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Urgent and Emergency Care: Interventions to Transform the System in-line with the NHS England National Review

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Contents

Introduction

This report considers review level evidence on urgent and emergency care (UEC) published since 2009 by UK national health and research institutions. It provides a summary of recommended and evidence-based interventions for system-wide improvement in-line with the NHS England national review of UEC launched in 2013 (NHS England 2013a).

The two NHS England reports so far published (NHS England 2015b; NHS England 2013b) from the review have been interpreted here in terms of specific aims for the urgent and emergency care system (UCS). The report is set out according to these aims with brief descriptions of each.

The interventions are set out in tables in respect to each aim. Clear reference is made to the particular component of the UCS to which the interventions relate, including: telephone access (NHS 111 and 999); General Practice (GP); Out Of Hours services (OOH); other out-of-hospital primary and community care services (PCC); Type 3 A&E services (UCC) - such as walk-in-centres and urgent care centres; Emergency Departments (ED); secondary acute care (HOSP) - including inpatient, outpatient and ambulatory care; and social care services (SC) - including intermediate care. Interventions that are considered to be system-wide (SYS) or advice specifically for commissioners (COMM) are also distinguished.

Interventions tested but shown to be ineffective and thought likely to be in practice will be included in an appendix to this report but will not be provided with the first circulation.

The report presents best available evidence from the reviews included, but this is not necessarily comprehensive or of high quality - many reviews found that high quality evidence for relevant UEC interventions was not always available. The report does not go into the detail of implementation - this can be found in original studies and review papers.

Owing to the current high national profile of UEC and the multi-faceted, varied and complex nature of health and social care needs and services involved, there is an ever-growing body of evidence relevant to the UCS. This should be considered when reading this report and additions and updates should be made to the interpretations and recommendations wherever appropriate.

The references given are to the reviews used and cited in the text by the institution to which they are assigned, with authors detailed in the references where appropriate. The referencing does not include individual studies presented within those reviews.

Background

The 2013 NHS England national review of UEC was launched in response to growing concerns about pressures on ED - with overcrowding and breaches of the national four hour waiting time standard - and pressures on inpatient hospital services - with high rates of emergency admission. Around the same time the Health Select Committee published a report describing this situation and concerns that the NHS England review hadn't presented a comprehensive solution (Health Select Committee 2013).

Despite the hard work and activities since the launch of the national review, including the establishment of System Resilience Groups - bringing together provider organisations, commissioners and other stakeholders to coordinate a transformation of the local UCS - the pressures continue to grow. National statistics demonstrate growing inpatient bed occupancy rates, ongoing growth in ED attendance (this is a steady and predictable rise but one that hasn't been lessened by the alternatives such as walk-in-centres) and the consequent signs of a system under pressure (NHS England 2015a; Monitor 2015; The Nuffield Trust 2015). In view of the economic climate, the complex nature of the UCS and the time it takes for changes to take effect, the continued pressures are to some extent to be expected. However, evidence continues to demonstrate a discord between those interventions which are well evidenced at improving UEC quality and demand management and what is actually being implemented (NHS England 2015b; The King's Fund 2013).

With better understanding of the UCS since the national review began, the body of high-level evidence now available and the supportive vision set out in the NHS Five Year Forward View (NHS England 2014), now seems a good time to take stock and consider how, on a local and regional level, transformation to a UCS that is *"safer, faster, better"* (NHS England 2015b) might be achieved.

Aims for urgent and emergency care

These have been interpreted from the two reports so far published from the NHS England national review (NHS England 2013b; NHS England 2015b). They are not cited explicitly in the national review. They are intended to inform the whole-system approach recommended by the review and broadly cover the problems described within the UCS.

Aim 1. Reduce inherent inefficiency

The NHS is a publicly funded service which is trying to improve in a climate of austerity and with an ageing population. That means there is *less* money with which to provide a *better* service for *more* patients with *more* complex illness (such as frailty and multiple chronic disease).

Although this seems like an uphill struggle it is one in which efficiency is essential so long as it is done without taking one eye off safety and quality. There are three key features of the current UCS which require particular attention for their unwarranted inefficiency and potential for harming patients' experiences and outcomes.

Multiple contacts per episode

A striking demonstration of this is presented in a cases review of children with fever, which found that one child with one episode of a feverish illness might have up to 13 encounters with the UCS. Over half of the encounters per illness were initiated by the UCS and not by parents. This can be demonstrated in day-to-day practice in other patient groups and suggests a fragmented and incohesive system under pressure.

