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Review

Prison health care: a review of the literature

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Abstract

The prison population is increasing and the health problems of prisoners are considerable. Prison is designed with punishment, correction and rehabilitation to the community in mind and these goals may conflict with the aims of health care. A literature review showed that the main issues in prison health care are mental health, substance abuse and communicable diseases. Women prisoners and older prisoners have needs which are distinct from other prisoners. Health promotion and the health of the community outside prisons are desirable aims of prison health care. The delivery of effective health care to prisoners is dependent upon partnership between health and prison services and telemedicine is one possible mode of delivery.

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1. Introduction

Health care in prisons is an area of increasing international concern with literature from Europe, North American, Australasia and other regions of the world testifying to this (World Health Organisation (WHO), 1999). The present study is based in the United Kingdom (UK) but will be set in an international context.

The prison population of the world is rising and the prison population in the UK, while it has reached a plateau, has risen rapidly in recent years (Home Office, 2001). The spectrum of health problems which prisoners may bring to prison is wide and in many cases prevalence is greater than in the general population. For example, 90% of prisoners have mental health problems with many also having a substance abuse problem, 80% of prisoners smoke; hepatitis B and C rates of infection are high (men 8%; women 12%) along with several other problems such as being HIV positive and self-harming (Her Majesty's Prison Service/Department of Health (HMPS/DoH), 2001).

1.1. The purpose of prison

Prison has several purposes. Amongst these are separation from society and confinement for the safety of society, punishment for crime, correction and rehabilitation to the community. Prisons are not, primarily, concerned with the health of the prison population and, indeed, 'The need for security and discipline can cut across the perception of individuals (prisoners) as patients' (Her Majesty's Inspector of Prisons (HMIP), 1996, p. 1). The prison service in the UK has traditionally established its own health care facilities for prisoners who become patients, with its own doctors and nurses employed by the prison service (HMIP, 1996). This has served to reinforce the image of prisoners who are patients as being separate, even in terms of health care, from the general population and it has also led to isolation of the professionals: doctors and nurses, working in the prison service. Consequently, they have been accorded a lower status by colleagues

working in, for example, the UK National Health Service (NHS) (HMIP, 1996). The prison health service in the UK has tried to resist this negative image but it has been an almost inevitable outcome of their isolation. It has been considered, in the UK, since the middle of the last decade that it was time to change the separation of prison health care from the NHS and to move towards integration without duplication of services (HMIP, 1996). A recent working group in the UK proposed several action points to be achieved in the integration of doctors working with prisoners including a rationalised pay structure, continuing professional development, career structure including appropriate qualifications and the provision of appropriate information technology (DoH/HMPS/National Assembly for Wales (NAW), 2001a).

1.2. Nursing in prison

Except in cases where individuals may have to be restrained under relevant mental health legislation, custodial care is not part of the nursing role. There is conflict within this role in the UK as many health care workers in prisons, who carry out nursing roles, are custodial officers who have undergone short training courses in prison health but who are not registered with the Nursing and Midwifery Council. However, it has been described as a specialist role (McCausland and Parrish, 2002) and as multifaceted (Norman and Parrish, 2002). However, nurses working in prisons are working in custodial environments and this has led to some nurses being confused about the boundaries of their role (Royal College of Nursing (RCN), 2001) and this is especially the case if they are employed by the prison service rather than by the health service. It has been reported that there is a conflict between the 'divergent aims' (Reeder, 1991, p. 41) of correctional officers and nurses due to different 'underlying assumptions' of providing health care on the one hand and correction on the other. In the UK this issue has received the attention of the Royal College of Nursing (Dale and Woods, 2002; RCN, 2001) and the UK government (HMPS/NAW/National Health Service

Executive (NHSE), 2000). Reports produced by both of the above bodies have made recommendations for improved training and education for nurses working in prisons and a specific qualification to be obtained by nurses working with prisoners. The aim is to provide better health care in prison for prisoners.

