the identified themes can act as both enablers or impede intervention implementation dependent on contextually specific factors. Whilst this review draws information from studies conducted in prison, the focus will be on the implementation of interventions once research access has been granted, rather than the practical aspects of conducting research in prisons. This review is the first evidence summary specifically exploring oral health interventions in this setting.

2 | METHODS

A scoping review was selected to determine the nature and extent of the published literature in this area.[14] The range of evidence on the topic was broad in terms of delivery mechanism and comes from countries with different justice system practices. This review outlines oral health interventions within prison settings and their implementation, with a view to inform the development and implementation of future interventions. Two questions were addressed (1) what is the nature of the interventions used to deliver oral health promotion interventions in prisons settings and (2) what are the barriers and facilitators towards the implementation of oral health intervention in prison settings. The Joanna Briggs Institute (JBI) methodology[15] was used. In terms of Population Concept and Context (PCC), the population assessed was those currently incarcerated, the concept was the implementation of an oral health intervention and the context was within a prison.

A search strategy was developed from a preliminary literature search for key words and index terms (Appendix S1). Six databases were searched: Medline (R), Emcare, Embase, AMED, Cochrane library and PsycINFO. All papers were exported into Endnote[16] and duplicates removed. The titles were then screened by a primary reviewer for relevance followed by the abstracts. The search string was then re-run by a second reviewer independently and results compared. Both reviewers discussed the papers and made agreements. At this stage, one article was translated into English using Google Translate.[17] The full texts were evaluated against pre-determined inclusion and exclusion criteria (Table 1).

Data extraction forms included authors, date published, participants, study type, context and key findings. Data were synthesized and thematically categorized into barriers and facilitators for implementing the interventions.

3 | RESULTS

Ten articles met the inclusion and exclusion criteria and addressed the research aim (as shown in Figure 1). The selected studies were published from 2008 to 2021. All studies were from high income countries: UK (4), France (3), United States (2) and Norway (1). The studies were either non-randomized experimental (8) or observational in design (2). The sample size range varied greatly from six[18] to 448 participants[19](see data extraction table in appendix).

TABLE 1 Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
Studies involving an oral health intervention in a prison setting	Publications prior to 2000 and those after the date of the literature search, September 2022
Published in any language	Epidemiological studies
All levels of prison security and prison types	Grey literature
No restriction on the demographic of the prison population included	

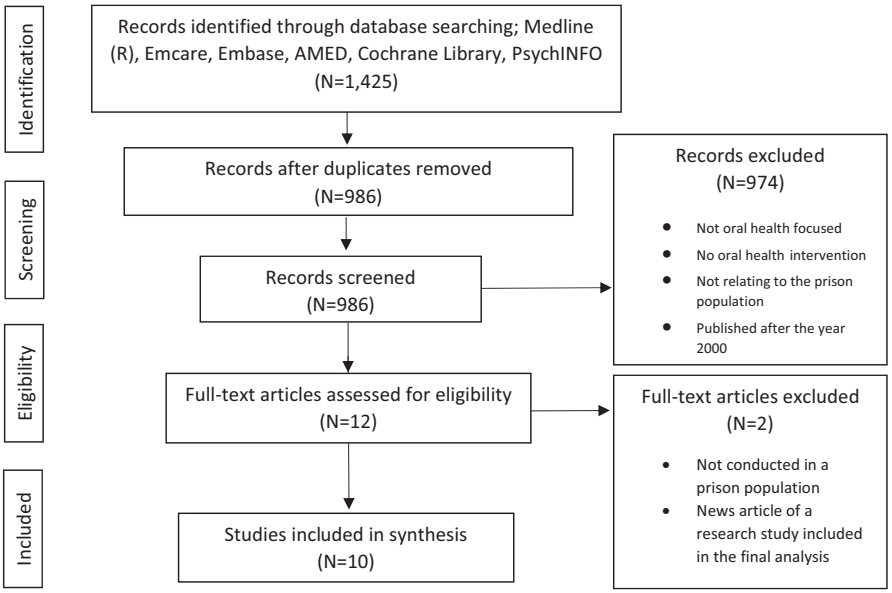

FIGURE 1 PRISMA flowchart of paper selection

4 | QUESTION 1: WHAT IS THE NATURE OF ORAL HEALTH INTERVENTIONS IN PRISON SETTINGS?