Whilst patient education of service use is important the UCS should maintain a culture of managing a patient according to their concerns and at the point at which they access the system, rather than a presumption of 'inappropriate use' of services and diversion of care. But this requires a system which supports its component parts, including with ready access to advice, diagnostics and safe follow up.

Duplication of care

In the current UCS a patient's pathway to an emergency hospital admission for a single episode of illness might conceivably include all of: a telephone *assessment* through NHS 111, an *assessment* out-of-hospital by a GP, an *assessment* by the transporting ambulance crew, an *assessment* in ED *and* an *assessment* on an acute ward. Many of these assessments will be carried out by a trained practitioner and involve a fresh set of processes and 'paperwork'. Often too few of these assessments will be shared in a usable way and so unnecessary duplications are likely to occur. Although this will rarely be unsafe it demonstrates costly duplications of care and is likely to adversely affect the patient experience.

Only one intervention specifically targeted at each of the above problems is described here. It is reasonable to expect that other interventions described below will have a beneficial effect on these inefficiencies - especially those that address patient flow, variation in care and system-wide working. However, specific monitoring of multiple encounters and duplications of care is something the UCS should prioritise.

Patient Flow

The movement of patients through a single health facility such as a hospital is a simple concept that quickly becomes complicated by factors outside of the fixed physical environment - delays might be due to changes in a patient's condition, workforce shortages, equipment failures, unforeseen need for further investigation or delayed discharges due to home circumstances. When the wider UCS is considered this complexity rises sharply - with multiple interactions between services such as GP, hospital trusts and social care services, variability in IT systems and information sharing between providers, and differing hours and other processes of care.

This makes understanding and managing demand to maintain patient flow very challenging. It is essential that variation rather than 'average demand' is accounted for in capacity calculations and processes throughout the system are aligned to improve flow - including admission and discharge norms within hospitals and activities throughout primary, secondary and social care.

Intervention	Services	Review
Aim 1: Reduce inherent inefficiency		
Multiple contacts per episode		
Initiation of UEC is the patient's determination of need. Point of UEC provision is at the point of access (within clinical reason).	SYS.	(NHS Alliance 2011)
Duplication of care		
Information sharing: live assessment & management information along referral pathways.	SYS.	(The King's Fund 2013; RCGP 2011)
Patient flow		
Directory of services: up to date & inclusive of live capacity information.	SYS.	(The King's Fund 2013)
ED crowding: overcrowding protocols (see RCEM); capacity & staffing calculations; remove unnecessary services from EDs.	ED & HOSP.	(The King's Fund 2013; RCEM 2014)
ED flow: reduce triage; frontload senior review and investigations; separate pts by severity; GP referral by-pass; access to high-volume specialties within 30 minutes of referral; short stay wards (<48hr stay).	ED & HOSP.	(The King's Fund 2013; RCEM 2014; NHS England 2015b)
Acute assessment units: 48hr single consultant cover; twice daily consultant review (including 8am for anticipated 1pm discharge); maintain <85% occupancy.	ED & HOSP.	(The King's Fund 2013; NHS England 2015b)
Review flow issues according to operational productivity (see Lord Carter).	SYS.	(Carter 2015)
Doctor-led triage (ED senior doctor, GP) or senior doctor assessment without triage, of all ED attendances.	ED.	(NIHR 2013a; NHS Alliance 2011)

Aim 2: Reduce variation in quality

Owing to the unpredictability of urgent and emergency healthcare needs, variations in demand and the human judgement involved in clinical care there is an inevitable degree of variation in outcomes from UEC, as with all healthcare activities. However, it is reducing the unwarranted variation that the national review expects of the UCS. Three particular variations are considered here.

Geography
Despite various technologies being available to improve this issue, distances needed to travel to health facilities are not always adequately overcome by the UCS, resulting in effects such as increased risk of emergency admission.

Processes of care
Those which lead to variation in the quality of UEC provision include time of encounter (with variations in-hours, out-of-hours and over weekends), point of access (eg attending one UCC with 24hr cover and access to full hospital facilities, and another with daytime opening only and minimal diagnostic facilities), resources available (including specialist support and technologies) and approaches to care (including adherence to guidelines and clinical pathways).

Groups
Variation in care between groups within society is most notable in more deprived communities that tend to have poorer access to healthcare and higher risk of emergency admission, particular patient groups such as mental health or frail elderly (this is largely covered by Aim 3 below), and where there is a lack of flexibility within the UCS toward different understanding, cultures and preferences of health service use.