1.3. *Delivery of prison health care*

Health care is delivered to prisoners by different models, depending upon location and type of institution and some of these models, in the developed world, including the UK, involve nurses (HMPS/NAW/NHSE, 2000). Models range from health care delivered by prison service employees to those delivered by local and NHSs—both primary and secondary care. Nurses are ideally placed to provide health care to prisoners but the prison environment produces dilemmas and problems for both prisoners and nurses (HMIP, 1996). Furthermore, the aims and objectives of prison health care are not always clear. However, there are European directives relevant to the UK context which point out that prisoners should have the same access to health care as the population outside prison, that the health care given to prisoners should be equivalent to that obtained outside prison and that such things as patient consent and confidentiality cannot be overruled in prisons (Council of Europe, 1989). This provides a good starting point for health care in prisons but there is more to prison health care. In addition to solving the immediate health problems of prisoners and the prison population generally, prison health care also provides opportunities which may benefit the wider community which prisons serve through returning prisoners to the community with a more positive attitude to personal health and better health than they entered prison with. Nurses clearly have a crucial role to play in the health care of prisoners but they will only be able to fulfil that role if they understand the special issues relating to the health of prisoners. These issues are considered in this paper.

1.4. *The present study*

This paper results directly from a systematic review of the literature on prison health care which was commissioned by a UK regional NHSE in order to inform them about the establishment of new systems of prison health care. The research tender was framed around the fact that ‘concerns had been expressed for some years about the health of prisoners and the capacity of the current prison health care system’ (NHSE Northern and Yorkshire, 2001, p. 1). The driving force for reforming prison health care in the UK is to be found in a series of government reports jointly published by the UK Department of Health and the UK prison service (Her Majesty’s Prison Service—HMPS). The earliest of these

reports (HMPS/NHSE, 1999) identified broad models for the delivery of prison health care currently operating in the UK and these were:

- directly employed full time doctors,
- care provided by NHS GPs,
- primary care contracted out to local GPs,
- entire external provision of prison health care,
- clustering of prisons to provide primary care.

From this range of models in the UK the intention is that the prison services start to pay for primary health care from the NHS leaving the secondary care of prisoners the same as for the remaining population.

2. Method

The method of the present study was a literature review the purpose of which was to identify models of prison health care from which lessons could be learned for the UK prisons service and the NHS. The systematic review was conducted using electronic databases relevant to the areas specified (models of prison health care) which were accessed through the Internet gateway ATHENS. Papers from management, health, sociological and psychological sources were included. Reports and policy documents were obtained from governmental and non-governmental organisations. Grey literature was accessed through the Commission for Health Improvement, the NHS Centre for Reviews and Dissemination and Dissertation Abstracts. The search was limited to 1991–2002, including international literature published in English. The reference lists of retrieved papers were checked for other key papers in order to ensure a comprehensive search. Abstracts were printed for all relevant articles; the team then reviewed these and abstracts deemed not relevant were disregarded. Full papers were obtained for the remainder. The time window for the retrieval and synthesis of material from the review was 12 weeks.

The following databases were searched: Medline, CINAHL, Cochrane Library, BIDS, Psychlit, Sociological Abstracts, OMNI; and or reports and policy documents: UK Department of Health, HMPS, World Health Organisation, The Council of Europe, The National Institution for Correction/US Federal Bureau of Prisons.

The search strategy included all aspects of prison health: health promotion, mental health, communicable diseases and palliative care and this was accomplished by using broad search terms and the results being checked to eliminate the possibility of relevant items being missed. A free-text strategy was utilised in databases without a well-constructed thesaurus, the free-text terms being: Prison or prisons or prisoner; health or health care; model/s and any combination of the above.

Medical subject headings (MeSH) terms were used when searching Medline and CINAHL. For the other databases the Boolean operators 'and' and 'or' were utilised. The terms were used as follows: ep.prisoner*; health or health care; model or models. 'Prisoner' is an MeSH term in the Medline thesaurus but 'health' is not thus the use of the Boolean operator 'or'. 'Models' is an MeSH term when attached to another term such as nursing model or psychological model but not health care model and the Boolean operator 'or' was used.

3. Results

The total number of hits was 906 but the majority was not relevant to the study or were duplicates. One hundred and thirty-four abstracts were printed of which 24 were regarded as not being relevant. One hundred and ten items were requested for retrieval but nine were unobtainable. A further nine were rejected resulting in 90 papers and 21 reports or policy documents for review. Of the reports, 13 were UK, five were North American and three were European (other than UK).