The interventions focused on three areas: face-to-face triaging, teledentistry and health education or coaching. The studies included focused predominately on middle-aged male prisoners[20] and included high security prisons.[21] The interventions varied in their functions with face-to-face triaging and teledentistry aiming to identify treatment need and aid treatment planning, whereas the health coaching and health education interventions aimed to empower prisoners to enhance their oral health through health promoting behaviours.

4.1 | Face-to-face triaging

Two studies looked at triaging systems to improve the delivery of oral care within prisons.[22,23] Both these studies were in major cities London[22] and Belfast.[23] One triaging intervention involved triaging with a screening tool, the Dental Pain Questionnaire (DePaQ). The questionnaire classified patients with dental pain into one of three groups dependent on predicted pathology based upon symptoms.[22] The questionnaire was delivered by nurses and incorporated as part of the 48 h general assessment of new prisoners. The sensitivity of the screening test was deemed to be 81% but the specificity was low, 33%. The other triaging system[23] included three components: an oral health assessment by a dental nurse during induction, a simple monthly clinical examination and prioritization of referrals from prison landing staff. This triaging system successfully identified the correct level of dental need for 95% of prisoners and improved the percentage of patients seen according to their categorization.

4.2 | Teledentistry

Three studies involved teledentistry in screening of prisoners for dental treatment needs on their admission to prison.[24–26] All studies were conducted in France, two of which were carried out in the same prison.[24,26] The interventions involved a nurse in the prison using an intraoral camera and fluorescent light to record the mouth of the prisoner for asynchronous review by a remote dentist. The information sent to the remote dentist includes a set of questions relating to dental history, an odontogram and video of each dental quadrant. The remote dentist reviews and decides on treatment then assigns an urgency score to prioritize those with higher dental needs and plan treatment.

4.3 | Health coaching and education

Five of the studies introduced health coaching or education interventions.[18,19,21,27,28] Four of the studies involved health coaching or health promoting prison policies. Coates et al. focused specifically on health education alone.[27]

4.3.1 | Theoretical models used for health education and coaching

Motivational Interviewing

Evensen et al.[28] delivered motivational interviewing (MI) to 16 prisoners alongside oral examinations and an oral hygiene aid pack. MI was delivered in the visitor room of the prison, participants knowledge in relation to understanding how lifestyle can impact oral health improved through the MI sessions. Cinar et al. used a peer coaching approach to improve prisoner social interaction, self-esteem and self-efficacy alongside oral health.[18]

Health enhancing environment policy

Akbar et al. utilized a common risk factor approach within a programme to create a health and oral health promoting environment. The participants improved their oral health-related knowledge, little effect on attitudes was seen and no effect on oral health-related behaviours.[21] Clouse et al. used a similar approach with the addition of health education sessions but this had no impact upon oral hygiene.[19]

Health education

Coates et al. was the only study to use health education. This was delivered as a one-hour interactive session informing those in a juvenile detention centre how to access healthcare services. They supplemented this with an information booklet. The session improved the prisoner's health knowledge, attitudes as to the importance of seeking dental care and self-efficacy of accessing care.[27]

5 | QUESTION 2: WHAT WERE THE BARRIERS AND FACILITATORS TO IMPLEMENTATION OF INTERVENTIONS?

The studies highlighted a number of barriers and facilitators to implementing interventions in prison settings (see Table 2). We found that barriers and facilitators could arise from subthemes related to four areas: prison environment, population makeup, compliance and staffing.

5.1 | Prison environment

The prison environment offered aspects that supported intervention engagement but at times limited the sustainability of the interventions. Security was often a barrier. The security procedures meant that interventions had to be paused or stopped.[22] For security reasons, dental equipment allowed is restricted, making dental examinations challenging.[28] The restrictions in oral hygiene aids and limited access to healthy food options[18] diluted health messages delivered.[21] A common risk factor approach was challenged as the greatest predictor of health-related behaviours, such as number of cigarettes smoked, was related to the length of time in prison as opposed to the common risk factor approach intervention.[21]

The prison environment could present an opportunity for those incarcerated to restructure their personal hygiene activities and to adopt and maintain positive oral health behaviours.[18] The interventions that were implemented on arrival to prison acted as first opportunities for prisoners to meet healthcare staff and receive preventative advice as they had been less likely to have contact with healthcare on the outside.[23]

