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Ambulance service patient management outside hospital – evidence & lessons learned

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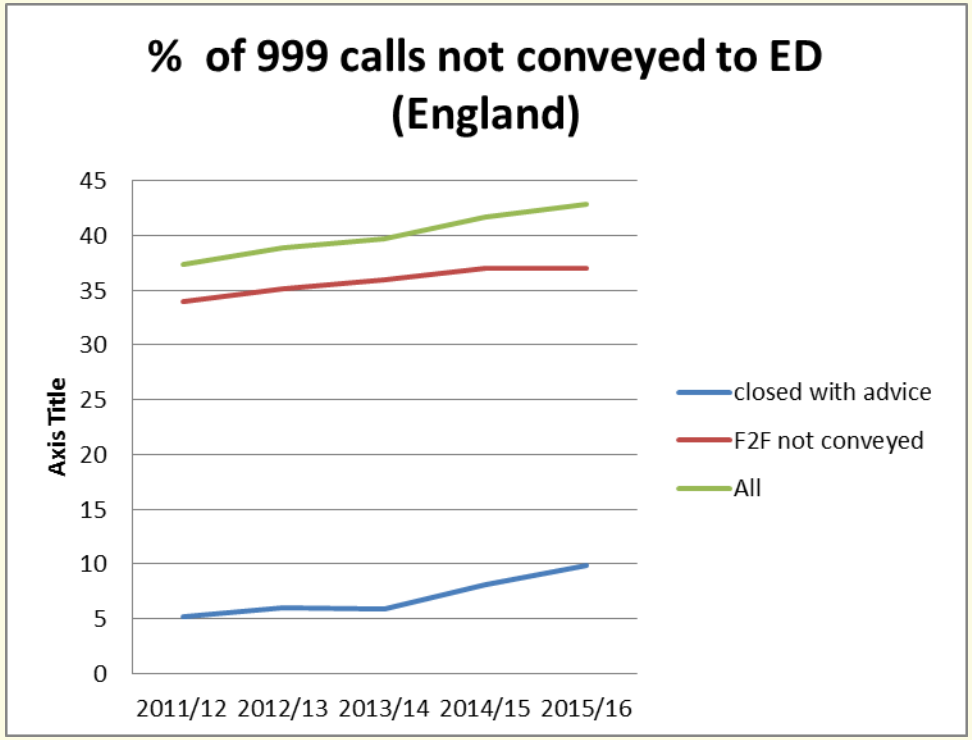
Where we are



Source - AQI

- Range: 27.9 - 57.6% (March 2015)
- Netherlands 27%
- Spain (Andalucia) 76%
- Spain (Basque) 20% Tel advice, 15% Nurse/Dr home visit, 16% info only

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Population utilisation of emergency ambulance services

	Calls/100 popn
Belgium	33
Czech Republic	21
Hungary	20
Ireland	7
Latvia	20
Lithuania	29
Norway	17
Turkey	4
UK	13

- Variable utilisation across countries
- Access for range of health needs not just emergencies
- Lacking comparable data on responses and conveyance

Ambulance care in Europe http://www.nivel.nl/en

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- Telephone based services
- Ambulance clinician care outside hospital
- Demand & information
- Networks

http://www.journalslibrary.nihr.ac.uk/hsdr/volume-3/issue-43#abstract

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Telephone based services

- Primary evidence on efficiency, effectiveness and patient experience
- Managing requests for emergency or urgent care
- 10 SR (33 articles) and 44 primary research studies, 7 trials
- Outcomes – Accuracy; compliance; safety; satisfaction; costs; service impact; access

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Summary findings

- Accuracy high for minimising risk. Inaccuracy tends to over-triage
- Adverse events very low
- Risk-averseness = safe but not efficient
- Compliance mixed but generally good - higher for Self-care/ED than primary care
- Satisfaction high and well liked by users

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Which clinician?