Items were retained for review on the basis of relevance to the study and on the basis of their standing as individual items with letters, editorials and unreferenced opinion pieces being rejected. Otherwise, a hierarchy of evidence was not applied to the retrieved items because there were no randomised trials and few rigorous surveys: most of the items were either scholarly papers, non-systematic literature reviews or descriptive studies and the application of a strict hierarchy of evidence such as that applied to clinical intervention studies would have left very little material to review.

The entire retrieved literature is not reported here and only key papers will be used to exemplify the themes which were identified from the review. A complete reference list and annotated bibliography may be obtained upon request from the corresponding author.

4. Health problems in prison

Prisoners bring a range of health problems to prison with them and are also at risk from a range of health problems while in prison. The nature of the health problems of prisoners indicates that there is a link between the health problems which prisoners bring with them to prison and those from which they are at risk. The range of health issues for prisoners can be grouped under:

- Mental health
- Substance abuse
- Communicable diseases

There was literature specifically related to groups of prisoners:

- Older prisoners
- Women prisoners

There were a number of themes underlying the above, with relevance to more than one area and these included:

- Health promotion
- The health of the community

There were a few papers related to delivery of health care in prisons:

- Partnership
- Telemedicine

The results are presented under the themes identified above on the basis of the main topic of the papers. Most papers fell under the theme of mental health followed by substance abuse and then communicable diseases but it is recognised that these three themes are inextricably linked: mental health problems may lead to substance abuse and may arise from substance abuse (Munetz et al., 2001). Communicable diseases may result from substance abuse, especially from intravenous methods of self-administration but mental health problems and substance abuse may also lead to high-risk sexual behaviour with its attendant risk of sexually transmitted diseases. While the links are obvious these three areas will initially be considered separately below.

4.1. Mental health of prisoners

Forty-seven papers were retrieved which had mental health as their main topic but, as described above, many of these papers also included material on substance abuse, communicable diseases and sexually transmitted diseases. The material was mostly concerned with screening for mental health problems in general and not with specific diagnoses.

Mental health problems are more prevalent among the prison population than the general population and this has been established in several studies from different countries such as New Zealand (Brinded et al., 2001) and North America (Corrado et al., 2000; Diamond et al., 2001). Europe is also facing an increase in the population of prisoners with mental health problems (Blaauw et al., 2000; Joukamaa, 1995; Rasmussen et al., 1999) and a very recent review involving 23,000 prisoners from 12 countries confirms the view that the mental health of prisoners is an international problem of increasing proportions (Fazel and Danesh, 2002).

Whether or not being in prison exacerbates the mental health problems of prisoners is not known (Gullone et al., 2000) but it is clear that having mental health

problems is a causative factor in imprisonment (Fujioka, 2001; Lamberti et al., 2001) and also that prisoners with mental health problems may pose a greater risk to correctional staff and other prisoners than prisoners without mental health problems (Hilton and Simmons, 2001; Hoptman et al., 1999). However, one study from Canada found that there was no evidence that people with mental health problems were being ‘warehoused’, in other words kept in prison purely as a result of their mental health problem (Corrado et al., 2000). A UK study found that severity of mental health problem was not related to length of custodial sentence nor did time spent in hospital reflect the gravity of the offence (Huws et al., 1997). Clearly, there is a link between mental health and suicide, with prisoners who have mental health problems at higher risk; prison is also a high-risk environment for suicide and this has been recognised in the World Health Organisation resource document for prison officers on suicide (WHO, 2000).

With the high prevalence of mental health problems in prisons, the results of a recent UK study are a cause for concern: Reed and Lyne (2000) reported that no prison doctors in their study had specialist training and less than a quarter of nurses had mental health training. They concluded that the mental health service offered to prisoners fell below the standard of the NHS. Also, given the high incidence of mental health problems among prisoners coming into prison it is a further cause for concern that only a few of these are identified at reception into the prison system.

The key to addressing mental health problems in prisoners, therefore, is assessment. In order to avoid duplication of effort, in other words if put on remand or when finally sent to jail, prisoners should be assessed as soon as they enter the prison system (Birmingham et al., 1996). There is also evidence to support the use of standardised assessment procedures incorporating validated assessment instruments (Metzner et al., 1994). However, there was no evidence of the development of specific instruments for use in prisons and there may be issues related to how instruments developed on population norms are applicable to the prison population.