5.2 | Population makeup

The population makeup and dynamism can be a barrier or facilitator. As a barrier, for interventions conducted over a long period or those involving multiple sessions[28] the high turnover and new admissions

TABLE 2 Data themes framework and uncovered barriers and facilitators

Barriers:		Facilitators:	
Prison environment - Prison security procedures - Limited facilities - Limited equipment - Dilution of health messages - Longer sentences negatively impacting interventions	Buchanan et al., 2008 Akbar et al., 2012 Cinar et al., 2017 Evensen et al., 2021	**Prison environment** - Intervention on arrival - Opportunities for preventative care and to restructure health-related behaviours	Giraudeau et al., 2017 Inquimbert et al., 2021 Novais et al., 2019 Cinar et al., 2017
Population makeup - Low health literacy - Unpredictable population number raising logistical challenges	Buchanan et al., 2008 Giraudeau et al., 2017 Inquimbert et al., 2021 Evensen et al., 2021 Akbar et al., 2012 Gray et al., 2014	**Population makeup** - Wider reach of interventions - Need for clinical activity	Novais et al., 2019 Giraudeau et al., 2017 Evensen et al., 2021
Compliance - Low motivation - Conflicting legal or family visit appointments - Dental anxiety - Prisoner gaming	Buchanan et al., 2008 Evensen et al., 2021 Giraudeau et al., 2017 Inquimbert et al., 2021 Akbar et al., 2012	**Compliance** - Development alongside those working with this demographic - Contact with health professionals - Improving health literacy - Healthcare staff open and non-judgmental - Provision of oral hygiene aids	Evensen et al., 2021 Giraudeau et al., 2017 Inquimbert et al., 2021
Staffing levels - Prison staffing levels	Giraudeau et al., 2017 Inquimbert et al., 2021 Buchanan et al., 2008	**Staffing levels** - Good working relationships with prison staff - Utilization of nursing team - Reduction in number of security escorts needed	Giraudeau et al., 2017 Grey et al., 2014

make it hard to plan demand for interventions.[26] Low levels of health literacy in the population are also a barrier to prisoners engaging with self-completed triaging forms.[22] This population can have low motivation to comply with health-related behaviours and a lack of perceived importance towards preventative care.[24,28] This could be due to factors such as dental anxiety, stress, boredom and substance abuse[21,28] reducing the likelihood of this population partaking in interventions.

On the reverse, the population makeup provides an opportunity to deliver oral health messages to large numbers of diverse prisoner populations all in one setting. A virtual example of this is the study by Novais et al.[25] Triaging and teledentistry systems aided in the logistical screening of prisoners and integration into healthcare systems, prioritizing their care, planning long-term treatment and reducing failed appointment rates.[23,24,26]

5.3 | Compliance

Compliance is an important component for success of an intervention. It is challenged by the workings within the prison. In non-prison settings, oral hygiene aids can incentivize compliance to change, but in prisons, floss and electric toothbrushes are restricted for safety purposes, making it hard to comply with oral hygiene instructions.[18] Multiple studies quoted low uptake and compliance with proposed interventions due to high levels of boredom and stress.[21,22,24,26,28] Legal appointments and family visits also understandably conflict with attending scheduled intervention sessions.[23] The prisoners "gaming" was also a concern as in the case of the screening test, where they gamed in order to gain access to a dentist for reasons other than dental pain.[22]

Compliance can be cultivated by co-design of the interventions to facilitate a feeling of co-ownership. Evensen et al[28] worked closely to develop the MI protocol alongside stakeholders who understood the target population. This could have impacted on the translatability of this intervention into a prison setting. A crucial part of this intervention was that participants deemed those delivering the intervention as open and non-judgemental. They felt that their increased motivation to change oral health-related behaviours was due to an increase in self-worth from feeling understood by the person delivering the interviewing.[28] In addition, motivation can also be leveraged by accepted oral hygiene aids, some view being part of the study and gifts for participating as important and increases their compliance.[28]

5.4 | Staffing levels

A lack of staffing can be a barrier. Prison staffing levels were cited as being a challenge to implementing interventions,[26] within a wider context of underfunding prison systems. In order to maintain the safety of prisoners, prison staff escorts are required to transfer prisoners from one area of the prison to another and stay with them during the delivery of the intervention. Processes such as teledentistry are dependent on having trained nurses available.[25]

