Summary of: Immunisation status of dental practice staff in Kent

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FULL PAPER DETAILS

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Aim To determine the hepatitis B, tuberculosis (TB), varicella and rubella immunisation status of dental practice workers in Kent. **Method** A cross-sectional survey using a) a dental practice questionnaire sent to all 275 registered dental practices in Kent in February 2005, to determine the numbers of staff employed and their job titles, and b) a confidential personal health questionnaire for every staff member employed by each practice, to determine past history of infections and immunisation history. **Results** Two hundred out of 257 (78%) dental practices took part in the survey, and 1,415 staff (76% of known participants) returned completed personal health questionnaires. Three hundred and eighty-four out of 395 dentists (97%) indicated previous immunisation against hepatitis B. The corresponding percentages for other occupational groups were dental hygienists (94%), nurses (89%), dental therapists (75%), and other non-clinical staff (65%). 1,197 (85%) of participants reported previous chicken pox and/or shingles; 1,208 (85%) gave a history of previous immunisation against TB; and 823 (58%) had either had rubella or were immunised against rubella. Male participants were less likely to have had rubella immunisation. **Conclusions** The study has demonstrated the variations in knowledge about personal immunity status amongst dental practice staff for some infectious diseases. Improvement in establishing personal immunity status of individual dental care workers and provision of a vaccination programme could be facilitated. This preventive measure could be arranged through occupational health providers.

EDITOR'S SUMMARY

The issues of occupational health and cross-infection control have deservedly come to prominence in recent years. By investigating immunisation status, however, the authors of this paper have highlighted an area that has received little coverage until now.

Although funding is allocated to primary care trusts to enable them to provide occupational health services to dentists and their staff, the authors point out that provision of immunisation services for dental professionals in the UK is still patchy. The aim of their work was therefore to assess, by investigating current levels of immunisation, how large a task an immunisation programme for dentists and other practice staff would potentially be. Although the study looked only at practices in Kent, the high response rate means that the results are nonetheless of interest.

Since November 2006, GDC regulations have required practising dentists to be immunised against hepatitis B. Although the study took place in 2005, 97% of responding dentists and 94% of responding hygienists had previously been immunised against hepatitis B, a reassuring result. However, only 75% of dental therapists were immune to this virus, which is of more concern. It is to be hoped that the advent of registration for dental care professionals means that this percentage would be higher if the study was repeated now.

The results for immunisation against other pathogens such as TB and rubella show lower percentages, with 85% of participants immunised against TB and 58% against rubella, although there was a significant difference between male and female respondents for rubella vaccination as might be expected. Taken together with the increase in cases of TB in recent years, the former results suggest that TB immunisation status should not be overlooked when planning any immunisation programme for dental staff.

Overall, the results of this study suggest that there are a significant number of dental professionals in the UK who require immunisation of some description. Coherent immunisation programmes organised through local occupational health services would go a long way to solving this problem.

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.

Rowena Milan,
Journal Editor

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IN BRIEF

- Highlights immunisation as an important measure in prevention of occupationally acquired infection in dental practice staff.
- Advises employers of their obligations under Health and Safety (UK) legislation to prevent and adequately control the risk of transferable infections at work.
- Justifies the provision of occupational health services to all dental staff to assist in meeting these requirements.

RESEARCH

COMMENT

There have been several publications which have detailed recommended vaccinations for dental personnel. All of these sources of advice have agreed that all dental personnel should be fully protected against hepatitis B and should have been vaccinated or be naturally immune to tuberculosis before doing exposure-prone procedures. Whilst these are universally accepted recommendations, there is little information about compliance within dental practice. This study investigated compliance with a postal survey of practices in Kent. The compliance rate for the questionnaires was high (78%) and this comprised 76% of all known dental personnel within practices in Kent. This could therefore be regarded as an authoritative survey within the known limitations of questionnaire surveys.

The risk of transmission of hepatitis B from a sharps injury to an individual who is not immunised against this disease can be as high as 40%. It is also known that at certain times infected individuals can have high numbers of hepatitis B virus particles in saliva capable of causing infection and that at least 1-2% of the population carry this disease. The risk of transmission of this disease is high and it would be expected that all dentists would be vaccinated and in this survey 97% were. What is surprising is the low number of dental therapists who reported being vaccinated against hepatitis B (79%), although the risk of transmission of this disease must be comparable to that of dentists. It is difficult to explain why this figure is so low but it is certainly worrying. This is important data from Kent, but similar studies need to be commissioned elsewhere to verify the reported trends.

The question that this paper raises is who is responsible and who monitors levels of compliance of immunisation within dental practice? The authors suggest that the ultimate responsibility for monitoring vaccination programmes should be with the occupational health services and this commentator agrees.

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AUTHOR QUESTIONS AND ANSWERS

1. Why did you undertake this research?

There appeared to be no published research to quantify the proportion of dental staff with adequate immunity to certain occupationally acquired infections to use when planning a new occupational health service in Kent. The purpose of the study was to establish the likely extent of non-immunity in staff to enable accurate planning and budgeting during the development of a suitable vaccination programme.

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

To ascertain by further review the effectiveness of the introduction of an immunisation programme and by questionnaire clarify the need to establish other services such as an appropriate needlestick injury procedure.