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Notes
Trends in demand for emergency ambulance services in Wiltshire over nine years: observational study

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Demand for emergency medical services in the United Kingdom is rising.1 Research into the type of patients transported by emergency ambulances and the severity of their illness has tended to focus on identifying people who use the service inappropriately rather than factors influencing demand, and our understanding of the increase in demand is poor.2 3

In Wiltshire, a largely rural county in the south west of England, the number of emergency transports of patients increased from 11 268 in 1988 to 16 814 in 1996, a crude increase of 49%.4 This increase is often attributed to general practitioners redirecting patients with urgent problems to the ambulance service, particularly out of surgery hours. Over the same period, however, urgent transports booked by general practitioners rather than in response to a 999 call rose from 9982 to 13 951 (40%). We examined the reasons for this rise.

Methods and results

We conducted a retrospective analysis of emergency ambulance despatches using a random sample of records held by Wiltshire Ambulance Service NHS Trust. From each year in nine years’ records (1988-96) we sampled 14 days, stratified by season, providing a dataset of 126 days of calls. Data were drawn from AS1 forms (completed by call takers) and from patient report forms (completed by paramedics). We used the system of call classification used by the trust to categorise data on the nature of incidents for analysis. We used indirect age standardisation based on the year with the most complete age data (1994) to account for demographic changes over the nine years (see methodological supplement on bmj.com). We calculated significance of trends with EpInfo 6.03, using $\chi^2$ for trend.

Our sample contained details of 6100 calls relating to 5821 incidents. For 1225 (21%) of these, patient report forms rather than AS1 forms had been filled in. The table shows the numbers of vehicles despatched, incidents, and patients transported in each year.

A 72% increase in incidents attended over nine years reduced to 53% after standardisation for age. The proportion of incidents in response to a call from a general practitioner, or incidents where one was present, remained fairly constant over the study period, whereas the proportion of calls made by patients and relatives rose from 11.8% to 20.1% (see tables A and B on bmj.com). Calls from other emergency services peaked in 1990. The category showing an increase out of line with that seen overall was “sudden illness at the real world.” The pragmatic nature of our design may have affected the outcome, but that outcome represents a true picture of the impact of introducing the leaflets into routine practice.

We thank midwives, managers, and administrative staff in the maternity units in Wales (unnamed to ensure confidentiality of participating units), who worked so hard to help us with data collection. We thank the thousands of women who completed our questionnaires at such an important time in their lives.

Contributors: See bmj.com

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Competing interests: None declared.


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Comment

Demand for emergency ambulances has risen, and there is evidence that people are using more specific terminology to describe emergency incidents. We found no evidence of a transfer of general practitioners’ workload to the emergency ambulance service. The fall in mortality across all age groups in Western Europe is falling.

Callers’ perceptions of urgency are known to be unreliable, and a wider range of responses from service providers may be the most appropriate way to manage rising demand. The integration of the gateway to primary care out of hours with NHS Direct might provide one way of accomplishing this. Research identifying influences on callers’ perceptions of urgency is necessary if we are to improve our understanding of the demand for emergency care and our ability to plan for the future.

We thank members of Wiltshire Ambulance Services Trust who undertook the analysis with advice from all authors. Specialist advice on ambulance services was provided by H Snooks. All authors participated in the interpretation of findings, writing up and editing of the paper. SG is the guarantor.

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Corrections and clarifications

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