What do we know about why Urgent and Emergency Care demand has increased?

Literature review commissioned by the NHS Confederation and completed by Colin O'Keeffe, Research Fellow, School of Health and Related Research, University of Sheffield

Research investigating factors behind the growth in demand for UEC systems has focused on demand in individual services (particularly pre-hospital ambulance and the emergency department) rather than demand across the whole system. The factors identified in reviewed studies are outline in the table below by service. Systematic reviews of evidence are included where available as these studies reviewed evidence from across a number of primary studies. Primary studies were included if published after the systematic review was carried out or where studies were not included in the reviews. The factors associated with increasing emergency department (ED) presentations appear to be multiple, complex and inter-related (see Table 1 below).

Table 1: Factors identified as contributing to increased demand for both ED & 999 services

Identified reasons for increased demand	References
• **Ageing population** - Fastest growth in ED attendance reported in patients over the age of 65 (proportions >65 attending EDs varied between 12-21 per cent) - Older cohorts (i.e. >85 years) are 4 times as likely to present to ED and 8 times more likely to be transported as younger adult age groups • **Underlying factors behind older age ED/999 use:** - Long term medical conditions increase with age (e.g. accounting for >80 per cent of ED visits by older people) - Fallers twice as likely to be older - Self-care: functional impairment coupled with a lack of support - Nursing residential care populations - evidence of greater use than older people in own homes - Factors that promote access to primary medical care are associated with reduced ED utilisation - Male gender - Lower socioeconomic status	Lowthian et al 2011, Lowthian et al 2012 Gruneir et al 2011, Ingarfield et al 2009, McCusker et al 2003 Lowthian 2011a
• **Loneliness and lack of family support** - Fragmentation of family units and government policies encouraging older people to stay in the home associated with increased use of emergency services	Lowthian 2011 McCusker et al 2003, Lowthian 2011a
• **Changes in organisation of primary care services, reduced access to primary care** - Linked to issues such as: change to out of hours GP contract (UK); reduction in GP numbers (Australia); payments for consultations; unsuccessful attempts to access care (USA) - Access to a primary care provider reduced utilisation of ED services	Lowthian 2011 Gruneir et al 2011, Lowthian et al 2012
• **Health promotion and health awareness** - Increased awareness of need for early medical intervention for certain conditions (e.g. stroke) due to health programmes/ media campaigns. Maybe increased expectation for immediate care from the public (if	Lowthian et al 2011, Lowthian et al 2011a

they perceive urgent situation). - Evidence of campaign reducing emergency number use in Japan	
• **Convenience** - Convenience of 'one stop' shop with full range of specialists/diagnostics identified in several international studies.	Lowthian et al 2011, Lowthian et al 2012
• **Appropriateness of use and risk aversion** - Potentially inappropriate visits from nursing homes due to lack of appropriate levels of primary care in their place of residence - Self-referred younger patients identified as potentially inappropriate attendees (reduced utilisation of primary care). - Inappropriate use of emergency number services identified internationally - Differences in patient and clinician perceptions of appropriateness of use of emergency number/emergency departments	Lowthian et al 2011, Lowthian et al 2012, Lowthian et al 2011a
• **Increased ambulance use (impacting on ED)** - Emergency ambulances demand rising by an average of 6.5 per cent per year, 60 per cent resulting in transportation.	Lowthian et al 2011,
• **Deprivation** - Lower socioeconomic status associated with increased use of emergency number services	Lowthian et al 2011a

Further investigation is required into the demographic, socioeconomic and health-related factors associated with use of ED/999 services (with a particularly focus on older people). This would facilitate untangling the dynamics of the increase in UEC demand. Effective management of future demand will depend on a comprehensive analysis that goes beyond simple demographics of age and population growth. A clear understanding of reasons for high usage of emergency services is necessary to best direct attempts to meet genuine needs and to reduce inappropriate usage of the UEC services.

Patient priorities and decision-making when accessing Urgent and Emergency Care (UEC)

A limited number of studies have investigated patient decision-making when accessing services with unscheduled care needs. These issues and the factors identified are outlined in Table 2 below.

Most of the studies have focused on selected populations attending the ED or dialling 999 who may have been amenable to alternative, primary care based intervention. There is limited evidence that patients' perception of the severity of their need is the major reason for accessing the ED and 999 (rather than accessing primary and community based alternatives). However there is also evidence that patients, even with minor conditions, perceive that alternative services may not be able to meet their unscheduled care needs.

Larger, multi-centre studies are required to investigate patient perceptions of care alternatives when accessing urgent and emergency care. A better understanding of why patients access particular UEC services is crucial in ensuring any alternatives are acceptable to those patients with unscheduled care needs. There appears to be the potential for education of the public in awareness of the roles, skills and services provided by different parts of the UEC system.

