mix and administer iv antibiotics. It was our philosophy that, the more clinicians who can give iv therapy, the better the chances of prompt treatment. The second part of the session was taught by a medical assistant who gave a practical demonstration of the optimal methods to obtaining 'clean' blood cultures. The feedback from the junior doctors has been universally positive and it is certainly something that is missing from the current curriculum.

The preliminary re-audit data following the symposiums have seen more than a 50% reduction in time to antimicrobials. For every hour antimicrobial therapy is delayed in a patient with severe sepsis there is an 8% increase in mortality, every second really does count.[1] Aside from the benefits of the more expensive and technical therapies and interventions that exist, the main priority remains, as it always has, early recognition and treatment.

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Reference

1 Kumar A. Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock. *Crit Care Med* 2006;34:1589–96.

Clinical & Scientific letters

Letters not directly related to articles published in *Clinical Medicine* and presenting unpublished original data should be submitted for publication in this section. Clinical and scientific letters should not exceed 500 words and may include one table and up to five references.

Influenza vaccination: a cross-sectional prospective audit of influenza vaccination in patients admitted to a London hospital

Seasonal flu affects 5–15% of the population.[1] In the UK, the influenza vaccine is offered annually to those considered to be at risk and belonging to particular target groups which include people aged 65 and over, and those suffering from chronic diseases.[2] Influenza immunisation has been shown to reduce the incidence of bronchopneumonia, hospital admissions and mortality.[2] The government aims to vaccinate more than 70% of 'at risk' individuals.[3] Additionally, the World Health Organization has set a further target for vaccinating 85% of over 65s by 2010.[3] The vaccination of clinically vulnerable people is becoming increasingly important as a flu pandemic has now been declared.[1]

Methodology and results

An audit on the uptake of influenza vaccination among acute medical admissions, in a busy London teaching hospital, was undertaken in 2007 using a questionnaire survey. As a result of this audit, changes were recommended and the audit was repeated in 2009. The audit was conducted over a four-week period in winter 2007 and 2009. All patients belonging to an influenza vaccine target group were assessed for their vaccine uptake based on the questionnaire. Reasons for not receiving the vaccine were noted. This was audited against the Department of Health's recommended inclusion criteria for influenza vaccination.[2]

Table 1. A comparison of flu vaccine uptake in 2007 and 2009.

Year of audit	Patients in target group	
	Number who received the vaccine (%)	Number who did not receive the vaccine (%)
2007	82 (71)	34 (29)
2009	89 (74)	31 (26)

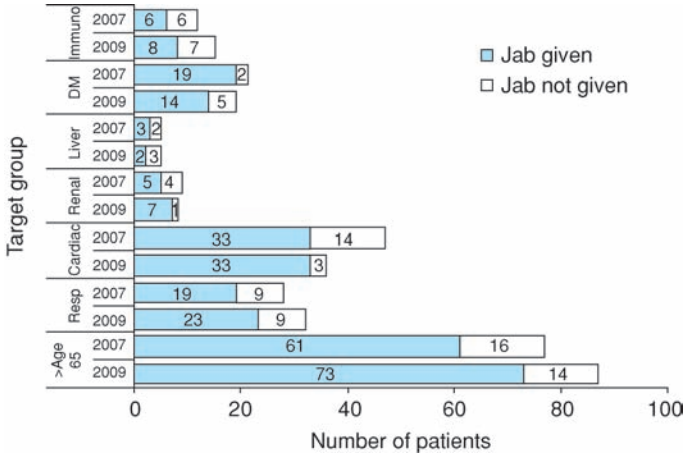

Fig 1. Comparison of each eligible target group and vaccine uptake over the 2007 and 2009 audits. DM = diabetes mellitus; immuno = immunology; resp = respiratory.

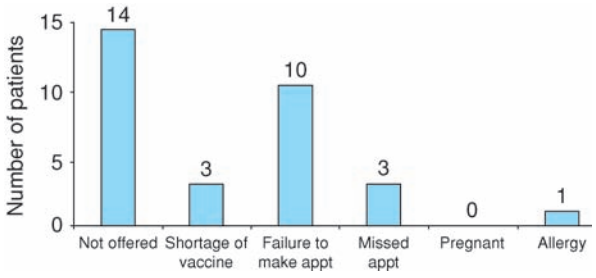

Fig 2. Reasons for eligible patients not being vaccinated in 2009 audit. Appt = appointment.

In total, 148 patients were included in the 2007 audit and 145 in the 2009 re-audit. Within the target groups there was an overall increase in those receiving the vaccine, from 71% in 2007 to 74% in 2009, which meets the government target of 70% (Table 1).

How the vaccine uptake differed between target groups was then studied (Fig 1). The largest target group is the over 65s where vaccination rates increased from 79% to 84% between 2007 and 2009. The 70% vaccination target was reached in the over 65s, diabetes, respiratory, cardiac and renal diseases groups. The target was not met in the liver disease or immunosuppression groups, where less than 50% of patients had been vaccinated.

The most common reasons for patients within the target groups not being vaccinated in 2009 were that they were not offered the vaccine or that they did not make an appointment (Fig 2). In 2007, not being offered the vaccine was also the most common reason for not being vaccinated, accounting for 41% of missed vaccinations.

Conclusions

Vaccines continue to represent an important tool for preventing infectious diseases and decreasing morbidity and mortality. The overall positive trend in increased influenza vaccination rates, evident in this audit, is replicated at national and European levels.[3–5]

In the over-65 target group vaccine uptake in the audit cohort was consistently high (77% in 2007 and 84% in 2009) compared with national figures (74%).[4] However, uptake in the under-65 target group was low (14% in 2007 and 31% in 2009), and worse than national figures (47.1%) as well as figures for the London strategic health authority (39.9% in 2007 to 40.7% in 2009).[4]

The local vaccination rate for over 65s in the Charing Cross area is excellent. Interestingly, 45% of the over 65s fulfil at least one other target group. If patients fulfil the over-65 criteria then they are likely to get vaccinated whether or not they fulfil other criteria. Subsequently, patients belonging to target groups who are less than 65 may be less likely to get vaccinated. In this audit, patients who were immunosuppressed and under 65 were less likely to get vaccinated (25%) compared with those who were immunosuppressed and over 65 (86%). Analysis of the data from the immunosuppressed, renal and liver diseases target groups is limited by the small sample size.

A European study found that the family doctor is the most important source of encouragement with regard vaccination.[5] In the UK, primary care incentives exist for meeting influenza uptake targets as part of the Directed Enhanced Services. However, vulnerable groups, particularly those under 65, should also be targeted during inpatient and outpatient hospital visits. Hospital specialists should consider educating or communicating with patients and their primary care physicians about all aspects of their disease including the importance of the influenza vaccine in vulnerable groups.

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