

Summary of: The performance of a screening test for urgent dental treatment need in a prison population

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FULL PAPER DETAILS

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Objective To compare the performance of a questionnaire-based assessment of dental pain delivered by non-dental prison nursing staff against a clinical examination performed by an experienced prison dentist (gold standard).

Setting The research fieldwork took place in the healthcare department at HMP Brixton located in South London.

Methods The cohort were those who had complained of dental/facial pain to the prison authorities and were therefore placed on the waiting list for emergency dental care. Subjects were asked to complete the screening test and were then clinically examined by trained and calibrated dentists. The screening test was in the form of a 12-item questionnaire designed to categorise a population reporting dental pain into one of three groups. The screening test results were compared with the diagnosis of a clinical examination. **Results** Ninety-six subjects were recruited during the 16-week study period. Of the 96 prisoners recruited, 27 of those failed to complete the screening test and/or the diagnostic examination even though they had reported pain previously. When sensitivity and specificity values were calculated for the 96 prisoners recruited, the sensitivity was fairly high (81%) and the specificity was poor (33%). However, when these values were calculated for the sub-population, those that completed both the screening test and diagnostic examination ($n = 69$), the sensitivity did not improve particularly (83%) but the specificity value fell substantially to 13%. **Conclusions** This study highlighted the problems of conducting research in the prison environment, for example increased security preventing researchers from gaining access into the prison and general pressures on prison staff. Additionally, the study demonstrated that screening is not effective in local prisons with a high turnover of prisoners.

EDITOR'S SUMMARY

A Johnny Mercer and Harold Arlen song made famous by Bing Crosby entreats us to *Accentuate the positive*. This may be a laudable goal in general but in research taking account of the negative is also an important consideration when moving our knowledge forwards.

I use this as an introduction because, in essence, this paper details a good idea that failed to live up to its potential. The screening tool that had worked well in a dental hospital setting proved to be less than satisfactory when transferred to the prison environment. It highlights a dilemma which often faces us when we attempt to group people by assumed behaviour, as in the construction of a questionnaire. Specifically in this instance the assumption is that people complaining of dental

pain actually have dental pain and want something done to relieve it. In a dental hospital this works well. Why would anyone bother to attend and seek help if they didn't actually need to? But in the setting of a penal institution such assumptions are clearly criss-crossed with a range of other conflicting behavioural and motivational considerations. These are associated with the situation in which prisoners find themselves and from which they may be attempting to glean advantage and benefit quite aside from what we perceive as a main objective.

The value of this negative is to accentuate several issues, the first of which is that this screening test is not helpful for those attempting to increase the efficiency of dental care delivery in prisons and it will be necessary to think again. Additionally,

the study identifies once more the particular and very taxing difficulties that exist in attempting to provide health care in the prison environment and the way in which that environment alters and distorts 'normal' expectations.

Dentistry is a fascinating profession and this paper, apart from its practical value, demonstrates how we constantly attempt to improve patient care in all areas of human activity sometimes against very heavy odds and in otherwise unfashionable settings.

The full paper can be accessed from the *BDJ* website (www.bdj.co.uk), under 'Research' in the table of contents for Volume 205 issue 10.

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IN BRIEF

- Highlights the difficulties in undertaking research in prisons.
- Screening prisoners for dental conditions in 'high turnover' prisons is not effective.
- Details the reasons why prisoners are a high need, difficult to engage population.

COMMENT

Prisoners have high dental needs and are irregular dental attenders. On entry to prison many complain of toothache and request an urgent appointment with the prison dentist. Because of the rapid turnover of prisoners, there is constant pressure on the overstretched prison dental service and it would improve the efficiency of the service if those actually needing urgent care could be prioritized.

All newly admitted prisoners receive a health check but there is no standardised dental component to these assessments. A Dental Pain Questionnaire has been used in a dental teaching hospital to identify which patients need urgent care and which are non-urgent. This questionnaire was tested in a London prison to investigate whether it was appropriate for screening for urgent dental treatment in a prison population.

Ninety-six prisoners, all of whom had complained of dental pain and been placed on the waiting list for emergency dental care, were given the dental pain questionnaire by the nurse who carries out the health assessment. The responses were used to classify the prisoners as needing urgent or non-urgent care. These prisoners were then assessed by a trained and calibrated dentist who, without knowing the results of the screening assessment, took a history and examined the prisoner to identify whether urgent or non-urgent care was needed.

Twenty of the 96 prisoners, all of whom had previously claimed to

have pain requiring urgent attention, reported not having any pain. Seven others failed to complete the screening questionnaire even though the questions were read out and recorded for them. The results of the screening assessment and clinical examination were compared for those who completed both. Eighty-five percent of those who the dentist found to need urgent care and 87% of those who the dentist classified as non-urgent were identified as urgent from the screening questionnaire.

The authors discuss possible reasons for the discrepancy between the answers to the questionnaire and the clinical findings. The results indicate that using the Dental Pain Questionnaire that had proved useful in a dental teaching hospital was not appropriate for identifying those needing urgent dental treatment in a high turnover prison.

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AUTHOR QUESTIONS AND ANSWERS**1. Why did you undertake this research?**

In 2004 the Prison Health Research Network (PHRN) was established. The PHRN is a Department of Health funded initiative that in its first three years concentrated on prison health research. The PHRN funded three demonstration projects (dental, primary care and mental health) to demonstrate how small scale projects in prisons could be deliverable and could influence current practice in prison health.

The main reason for choosing this area of research was to improve access to dental care for prisoners by testing a tool that could potentially assess and prioritise the dental needs of prisoners reporting pain and discomfort. This area is of particular interest to the authors as the strategy for modernising dental services for prisoners in England (2003) reports that the prison population has continued to increase and therefore the demand on an already overstretched dental services has also increased.

2. What would you like to do next in this area to follow on from this work?

The research has highlighted many difficulties with undertaking research fieldwork in a prison setting. This study has suggested that other research approaches need to be developed if we are to establish a firm evidence base for dental service delivery in prisons.