Summary of: A patient notification exercise following infection control failures in a dental surgery

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FULL PAPER DETAILS

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Objectives To investigate the association between treatment by a dental healthcare worker (HCW) and patient infection with a blood-borne virus (BBV). **Design** Nested case control study. **Setting** A patient notification exercise (PNE) arising from a hepatitis C virus positive HCW that was undertaken because of deficiencies in infection control practice. **Methods** Cases were individuals with a BBV infection identified as a result of the PNE. Controls were randomly selected individuals with negative tests for BBVs. Detailed information on dental treatment was obtained from patient notes. Information on risk factors for BBV infection was obtained using a structured questionnaire administered by telephone interview. **Results** Thirty patients had evidence of infection with a BBV. The mean number of visits for treatment was 20.5 in cases and 18.6 in controls; the difference 1.8 (95% CI -5.4 to 9.1) was not statistically significant (p = 0.62). Transmission of hepatitis C in the dental setting was excluded by sequencing of the viral genome or establishing alternative risk factors. **Conclusion** There was no evidence of transmission of hepatitis C virus from the HCW to patients, or transmission of a BBV from patient to patient. To ensure consistent practice within the UK the National Institute for Health and Clinical Excellence should produce guidance on PNEs for the NHS.

EDITOR'S SUMMARY

There is a forensic precision about this piece of work which would warm the cockles of the heart of a detective chief superintendent and send a chill of fear through the novelist, since so little is left open to question with almost no conceivable chink in the plot.

The authors state with enviable clarity that it is essential that evidence is applied to practice and the results of their detailed and thorough investigation provide us with exactly that, a very valuable tool to add to our armamentarium when next we need to make a judgment. There is no doubt that this is an area where judgment is required rather than merely the *application* of rules and regulations.

It is salient to note that the power of detection has been made possible through science itself. The litany of procedures applied to the tracing of patients potentially affected, their social and lifestyle screening, medical history and typing of antigens and antibodies testifies not only the knowledgeable use of this logical chain of interrogative actions but the way in which they have all been derived through the many and varied routes of other research protocols.

Ultimately though, the value of this case and its investigation is the use that the knowledge gained may have in decisions about the future application of such exercises. Do such 'look backs' hold out the possibility of sufficient value to individuals who might even theoretically have been infected compared to the psychological unease created in all the others contacted? And to what extent does the conscious salving effect on those on whom the mantle of guardian of the public's health fall, affect the decision making process? Again, the authors are well up to the mark in terms of understanding the far reaching implications that their research findings may have. Perversely, on reflection, perhaps a novelist might find material here after all.

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 4.

Stephen Hancocks,
Editor-in-Chief

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IN BRIEF

- Demonstrates that the hepatitis C virus was not transmitted from a dental healthcare worker to patients despite suboptimal infection control practice.
- Provides evidence which contributes to the debate on the need to restrict the practice of health professionals infected with blood-borne viruses.
- Suggests that patient notification or 'look back' exercises may be unnecessary in similar situations.

RESEARCH

COMMENT

This paper nicely describes the dilemma faced by public health professionals and the, usual, reported outcome from a patient notification exercise (PNE) involving a dental healthcare worker. Although the healthcare worker was hepatitis C positive there was no evidence of transmission at the time of identification, yet a PNE was required on the basis of evidence of poor infection control practices.

We also undertook a risk assessment where there was long-standing evidence of poor infection control practices but where the dental healthcare worker did not have a blood-borne virus infection, where we decided the costs outweighed any benefit of a PNE.[1] We have also been involved in probably the largest PNE in the UK, involving an HIV infected dental healthcare worker (a clear cut PNE circumstance) which cost the National Health Service in excess of £300,000 (excluding opportunity costs of staff time devoted to the response).[2]

One important area this and other studies cannot address is the cost/impact of stress in the patients notified and screened or to the reputation of dental practice in the UK produced by such exercises.

We agree with the authors that the risk of transmission either from a blood-borne virus infected healthcare worker or between patients is very small and that the costs (financial, opportunistic, patient impact and reputational) probably outweigh the benefits of a PNE. However, the risk, though small, still exists and organisations and professionals with responsibilities for protecting public health have to respond to them.

The management of these incidents urgently requires wider debate. We note the comments regarding persistent failures of infection control practice over a ten year period. The comments mirror our experience and this paper highlights the need for improvements in the area.[1] We can see the day coming when Departments of Health and Health Authorities will seek to recoup the expenditure from those causing such exercises. Perhaps this financial risk directed at practitioners will lead to the necessary improvements in infection control practices among the significant few dental practices across the UK who cause these events.

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AUTHOR QUESTIONS AND ANSWERS

1. Why did you undertake this research?

This investigation was undertaken as part of the immediate management of a health protection incident. The purpose was to prove as far as possible that transmission of the hepatitis C virus had not occurred, either between the healthcare worker and patients or from patient-to-patient, by adopting a rigorous systematic combined epidemiological and virological approach. The primary purpose of the investigation was to demonstrate to the incident management team that extension of the 'look back' exercise was not necessary. The data generated would also provide evidence for policymakers which should inform decisions on restricting the practice of healthcare workers infected with blood-borne viruses and the need to undertake 'look back' exercises in the future.

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

It is essential that evidence is applied to practice. Restrictions on the practice of healthcare workers who are infected with blood-borne viruses should be kept under constant review. The absence of national guidance or policy in the UK on the management of patients exposed to instruments that might be contaminated with a blood-borne virus needs to be addressed. Although the most important intervention is action to prevent these incidents occurring, it is inevitable that infection control failures will arise. A consistent approach to these incidents across the NHS which has been agreed by politicians, policymakers, professionals and patients should be the ultimate aim.