The interventions within the literature included refer mainly to addressing variation due to processes of care. Reducing this will help to improve some of the other aspects of variation, but the UCS should consider how it can identify and target geographical areas and societal groups at most need, so as to increase equity within the health and social services.

Intervention	Services	Review
Aim 2: Reduce variability in quality		
Staffing in ED mapped according to: consultant delivered seven day care (16h per day); adequate consultant per head of population rates (see RCEM); GP & PCC access to secondary care advice; paediatric ED specialists for >16000 child attendances per yr.	ED & HOSP.	(The King's Fund 2015; The King's Fund 2013; NHS England 2015b; NIHR 2014a; NIHR 2015b)
Patient safety issues: robust root cause analysis looking for reversibility not 'unavoidability'.	SYS.	(The King's Fund 2013; NHS Alliance 2011; RCGP 2011)
Governance & professional standards across UCS including time to assessment, treatment, review, referral & disposal (adherent to NICE/CQC).	COMM & SYS.	(The King's Fund 2013; NHS Alliance 2011; RCGP 2011)
Staff education & training should focus on the implementation of evidence-based interventions.	SYS.	(The King's Fund 2013)
Community care: scaled to impact whole UCS; flexible to demand; case management & risk assessment model.	PCC.	(The King's Fund 2013)
Responsive mental health & addiction services: outreach for inpatients; access to psychiatry / specialist; case management models.	HOSP & PCC.	(The King's Fund 2013; NHS England 2015b)
Acute assessment units: 8-12h consultant presence; consultant assessment within 8h during day (14h max); diagnostic & specialty support.	ED & HOSP.	(The King's Fund 2013; RCGP 2011)
Specialty wards: consultant assessment within 3h during day (12h max); twice daily board round & take home prescriptions; discharge pts as priority of morning round; employ dedicated discharge clerk.	HOSP.	(The King's Fund 2013; NHS England 2015b)
ED emergency assessment areas for sickest pts.	ED.	(NIHR 2015b)
ED support services: resident specialties (according to NCEPOD); middle grade surgical assessment within 30min & medical within 1h.	ED & HOSP.	(NIHR 2015b)
System changes: designed to achieve better care for all; risk-profile population to target most need.	SYS.	(RCGP 2012)

Aim 3: Improve care for particular patient groups

There are two distinct reasons to focus on patient groups to understand their particular needs and how best to address them:

1. To effectively care for their needs to achieve good patient experiences and outcomes.
2. To efficiently manage their demand of the UCS and reduce unwarranted or costly use.

Sometimes these two objectives will complement one another - better quality care can result in shorter episodes of UEC need and less risk of recurrence or re-attendance. However, this is not always the case and as with all these interventions, implementation should take account of resources and opportunity costs.

The three patient groups that receive most attention from the reviews demonstrate specific and often complex needs and a high demand.

Older, frail, vulnerable, multimorbidity and dementia patients

These elements often co-exist, with frailty, dementia and social or other vulnerabilities being more common in older patients. Multimorbidity refers to two or more conditions and is more common the older we get, with chronic diseases such as cardiovascular disease and respiratory diseases often co-existing. These elements can present particular clinical considerations affecting the episode of care, and social considerations meaning that a safe and timely discharge at the end of the clinical need can be difficult. They are also becoming more common as the population grows older and thus present an increasing demand.

It should be noted that physical frailty and dementia can occur in ages not usually considered 'older', with early onset dementias and various causes for physical and mobility impairment. It should also be noted that social vulnerabilities can affect children and adults and the related safeguarding issues require particular awareness and careful management.

Mental health

Mental health care is recognised to be poorly provisioned in many conventional healthcare settings, especially in UEC where immediate physical need might be prioritised. For people presenting primarily with an urgent mental health need the bright, noisy and fast-paced ED for example, might not be the best place for care, but there is often a lack of alternatives. Also, for people presenting with a physical need, co-existing mental health needs might be largely ignored and yet compound the patient's ability to improve.

End of life

Patient's wishes for end-of-life care in the case of terminal disease and for a comfortable death at home or elsewhere should be respected by the UCS. However, there are still examples of people with known end-of-life illnesses who do not have appropriate care or care plans, and of people with plans and documented wishes for end-of-life care who end up in ambulances, EDs or admitted against these wishes. Although addressing this patient group might not present more efficient healthcare - as it will often require special provision of care at the place of residence - it is an important aspect of good healthcare and puts undue strain on patients, carers and healthcare workers if managed poorly.