Modes of delivery of mental health care are not widely addressed in the literature but telemedicine, considered separately below, is one such mode. Health promotion, with regard to mental health and related aspects such as substance abuse is also relevant and will likewise be considered below. Two models of partnership in the delivery of mental health services to prisoners involving a university medical school, the state and other local services has been reported from North America (Applebaum et al., 2002; Lamberti et al., 2001). The applicability of these models outside North America may, however, be low. Based on the literature reviewed above, it is possible to point to what may be the essential features of any model of prison mental health care and

these would include specific training for staff (officers, doctors and nurses) and early assessment of prisoners for mental health problems.

4.2. Communicable diseases

Twenty-one papers were retrieved in which the main topic was communicable diseases amongst prisoners. The prevalence of sexually transmitted diseases, including HIV/AIDS, in prisoners is high (20 times greater than the general population according to one study by Potts (2000) and they are at great risk in this respect from a combination of substance abuse and mental health problems (WHO, 1999) which may make them vulnerable to high-risk sexual activity. The problem of HIV/AIDS in prisons is truly international as demonstrated by studies from Africa (Simoooya and Sanjobo, 2001), Australia (Butler et al., 2001), Canada (Beaupré, 1994; Potts, 2000), Ireland (Allwright et al., 2001), Pakistan (Akhtar et al., 2001), Spain (Estébanez et al., 2002), UK (Bellis et al., 1997; Edwards et al., 2001) and USA (Okwumabua et al., 2000). Other sexually transmitted diseases such as syphilis also pose a problem for prisoners (Wolfe et al., 2001; Okwumabua et al., 2000) and hepatitis is also present (Allwright et al., 2000). Another communicable disease in prisons with an international dimension is tuberculosis (TB) and this has prompted the attention of the WHO and the International Committee of the Red Cross (WHO/ICRC, 2001). Studies from around the world point to how prisons are conducive to the spread of TB (Reyes and Coninx, 1997), how mortality from TB is high and drug resistance is prevalent (Coninx et al., 1999) and how TB in prisons poses a threat to the general population (Greifinger et al., 1993). There are also reports of how outbreaks of TB have been contained (Mohle-Boetani et al., 2002).

Two aspects of preventing communicable diseases were apparent: the health education/health promotion approach, which will be considered below as a general strategy for prison health care, and the provision of condoms and clean needles whereby safe sex and safe drug use—in terms of HIV/AIDS infection—could be practised (Potts, 2000; Simoooya and Sanjobo, 2000). However, the attitudes of correctional officers is key to the success of such strategies as many may have understandable misgivings about providing such things as condoms and clean needles (Godin et al., 2001).

4.3. Substance abuse

The use of illegal drugs was recognised as a major category for health promotion amongst prisoners by the WHO (1999) and the National Institute of Corrections (National Institute of Corrections, 1991) in the USA addressed the issue of substance abusing offenders as

long ago as 1991. Substance abuse is common in prisons and very common among those committed to prison. Clearly, there is a relationship with substance dependency and crime and, as mentioned above, this is also related to mental health problems and communicable diseases as studies from the UK (Hucklesby and Wilkinson, 2001), USA (Langan and Pelissier, 2001) and Greece (Koulierakis et al., 2000) demonstrate.

There are no definitive data on the success of drug rehabilitation programmes in prison and efforts to reduce the prevalence of substance abuse are fraught with problems. Mandatory drug testing of prisoners has reduced substance abuse in some circumstances but it also leads to the use of harder drugs, for example, opiates as opposed to marijuana. The latter have a longer half life (the time taken for the level of a substance to reduce by 50%) in the blood and prisoners may try to avoid failing drug tests by using drugs with shorter half lives (Hucklesby and Wilkinson, 2001).

Clearly, there is every imperative to educate prisoners about the dangers of substance abuse as most will, eventually, return to the community where a reduction in substance abuse may reduce recidivism and reduce the problem of substance abuse in the general population. In this respect, health promotion is essential and this will be considered under a separate heading below.

5. Groups of prisoners

There were two identifiable groups of prisoners: women and older prisoners, whose needs are distinct from the rest of the prison population. Younger offenders are clearly a category of prisoner but were not specifically covered in the present review.

