Life in the Fast Lane: Collaborating to deliver Research in Ambulance Services

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Context
Changing case mix

- Calls to the emergency ambulance service in the UK have been rising over recent years at 7% per annum.
- It has also previously been estimated that only 10% of 999 patients have a life threatening condition (Darzi, DOH 2009).
- 8% of emergency ambulance attendances are to older people who have fallen.
- In a study conducted by the Welsh Ambulance Services Trust and Swansea University, up to 10.7% of 999 calls to ambulance services were found to relate to mental health problems, and of these 53% related to Self Harm (INVENT 2013).
- Half of patients taken to emergency departments by ambulance have been found to be discharged without being treated or referred (Volans 1998).
Problem/idea
Case for change
Critical incident
Loss of political support
Some evidence against proposed change
Change abandoned
Failed to learn lessons or address why needed change or basis of original problem

Proposed change:
Policy/clinical/model of care developed and introduced
Evidence for change
Case for change
Problem/idea

Positive benefits observed

MAST Garments

- **Aim:** To identify all relevant randomised or quasi randomised controlled trials available for review in January 1999.

- No evidence to suggest incidence of death, length of stay in hospital or intensive care unit were decreased by MAST.

- Pooled relative risk data for mortality suggests MAST group were 1.13 times more likely to die than no MAST.

- Lack of quality trials in humans.
Health Thinkers:
Archibald Leman Cochrane (1909–1988)
Man of the Rhondda:
The ‘research push’ and ‘policy pull’.

This use of evidence is limited by factors such as research production, availability, dissemination and uptake. This has been termed as the ‘research push’ or the ‘policy pull’ (Mitton 2007).
Gap between policy makers
researchers and clinicians

Gorissen (et al 2005) explored the gap between doctors and policymakers in the Netherlands,

- the use of knowledge had to ‘compete’ with easily accessible resources, for powerful actors
- using power is easier than arguing it out’.
- powerful actors (a service manager in their case) had little need to use other resources or scientific knowledge, besides the resources of money and formal authority.
The pre-hospital randomised assessment of a mechanical compression device in cardiac arrest (PARAMEDIC)

- Pragmatic, cluster-randomised trial of adults with non-traumatic, out-of-hospital cardiac arrest (OHCA) from four UK Ambulance Services
- Ambulances randomly assigned to LUCAS-2 or manual CPR.
- Primary outcome: survival at 30 days
- 4471 eligible patients enrolled (1652 LUCAS-2 group, 2819 control group)
- Results/Conclusion:
  No evidence of improvement in 30 day survival with LUCAS-2 compared with manual compressions. On the basis of this and other recent randomised trials, widespread adoption of mechanical CPR devices for routine use does not improve survival.
Insert video
Barriers to Research

- Lack of Institutional Support for Research Time
- Consent in the Emergency Out-of-Hospital Setting
- The paramedics have conflicting demands on their time in terms of ensuring that patients received optimum medical care within a limited period
- Difficulty in Maintaining the IMP (Investigational Medicinal Product) Log:
  - Although a log was maintained at each ambulance station, some envelopes were left in the ambulances and subsequently misplaced or lost when vehicles were moved for servicing or transferred to another ambulance station
- Many eligible patients not approached for the studies. Up to a fifth of eligible patients recruited into studies
- Scattered workforce
- Difficulty in Organizing Face-to-Face Training Sessions
- Paramedics shift-working patterns and the requirement to attend in their personal time are obstacles to attending meetings
- Concerns about ethical and practical challenges
Heart patients to be given placebo by paramedics in controversial trial

Patients whose hearts stop will be given a placebo instead of adrenaline by paramedics during attempts to save their lives in a study branded 'ethically questionable'.

Paramedics to give dummy drug for heart attacks: Controversial trial will see patients given placebo instead of adrenaline when their heart has stopped

Paramedics will give them a placebo containing salt water

It will be given instead of an injection of adrenaline before CPR

Trials will begin in London, the South Coast, the North East

They will also be held in the West Midlands and in Wales

Cardiac arrest patients 'may be unaware' they are taking part in medical trial, claims paramedic

Welsh heart patients to be given salt water placebo during cardiac arrest

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Welsh heart failure patients will be among 4000 people given a placebo instead of adrenaline when undergoing resuscitation attempts as part of a trial that will break 30 years of medical practice.
Use established policies and documentation where possible

Push research training

Find paramedics in their habitat

Push the incentive button
Engage with R&D office early

Seek out champions

Flag wavers at all levels

Research Paramedic
Policy Pull

Policy-making has been argued to be a process of problem solving, constituting rounds in which divergent actors are involved with mutual power-dependency relations, usually having different frames of reference and using different resources, characterized by a sequence of actions with a recognizable course and is a social/political process, than a rational analytical process (dunn 1994, gorissen et al 2005).
Delivering Research in Ambulance Services is bridging the gap between the Service and a Knowledge economy

- Shift away from the dichotomous culture of producers and users of research evidence; ‘knowledge translation’, ‘transfer’ and mobilisation being imbedded in ‘learning’, ‘contribution’, and co-production (Jasanoff 2013).

- Frames the relationship between research and policy as a two-way negotiation, in which both partners learn from the other – pragmatically and politically a step towards an equality of prioritisation and experience.
• Despite the increase of academia and policy-making roles in medicine and other professions, there are few examples of formal brokerage roles of individuals (Ettelt & Mayes 2011),
Health & Care Research Wales performance matrix

- Number of patients recruited into Health and Care Research Wales Clinical Research Portfolio (CRP) studies
- Number of patients recruited into commercially sponsored studies
- Percentage of commercially sponsored and CRP studies:
  - receiving NHS research permission within 40 calendar days
  - recruiting the first patient within 30 calendar days of approval/site initiation
  - recruiting to time and target
  - Percentage of non-recruiting studies
Policy pull

- Integrated Medium Term Plan
- Local Delivery Plans
- R & D key target for Health Minister PDR with Chairman
- Performance matrix reported to CEO and board
Paramedics perceptions of caring for people who self harm

Ethnographic study of emotion work

Transient Ischaemic attack 999 Emergency Referral (TIER): feasibility trial

Public and clinicians views of Prudent Healthcare

Streamlining in ED

INVENT

Take home Naloxone

PEARS & PASTA

EVALARA

Evaluating the Diversion of Alcohol-Related Attendances

Ethnography of 'Primary Care Sensitive' Ambulance Contacts.
Your Views

To help improve our services we value your feedback:

www.healthandcareresearch.gov.wales/your-views/
Publications


- Rajagopal S1, Kaye CR2, Lall R2, Deakin CD3, Gates S2, Pocock H4, Quinn T5, Rees N6, Smyth M7, Perkins GD8. Characteristics of patients who are not resuscitated in out of hospital cardiac arrests and opportunities to improve community response to cardiac arrest. *Resuscitation* 110 (2017) 133–140


Pre-hospital Assessment of the Role of Adrenaline: Measuring the Effectiveness of Drug administration In Cardiac arrest (PARAMEDIC-2): Trial protocol Sep 2016 · Resuscitation