- Only 7 studies reported different staff types, 3 comparing Dr v nurse
- Mixed results on appropriateness – nurses tend to higher level care
- Higher satisfaction with Dr triage & higher repeat calls in nurse group
- High acuity and non-urgent easier to assess, urgent more complex so may benefit from higher level clinician - ?2 tier

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Gaps

- Individual, system or both? – no comparisons of triage systems
- Only 3 studies were on services using non-clinical call handlers (2 OOH, 1 NHS111)
- Little assessment of impact – usually single other service. Only 1 US &2 UK have addressed system impact
- Limited study of costs & results mixed
- Simplify access? – remarkably little attention

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Management by ambulance clinicians outside hospital

- Extended care paramedics, treat & leave or refer, ED avoidance, urgent conditions
- 7 SR (21 papers), 12 primary studies, 3 trials
- Outcomes – decision making; referrals/admissions; ED transports; costs; satisfaction

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Summary of findings

- Small number of high quality studies support extended paramedic roles
- Safe decisions, reduced ED transports, high satisfaction and acceptable; cost-effective
- Decision making is complex and needs to be underpinned by right education
- Small scale, single sites using sub populations of patients or clinicians

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Gaps

- Workforce implications at scale – numbers; skill-mix; training & education; costs and cost-effectiveness
- Better understanding of population case-mix – is there a threshold for non-conveyance?
- Pathways to support decision making and referral to further reduce ED transports
- Whole system impact

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Understanding demand (or not)

- Trends over time; characteristics of demand; all E&U care services
- 4 reviews, 8 primary studies
- Increasing demand trend across developed countries. Population utilisation growing faster for ambulance
- Demographic changes explains some but not all increases - Health needs; socioeconomic; patient behaviours; policy

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Gaps

- Few attempts to map demand, characteristics and relative effects, what is needed to respond
- Mainly single service – not whole system
- Lack of population based studies & identification of risk factors for access
- Inability to forecast

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Networks

- No empirical evidence on operating models and effectiveness
- Evidence for specific conditions – but not generalisable to a heterogeneous population
- Pressing need to conduct robust evaluation of emerging network models to identify what works best

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Main messages

- Map and characterise population demand at a system level
- Assess network development, existing evaluation and commission longer – term impact evaluation
- More work on pathway development and requirements for delivery at scale (including costs)
- Information systems to support