Conversely, the appropriate utilization of prison staff can aid in supporting successful delivery of interventions. The development of good working relationships with prison staff supported the practical elements of delivering the intervention in a number of studies.[24,25] In the case of teledentistry, prison health staff trained in teledentistry recorded the teleconsultation for a dental professional to review remotely.[25] In the study conducted by Grey and Fawcett, prison nurses carried out the dental triaging protocol.[23]

Interventions that can be delivered virtually or remotely can overcome some of the challenges involved with prison staffing levels, as well as circumnavigating access restrictions imposed for various reasons such as the COVID-19 pandemic. For interventions such as teledentistry, the number of escorts needed was reduced,[25] as a dentist reviewed the teleconsultation remotely, the number of dental professionals required in the prison was also reduced.

6 | DISCUSSION

This review highlighted the scarcity of routine interventions for oral health of prisoners. It in principle shows the role of teledentistry, incentives, theoretical models of behaviour change and flexible prison staff in delivery successful oral health interventions. The review focused on delivery of interventions as described by reviewed studies rather than from existing interventions due to the lack of published evaluations on existing interventions. It has therefore focussed on the intervention implementation aspect of these studies rather than research capabilities.

A strength of this review is the use of a robust methodology. The JBI methodology for scoping reviews was used to complete this review[15] which has been used to investigate wider healthcare services in the prison population.[29,30] The limitations of the review are firstly; it may not be generalizable outside of high-income countries. This is because of the northern epistemic hegemony in published literature.[31] Secondly, the review does not cover the barriers and facilitators related to the overall research process and access to prisons.

Within this review, the number of interventional studies aiming to improve oral health in this population was low. There were, however, innovative approaches such as teledentistry to interventions in prison which aligned with the World Health Organisation's HIPP aim for health promotion standards in prison to be equivalent to those in the wider community.[13]

Health coaching and education were shown to be acceptable in prisons. Outside of the oral health domain, McLeod et al. have indicated that peer health mentoring can also be used to aid the transition of prisoners into the community. Peer mentoring as part of the coaching seems to improve engagement as has been shown in other areas of healthcare promotion in prisons.[32] Health education was also common, this aligns with rehabilitation literature, educational programmes were well engaged with by prisoners particularly if they provided a qualificatiion[33,34] which was the case with one of

the interventions.[18] The review suggested that these interventions also had positive influence on prisoners' lives, building wellbeing skills and helping them to integrate with society on their release.[33,34]

Teledentistry featured as a key mode of delivery of interventions, mirroring success of remote interventions adopted in prison psychiatry.[35] Remote health interventions address staffing shortages, increasing health professional access from a range of geographic locations and overcoming potential safety concerns due to working in a prison facility.[36]

Barriers and facilitators related to prison environment, recruitment opportunities, incentives to comply and staff have been identified in this review. Previous studies that utilized a health promoting prison approach emphasized the importance of engaging prison staff to overcome organizational resistance to implementing change,[37] which addresses how the environment and staff can either make or break an intervention. To motivate prisoners to join and stay engaged, it was clear that incentivization and planning interventions around competing interests is important. The fact that prisoners are in one place is a potential way to recruit en masse. There are few activities in prison, and packaged in the right way, interventions act as an appealing activity.

Future research could explore prison population types and ideal intervention depending on factors such as length of stay, security levels, age groups and gender. The current evidence base does not provide an indication on whether the greatest impact of interventions is at the start of a prisoner's sentence or closer to release. Further studies involving a longer follow-up period that extends beyond release are needed, to establish the influence on the oral health of prisoners' post-incarceration. More qualitative evidence on perceptions and attitudes of prisoners is needed.

7 | CONCLUSION

Although the prison population experience higher rates of oral disease, there are a limited number of interventional studies to address this. Prisons would benefit from high quality, well-designed studies which take into consideration the workings within the prison environment, incentives and how the collaboration with staff can help promote success of the interventions.