5.1. Women prisoners

Clearly, women prisoners are a separate category but in terms of the present review, they appeared to have many of the same problems as male prisoners but often to a greater extent. The exception is pregnancy, on which there was only one paper (Siefert and Pimlott, 2001) about improving outcome in prison for pregnant prisoners in the face of substance abuse and mental health problems. In common with male prisoners, the majority of problems are not picked up at reception into prison (Parsons et al., 2001).

Women appear to have greater problems with mental health, substance abuse (Birecree et al., 1994) and sexually transmitted diseases (Estébanez et al., 2002) and their reasons for incarceration, clearly related to the above problems, display a different pattern. One study identified that women in prison use drugs more frequently and that they use harder drugs (Langan and Pelissier, 2001) and that drug rehabilitation programmes

designed for men may not be applicable to women as they face different problems in prison.

Prostitution, being abused as a child and running away from home were all identified as leading to the imprisonment of women (McClanahan et al., 1999; Estébanez et al., 2002) add to this list, having illegal sources of income, leaving education early and early drug abuse, especially in relation to HIV/AIDS. Clearly, there is a link between mental health, substance abuse and communicable diseases in women, as there is in men and this is of particular concern in the USA where women are the 'fastest growing population of prison inmates' (Staton et al., 2001, p. 701). In that respect any model of health care for prisoners must acknowledge the greater likelihood of the above problems among women but, in terms of health promotion for women prisoners, it has been recognised that 'prisons are not therapeutic environments' (Hanson and Gray, 1997). While prisons may represent an environment where improved health care with respect to drugs could be achieved, the punitive environment is particularly problematic for women (Malloch, 2000).

5.2. Older prisoners

Only three papers and an editorial were retrieved on older prisoners and this does not appear to be a major concern of government policy documents. Despite the fact that the majority of crime is committed by very young people with only 0.2% of indictable offences being committed by people over 60 (Tarbuck, 2001), the prison population of older people is growing and a tendency towards longer custodial sentences means that people committed to prison in their younger years are liable to be there when they are older (Corwin, 2001). Older prisoners have greater health needs than other prisoners reflecting the trend in the general population (Fazel et al., 2001). Multipathology is common with 85% of older prisoners having more than one major illness including psychiatric illness. In addition to the health-related aspects of older prisoners, they are also of criminological interest as they are less likely to offend on release (Corwin, 2001) and may be an unnecessary burden on the prison health care system. A Canadian study demonstrated that many older prisoners were being incarcerated well beyond their parole dates and called for new policies to address this issue (Gallagher, 2001).

Related to the care of older prisoners, the subject of hospice care in prisons was represented by two papers. This concept seems to be better developed in the USA where there are identified prison hospice workers (US Department of Justice, 1998). One such worker presents experiences in this area and considers issues such as having a hospice unit, admission criteria, 'do not resuscitate' orders and pain relief in addition to setting

a research agenda in this area (Maul, 1998). Recognising the need to provide care for prisoners which is as good as for those outside prisons in line with current UK government policy, Wilford (2001) advocates a link worker in this area of care.

6. Underlying themes

Running across all of the themes and groups of prisoners described above, the themes of health promotion and the health of the community were evident. Health promotion is clearly an essential component of prison health care in relation to substance abuse and communicable diseases. If prisoners are to be rehabilitated and returned to the community then the health of prisoners as they return to the community may have consequences for the community to which they return.

6.1. Health promotion

Health promotion is considered essential in prisons and is an integral part of UK government policy in this regard (DoH/HMPS/NAW, 2001b). However, with specific respect to prisons, health promotion has been described as ‘under-resourced and the concept and practice poorly understood’ (Carager et al., 2000, p. 5). There are problems with the non-therapeutic environment of prisons and one author asked if healthy prisons were not a contradiction in terms (Smith, 2000). The lack of standardised assessment instruments and standard procedures for health screening at entry to the prison system referred to above must contribute to difficulties with health promotion: if the health needs and problems of prisoners are not known then how can action be effective? There was an absence of papers from this review on health promotion in relation to chronic disease or coping with disability in prison and the use of therapeutic approaches to mental health problems.

One paper on the health care of diabetic prisoners reported that they were not allowed to keep their own equipment for the administration of insulin thus reducing their autonomy (Petit et al., 2001). This is a clear demonstration of the tension between the correctional and health care aspects of being in prison which have also been referred to above. It is too early in the history of health promotion in prisons to report on the success or failure of particular schemes but this is an area of considerable importance for the future and which must be integral to any model of health care.