Table 2: Factors identified as reasons for accessing UEC

Identified reasons for decisions to call 999	**Reference**
• Patient perception of severity of the condition/perceived medical necessity	Jacob, S. L., Jacoby, J., et al. (2008), Shah et al 2008 Yarris et al 2006 Saunders 2000
• Other person calling an ambulance - Bystanders likely to dial 999, whereas patients and their relatives prefer to access primary care.	Jacob & Jacoby(2008) Yarris et al 2006
• Paramedic recommendation • Perceived shorter waiting time in ED	Yarris et al 2006
• Perceived shorter time to treatment/quicker access	Saunders 2000, Yarris et al 2006
• Perceived competence of ambulance service to 'deal with anything' • Perception of limitation of primary care based urgent care to deal with issue • Influences of previous urgent care experiences in decision making, i.e. negative experiences of primary care based services • Interpersonal factors and the assessment of risk in decision making	Booker et al 2012
Identified reasons for decisions to access emergency departments	
• Perceived severity of their condition • Person other than patient accessing help	Benger & Jones 2008

• Advised by someone else - the most frequent reason for presenting to the ED was 'being advised to attend by someone else'. The 'adviser' was more likely to be a health professional (doctor or nurse or NHS Direct) than to be 'friends or family'. • Perceptions of seriousness - different factors categorised including need to see specialist, thought they had a fracture, or wanted to see a doctor as soon as possible	Penson et al 2012
• Positive experience of ED in past	Penson et al 2012, Benger & Jones 2008
Identified reasons why patients decide to not access primary care	
• Perceived severity of their condition	Benger & Jones 2008, Penson et al 2012
• Delay for appointment likely	Benger & Jones 2008, Penson et al 2012
• Services unavailable out of hours	Benger & Jones 2008
• Referral to ED likely	Benger & Jones 2008, Penson 2012

Media campaigns

Evidence for the impact of media campaigns on patient use of emergency medical services (EMS) is mainly focused on patients with acute conditions such as acute myocardial infarctions (i.e. reducing delay in access). Only one study looked at the role of media campaigns in reducing demand for EMS and more research is required to evaluate the targeting of campaigns to encourage the appropriate use of UEC. However, an improved understanding of why patients access UEC is required before media campaigns can be designed to impact on the appropriate patient use of these services.

Impact of media campaigns on health services utilisation	**Reference**
• Limited evidence for impact of medial campaigns on reducing delay to treatment for AMI patients; may increase ED visits and 999 calls	Kainth 2004
• Reduction in ambulance service transport of both serious and non-serious illness during 20 month period of media campaign	Ohshige et al 2008

References

Lowthian J, Curtis A, Cameron P et al (2011). Systematic review of trends in emergency department attendances: an Australian perspective. *Emergency Medicine Journal*;28(5):373-377.

Lowthian, J, Curtis A, Jolley J et al (2012). Demand at the emergency department front door: 10-year trends in presentations. *Medical Journal of Australia;*196:128-132.

Gruneir A, Silver M, Rochon A (2011). Review: Emergency Department Use by Older Adults: A Literature Review on Trends, Appropriateness, and Consequences of Unmet Health Care Needs. *Medical Care Research & Review*;68 (2):131-155.

Ingarfield L, Finn C, Jacobs G et al (2009). Use of emergency departments by older people from residential care: a population based study. *Age and Ageing*;38(3):314-318.

McCusker J, Karp I, Cardin S et al (2003). Determinants of emergency department visits by older adults: A systematic review. *Academic Emergency Medicine*;10(12):1362-1370.

Lowthian J, Jolley D, Curtis A et al (2011a). The challenges of population ageing: accelerating demand for emergency ambulance services by older patients, 1995-2015. *Medical Journal of Australia*;194(11):574-578.

Jacob S, Jacoby, J, Heller M et al (2008). Patient and physician perspectives on ambulance utilization. *Prehospital Emergency Care*;12(2):176–181.

Shah M, Davis C, Bauer C et al. (2008). Preferences for EMS transport and pediatric emergency department care. *Prehospital Emergency Care*;12(2):169–175.

Yarris L, Moreno R, Schmidt T et al. (2006).Reasons why patients choose an ambulance and willingness to consider alternatives. *Academic Emergency Medicine*;13(4):401–405.

Sanders J (2000).A review of health professional attitudes and patient perceptions on `inappropriate' accident and emergency attendances. The implications for current minor injury service provision in England and Wales. *Journal of Advanced Nursing*;31(5):1097-1105.

Booker M, Simmonds R, Purdy S (2013). Patients who call emergency ambulances for primary care problems: a qualitative study of the decision-making process. *Emergency Medicine Journal*. Published Online First doi:10.1136/emermed-2012-202124.

Benger JR, Jones V (2008). Why are we here? A study of patient actions prior to emergency hospital admission. *Emergency Medicine Journal*;25(7):424-427.

Penson R, Coleman P, Mason S et al (2012). Why do patients with minor or moderate conditions that could be managed in other settings attend the emergency department? *Emergency Medicine Journal*;29(6):487-491.

Morgans A & Burgess S (2012). Judging a patient's decision to seek emergency healthcare: clues for managing increasing patient demand. *Australian Health Review*;36(1):110-114.

Ohshige, K (2008). Reduction in ambulance transports during a public awareness campaign for appropriate ambulance use. *Academic Emergency Medicine*;15(3):289-293.

Kainth, A., Hewitt, A., Sowden, A et al (2004). Systematic review of interventions to reduce delay in patients with suspected heart attack. *Emergency Medicine Journal*;21(4):506-508.