

# The clinical, organisational and cost consequences of computer-assisted telephone advice to category C 999 ambulance service callers: results of a controlled trial

<b>Submission date</b> 23/01/2004	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 23/01/2004	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 18/11/2009	<b>Condition category</b> Other	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

Not provided at time of registration

## Contact information

### Type(s)

Scientific

### Contact name

Prof Jeremy Dale

### Contact details

Centre for Primary Health Care Studies  
University of Warwick  
Coventry  
United Kingdom  
CV4 7AL  
+44 (0)2476 524254  
[jeremy.dale@warwick.ac.uk](mailto:jeremy.dale@warwick.ac.uk)

## Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

## Secondary identifying numbers

PSI E-21

# Study information

## Scientific Title

### Study objectives

The aims of the study were:

1. To investigate the efficacy and safety of telephone assessment and advice to Category C (non-urgent) 999 ambulance service callers as an alternative to despatching an ambulance
2. To investigate the acceptability of telephone assessment and advice to Category C 999 ambulance service callers
3. To compare the efficacy, safety and acceptability of nurses and paramedics as providers of telephone advice to Category C 999 ambulance service callers
4. To model the cost consequences of telephone assessment and advice to Category C 999 ambulance callers

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Not provided at time of registration

### Study design

Randomised controlled trial

### Primary study design

Interventional

### Secondary study design

Randomised controlled trial

### Study setting(s)

Other

### Study type(s)

Other

## Participant information sheet

### Health condition(s) or problem(s) studied

Computer-assisted telephone advice for emergency services

### Interventions

Time blocks of 3-4 hours were allocated randomly within the constraints of staff availability to intervention sessions (nurse assessment and triage, or paramedic assessment and triage) and control sessions. During intervention sessions, nurses or paramedics trained in telephone consulting skills and using the TAS computerised decision support system assessed the patients'

needs for emergency ambulances and, if appropriate, offered advice. The intervention ran in 'shadow' form (i.e. all ambulances were dispatched in the usual way), but calls assessed as appropriate for advice were given an opportunity to decline the ambulance.

### **Intervention Type**

Other

### **Phase**

Not Applicable

### **Primary outcome measure**

1. Triage assessment made by the paramedic or nurse
2. Subsequent cancellation of ambulance
3. Caller/patient satisfaction
4. Health outcome
5. SF-12 one week after 999 call
6. Review of nurse/paramedic decision making by independent clinical panel
7. Economic analysis of findings. The findings indicate that the provision of telephone assessment and advice to Category C callers is both safe and acceptable to callers. Telephone assessment and advice could enable patients with no identified clinical need for an emergency ambulance to be offered more appropriate care for their presenting condition. In the ambulance services studied, this could lead to at least 7-10% of dispatches being cancelled, so enabling improved response times for patients with more critical or life-threatening needs. Nurses using computer assisted decision support were more effective at identifying patients not in need of emergency ambulance than were paramedics using the decision support. The savings in marginal costs to the ambulance service appear likely to outweigh the costs of providing the telephone triage intervention. There are also likely to be considerable savings to AEDs as a result of reduced attendances.

### **Secondary outcome measures**

Not provided at time of registration

### **Overall study start date**

01/04/1997

### **Completion date**

01/04/2000

## **Eligibility**

### **Key inclusion criteria**

The trial was conducted at two sites: the London Ambulance Service and the West Midlands Ambulance Service. Data collection for the main study was undertaken over a period of 12 months. All calls to the 999 ambulance service prioritised by call-takers as presenting with non-urgent (Category C) problems during sampled sessions.

### **Participant type(s)**

Patient

### **Age group**

Other

**Sex**

Both

**Target number of participants**

Not provided at time of registration

**Key exclusion criteria**

Not provided at time of registration

**Date of first enrolment**

01/04/1997

**Date of final enrolment**

01/04/2000

## **Locations**

**Countries of recruitment**

England

United Kingdom

**Study participating centre**

**Centre for Primary Health Care Studies**

Coventry

United Kingdom

CV4 7AL

## **Sponsor information**

**Organisation**

Record Provided by the NHS R&D 'Time-Limited' National Programme Register - Department of Health (UK)

**Sponsor details**

The Department of Health

Richmond House

79 Whitehall

London

United Kingdom

SW1A 2NL

**Sponsor type**

Government

**Website**

<http://www.doh.gov.uk>

## Funder(s)

**Funder type**

Government

**Funder Name**

NHS Primary and Secondary Care Interface National Research and Development Programme (UK)

## Results and Publications

**Publication and dissemination plan**

Not provided at time of registration

**Intention to publish date**

**Individual participant data (IPD) sharing plan**

**IPD sharing plan summary**

Not provided at time of registration

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/03/2003		Yes	No
<a href="#">Results article</a>	2, results	01/10/2004		Yes	No