6.2. The health of the community

The health problems in prison largely reflect, but magnify, the problems present in the communities which the prisons serve. There is, therefore, an inevitable

interplay in terms of health between prisons and the communities which they serve.

Clearly, there is an interest among prison services in dealing with communicable diseases as these may spread to health care staff and correctional officers and out into the community, without proper precautions. Despite this, it has been observed, among health care workers in prison that proper precautions are not always taken (Gershon et al., 1999).

It was recognised in the literature that prisons, in addition to being a potential focus for the health promotion of prisoners, were also a potential focus for improving the health of the community from which the prisoners come (Marquart and Merianos, 1996). In terms of mental health, prison could be the place where the cycle of jail and homelessness could be broken (Fujioka, 2001) and where preventative strategies could be implemented to prevent the release of people with greater mental health problems than when they entered prison (Lamberti et al., 2001).

There were no explicit theoretical models of prison health care. However, one paper by Roskes and Feldman (1999) referred to the potential for a ‘value added’ aspect to the health care of prisoners. While there is as yet little evidence for its efficacy, such a model envisages improving the health of prisoners while in prison linking the delivery of health care to prisoners with a specific outcome rather than simply dealing with the health problems of prisoners as they arise.

7. Delivery of prison health care

The purpose of the review commissioned here was to look for models of health care delivery in prisons which might be applicable to one region of the UK. Evidence of such models was scarce but the general principle of partnership was evident and one specific move of health care delivery, namely telemedicine, had received some attention in the literature.

7.1. Partnerships

While partnership is integral to the delivery of prison health care as envisaged in current UK government policy documents, there were few examples in the literature directly applicable to the UK, of where partnerships in prison health care with, for example, secondary services, social work, private health care providers and other institutions had been successfully implemented. The models which were presented were all from the USA and were concerned with partnerships between prisons and university hospitals and with the private sector (for example, Applebaum et al., 2002). This is clearly an area for further research and development.

7.2. Telemedicine

It is uncommon to be able to offer all the health care expertise that a prisoner may require in one prison. However, moving prisoners for health care consultations and for minor treatment has implications: it is a security risk, costly and disruptive (Brecht et al., 1996). For these reasons telemedicine approaches to consultation and minor treatment have been tried and, while not an extensive literature, all the papers retrieved reported favourably upon it. It should be noted that all the papers were from the USA. An early study by Brecht et al. (1996) suggested that telemedicine could be cost-effective and it has been successfully applied to psychiatry and emergency medicine in prisons (Zaylor et al., 2001; Ellis et al., 2001). It is clear that telemedicine may be a potential component of any prison health care model.

8. Conclusion

This review was commissioned to help the local prison and health services produce a model for partnership in the delivery of health care in prisons in line with current UK government policy. Models include health care delivery by employees of the prison services, combined models including primary and secondary care divided between prison services and health services, respectively, and models whereby local and NHSs augment prison health care through, for example, telemedicine.

In that sense, the review has not uncovered any single model which is applicable but there are some vital ingredients to any model which must be considered and these include:

- Health promotion as a unifying concept for health care in prisons incorporating health needs assessment.
- Health screening on arrival in the prison system incorporating standardised protocols and validated instrument with an emphasis on mental health.
- Partnership between prison services and the NHS.
- Telemedicine as one mode of delivering health care in prisons.
- Education of prison staff, including health care staff about the health needs of prisoners.
- Developing a model of prison health care which looks beyond the prison environment to the communities which the prison serves.

There was not a great deal of research literature on the role of nurses in the prison service. Two papers from the USA dealt with forensic nursing, one presenting a theoretical model for forensic nursing (Lynch, 1993) and the other examining the tensions between correction and

health care (Maeve and Vaughn, 2001). However, with specific reference to the UK, where prison health care is undergoing an element of reform, where there is an increasing recognition of the need for health promotion in prisons and with the advanced roles that nurses play in primary care, this is an area which is ripe for development both professionally and through research.

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Contributions

Study design: TH, RW; Data collection and analysis: AS, RW; Manuscript preparation: RW, AS, TH.

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