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

Submission date
23/01/2004

Recruitment status
No longer recruiting

Registration date
23/01/2004

Overall study status
Completed

Last Edited
18/11/2009

Condition category
Other

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
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

Study type(s)
Other

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(s)
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.

Key secondary outcome(s))
Not provided at time of registration

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

Healthy volunteers allowed
No

Age group
Other

Sex
All

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
United Kingdom

England

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)

Funder(s)

Funder type
Government

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

Results and Publications

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?
Results article	results	01/03/2003		Yes	No
Results article	2, results	01/10/2004		Yes	No