DATA AVAILABILITY STATEMENT

The data that supports the findings of this study are available in the supplementary material of this article

ORCID

Joelle Booth https://orcid.org/0000-0003-3907-8844
Lucy O'Malley https://orcid.org/0000-0003-3057-3814
Rosie Meek https://orcid.org/0000-0002-2705-1516
Niall Mc Goldrick https://orcid.org/0000-0001-7353-1396
Matthew Maycock https://orcid.org/0000-0002-3557-3517
Janet Clarkson https://orcid.org/0000-0001-5940-2926
Kristina Wanyonyi-Kay https://orcid.org/0000-0003-2320-6805

REFERENCES

1. World Prison Brief, Institute for Crime & Justice Policy Research. *World Prison Brief Data Institute for Crime & Justice Policy Research*. World Prison Brief; 2022. Accessed 31/03/2022. https://www.prisonstudies.org/world-prison-brief-data
2. Heidari E, Dickinson C, Dickson C, Newton T. An overview of the prison population and the general health status of prisoners. *Br Dent J*. 2014;217(1):15-19. doi:10.1038/sj.bdj.2014.548
3. Public Health England. Survey of prison dental services England, Wales and Northern Ireland 2017 to 2018. 2022. Accessed 31/03/2022. https://www.gov.uk/government/publications/national-survey-of-prison-dental-services-2017-to-2018
4. Treadwell HM, Formicola AJ. Improving the oral health of prisoners to improve overall health and well-being. *Am J Public Health*. 2005;95(10):1677-1678. doi:10.2105/ajph.2005.073924
5. The Scottish Government. Oral Health Improvement and Dental Services in Scottish Prisons. 2015.
6. Boyer EM, Nielsen-Thompson NJ, Hill TJ. A comparison of dental caries and tooth loss for Iowa prisoners with other prison populations and dentate U.S. adults. *J Dent Hyg Spring*. 2002;76(2):141-150.
7. Arora G, Richards D, Freeman, R. Oral Health Survey of Scottish Prisoners 2019 Report: Executive Summary. 2020.
8. McGrath C. Oral health behind bars: a study of oral disease and its impact on the life quality of an older prison population. *Gerodontology*. 2002;19(2):109-114. doi:10.1111/j.1741-2358.2002.00109.x
9. Decerle N, Woda A, Nicolas E, Hennequin M. A description of oral health in three French jails. *Community Dent Health*. 2012;29(4):274-278. PMID: 23488208.
10. Jones CM, Woods K, Neville J, Whittle JG. Dental health of prisoners in the north west of England in 2000: literature review and dental health survey results. *Community Dent Health*. 2005;22(2):113-117.
11. Condon L, Gill H, Harris F. A review of prison health and its implications for primary care nursing in England and Wales: the research evidence. *J Clin Nurs*. 2007;16(7):1201-1209. doi:10.1111/j.1365-2702.2007.01799.x
12. Porter LC. Being "on point": exploring the stress-related experiences of incarceration. *Soc Ment Health*. 2019;9(1):1-17. doi:10.1177/2156869318771439
13. World Health Organization. Prisons and Health. 2022. https://www.euro.who.int/en/health-topics/health-determinants/prisons-and-health/prisons-and-health
14. Grant MJ, Booth A. A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Info Libr J*. 2009;26(2):91-108. doi:10.1111/j.1471-1842.2009.00848.x
15. Peters M, Godfrey C, McInerney P, Soares C, Khalil H, Parker D. Methodology for jbi scoping reviews. In: Aromataris E, ed. *The Joanna Briggs Institute Reviewers Manual 2015*. Joanna Briggs Institute; 2015:3-24.
16. EndNote. *Version EndNote 20*. Clarivate; 2013.
17. Google. Google Translate. https://translate.google.co.uk/
18. Cinar AB, Jones C, Richards D, Fernandes F, White P, Freeman R. PeP-SCOT a health coaching intervention for people in prisons: the development of the intervention protocol. *Community Dent Health*. 2017;34(2):97-101. doi:10.1922/CDH_4019Cinar05
19. Clouse ML, Mannino D, Curd PR. Investigation of the correlates and effectiveness of a prison-based wellness program. *J Correct Health Care*. 2012;18(3):184-197. doi:10.1177/1078345812445028
20. House of Commons Justice Committee. *Ageing Prison Population*. Fifth Report of Session 2019–21; 2020.
21. Akbar T, Turner S, Themessl-Huber M, Richards D, Freeman R. The health-promoting prison: can it improve oral health? An evaluation of an oral health improvement project for high-security prisoners. *Int J Health Promot Educat*. 2012;50(4):169-177. doi:10.1080/14635240.2012.702507