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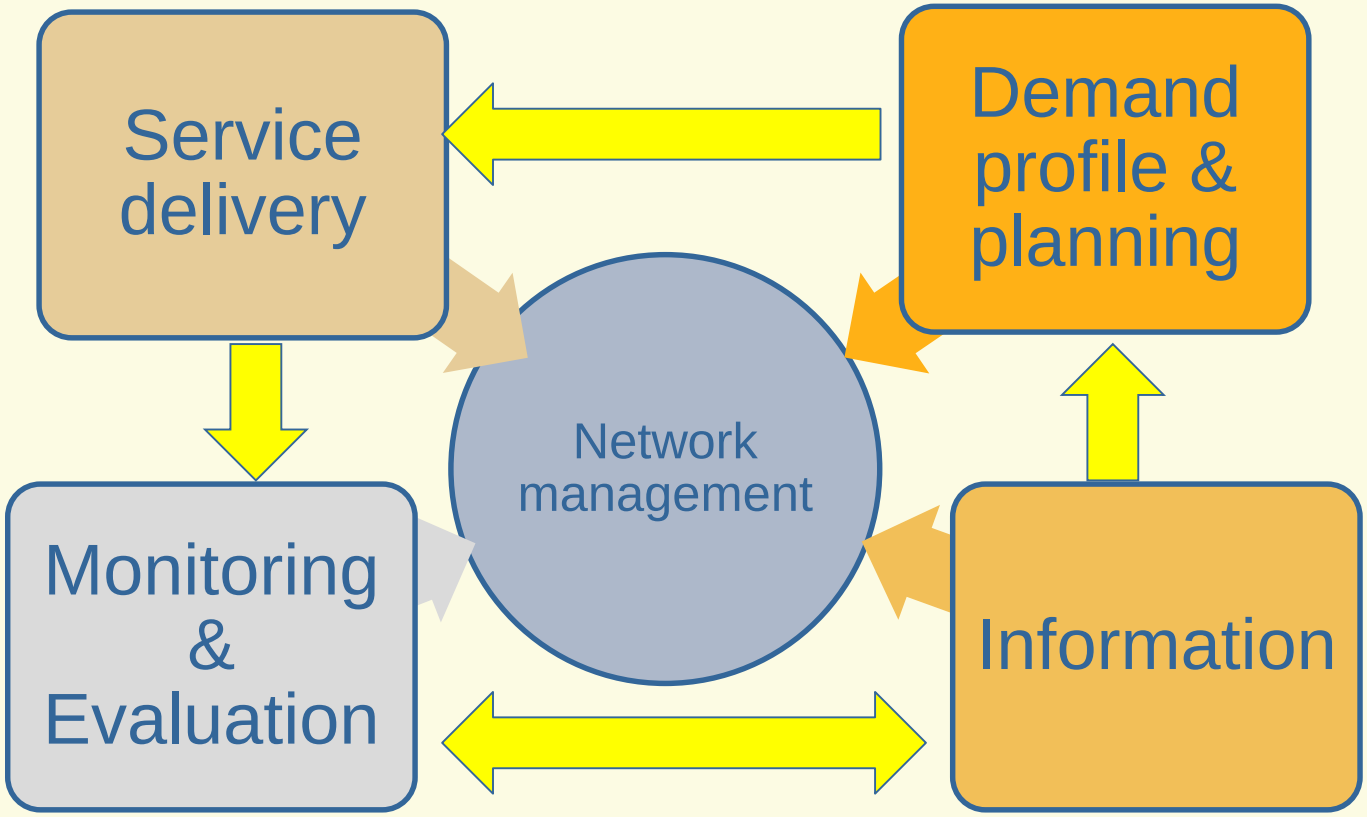

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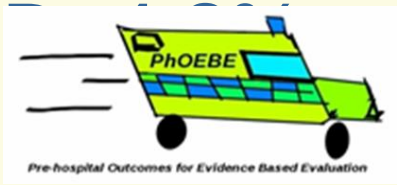
PhOEBE progress

- Linked dataset – CAD; ePRF; HES A&E; HES; ONS mortality
- 188,414 calls
- 63% to ED within 24 hours; 31% treated and discharged at scene; 6% telephone
- ED patients 16% admitted – mortality 0.1%
- Not conveyed – 25% attended E[illegible] admitted, 0.3% died



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VAN (Variation in non-conveyance)

- Commissioner interviews
- Success depends on engaging, collaborative and motivational working relationships
- Challenges - access to information to enable decision making
- Scale of the geographical commissioning area
- Collaborative working, complexity, lack of resource
- Role as quality enforcers and reporters

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VAN – Service interviews

- local and national guidelines
- out of hours provision
- commissioning approaches
- paramedic factors
- the wider health care system and its resources,
- patient factors
- availability and quality of training and support for paramedics

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EDARA

Evaluating the Diversion of Alcohol-Related Attendances

- Effectiveness, Cost-effectiveness, Efficiency & Acceptability of Alcohol Intoxication Management Services (AIMS)
- What supports successful implementation – key emphasis on frontline staff
- Acceptability to users and impact on ED users
- Impact on KPI – health service & ambulance
- Reduction in violent assaults
- Costs and cost-effectiveness
- 6 Intervention and 6 Control cities
- Funding NIHR HS&DR - 30 months

@irvingad82

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Priorities

1. System wide – information systems; understanding & mapping demand and need
2. Development of pathways & joined up services; networks
3. Ambulance clinician workforce and delivery at scale
4. NHS 111
5. NHS 111