22. Buchanan KM, Milsom KM, Zoitopoulos L, Pau A, Tickle M. The performance of a screening test for urgent dental treatment need in a prison population. *Br Dent J*. 2008;205(10):E19. doi:10.1038/sj.bdj.2008.950
23. Gray R, Fawcett T. Dental triage Hydebank wood prison and young offenders Centre, Belfast. *Br Dent J*. 2014;216(9):E19. doi:10.1038/sj.bdj.2014.381
24. Giraudeau N, Inquimbert C, Delafoy R, Tramini P, Valcarcel J, Meroueh F. Teledentistry, new oral care tool for prisoners. *Int J Prison Health*. 2017;13(2):124-134. doi:10.1108/IJPH-04-2016-0011
25. Novais A, Fac C, Allouche M, et al. Teledent, an oral tele-expertise experience in a penitentiary environment. *Med Sci (Paris)*. 2019;35(11):866-870. doi:10.1051/medsci/2019168 Teledent, Uune Eexperience de Tteleexpertise Bbucco-Ddentaire en Mmilieu Ppenitentiaire.
26. Inquimbert C, Huyghe N, Pasdeloup J, et al. Applications of teledentistry in a French inmate population: a one-year observational study. *PLoS ONE*. 2021;16(4):e0247778. doi:10.1371/journal.pone.0247778
27. Coates C, Meisman A, Gordon C, Chandler E, Braverman P. Evaluation of a health education module about accessing community based healthcare services for youth In a juvenile detention facility. *J Adolesc Health*. 2019;64(2 Supplement):S58-S59. PSYCHOLOGICAL WELL-BEING: INTERNATIONAL TRANS CULTURAL PERSPECTIVES. Washington United States. doi:10.1016/j.jadohealth.2018.10.128
28. Evensen KB, Bull VH, Ness L. A health promotion intervention to improve oral health of prisoners: results from a pilot study. *Int J Prison Health*. 2021;17:546-559. doi:10.1108/IJPH-11-2020-0085
29. Senanayake B, Wickramasinghe SI, Eriksson L, Smith AC, Edirippulige S. Telemedicine in the correctional setting: a scoping review. *J Telemed Telecare*. 2018;24(10):669-675. doi:10.1177/1357633x18800858
30. Johnson L, Gutridge K, Parkes J, Roy A, Plugge E. Scoping review of mental health in prisons through the COVID-19 pandemic. *BMJ Open*. 2021;11(5):e046547. doi:10.1136/bmjopen-2020-046547
31. Treacy S, Martin S, Samarutilake N, Van Bortel T. Patient and public involvement (PPI) in prisons: the involvement of people living in prison in the research process - a systematic scoping review. *Health Justice*. 2021;9(1):30. doi:10.1186/s40352-021-00154-6
32. McLeod KE, Korchinski M, Young P, et al. Supporting women leaving prison through peer health mentoring: a participatory health research study. *CMAJ Open*. 2020;8(1):E1-E8. doi:10.9778/cmajo.20190106
33. Ferszt GG, Erickson-Owens DA. Development of an educational/support group for pregnant women in prison. *J Forensic Nurs*. 2008;4(2):55-60. doi:10.1111/j.1939-3938.2008.00010.x
34. McLeod KE, Bergen C, Roth K, et al. Participant-driven health education workshops with men transitioning from prison to community. *Health Promot Pract*. 2019;20(1):8-11. doi:10.1177/1524839918816328
35. Kaftarian E. Lessons learned in prison and jail-based telepsychiatry. *Curr Psychiatry Rep*. 2019;21(3):15. doi:10.1007/s11920-019-1004-5
36. Hewson T, Robinson L, Khalifa N, Hard J, Shaw J. Remote consultations in prison mental healthcare in England: impacts of COVID-19. *BJPsych Open*. 2021;7(2):e49-e49. doi:10.1192/bjo.2021.13
37. Dixey R, Woodall J. Prison staff and the health promoting prison. *Int J Prison Health*. 2011;7(4):8-16. doi:10.1108/17449201111256862

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Booth J, O'Malley L, Meek R, et al. A scoping review of interventions to improve oral health in prison settings. *Community Dent Oral Epidemiol*. 2022;00:1-7. doi: 10.1111/cdoe.12811