Intervention	Services	Review
Aim 3: Improve care for particular patient groups		
Old age, frail, vulnerable, multimorbidity and dementia		
Case management & MDT input for pts with multiple disease: focus on risk factors & functional difficulties.	GP, PCC & SC.	(Cochrane EPOC 2012)
Comprehensive Geriatric Assessment for older people admitted to hospital.	HOSP.	(Cochrane EPOC 2011a)
Coordination of care, joint community and intermediate care commissioning & shared records for frail elderly.	GP, PCC, SC & COMM.	(The King's Fund 2015)
Assertive & holistic management of older inpts (Acute Care Toolkit 3).	SYS.	(NHS England 2015b; RCP 2015)
Continuity in GP for older & complex pts.	GP.	(NHS England 2015b)
Dedicated health & social care coordinator for GP practices.	GP, PCC & SC.	(NIHR 2015b)
Safeguarding training of all staff for vulnerable adults & children.	SYS.	(RCGP 2011)
Mental health		
Recognition & recording of mental health (as primary or secondary condition), prompt care & liaison services for secondary & primary care.	HOSP.	(The King's Fund 2015; RCGP 2011)
Access to MDT support at time of need.	PCC & HOSP.	(RCGP 2011)
End of life		
End-of-life care in the home including access to palliative care team.	HOSP & PCC.	(Cochrane EPOC 2011b)
Specific discharge planning, 24/7 community response and commissioning the pathway.	SYS & COMM.	(The King's Fund 2015)
Enhanced GP & PCC for end-stage heart failure pts.	GP & PCC.	(NIHR 2013b)

Aim 4: Improve particular aspects of care

The national review describes a UCS that has become over-complex and difficult to navigate - this might be true for healthcare workers as well as for patients. Many components / services added to improve navigation or better manage demand have been 'tagged on' rather than integrated thus increasing the complexity and creating new demand instead of managing existing. Although the evidence regarding the impact of NHS 111 is mixed it is an example of a major service development that has not had the impact on demand and patient's self-care empowerment that was hoped. Similarly while the year-on-year rise in ED attendances has not been as great as once thought, it was not reduced by the introduction of walk-in centres and other urgent care facilities which have created a demand of their own.

These problems are likely due to a lack of involvement with the whole UCS when planning major changes, a lack of pathways and information sharing throughout the UCS and a lack of engagement with the patients and public using the services. There are two key elements which the national review refers to when addressing future development.

Patient's access to services and ease of navigation
This refers to simplifying the UCS so that use is more intuitive (and will hopefully also be more efficient), with fewer component parts (especially in facilities between the community and hospitals such as walk-in centres and urgent care centres) and with more consistency (so that patients can expect the same thing from services wherever they are in the country).

Patient's access to information & self care support
Although the impact that self-care will have on UEC demand is unclear it is hoped that it will reduce rather than increase demand, reduce the exacerbation of chronic disease and empower patients to manage illness in a way that suits their personal needs. However, the term 'self care' can be misleading, as it can refer to a variety of care activities - from self-directed care for minor ailments and injuries, to care that is supported by patient information, to patient and GP co-developed care plans for chronic diseases. If self-care is to have the greatest impact on UEC it needs to consider equity - the patients in most need of it are likely to be the most deprived who have the lowest levels of health literacy and so are the hardest to reach.

Many of the more UEC provider-involved self care concepts for chronic disease management are covered under Aim 5: Reducing avoidable use of expensive services.

Intervention	Patients / Services	Review
Aim 4: Improve particular aspects of care		
Patients' access to services and ease of navigation		
OOH services to include co-located presence near ED & be effectively marketed to the pts & public.	OOH & ED.	(The King's Fund 2013)
NHS 111 effectiveness: evaluate cost-effectiveness of clinical versus non-clinical provision; up to date directory of service; fully integrated IT & live communications to UEC providers.	NHS 111 & SYS.	(NIHR 2014b)
NHS 111 compliance: invest in good call handler communication skills; recommending self-care & emergency care services results in better compliance than 'regular' care.	NHS 111.	(NIHR 2013a)
True single point of access: 111 for non-emergencies; 999 for emergencies.	NHS 111, 999 & SYS.	(RCGP 2011)
Public involvement in planning (including at board level).	SYS.	(RCGP 2011)
Quality marketing UCS to pts & public.	SYS.	(RCGP 2011)
Patient's access to information and self-care support		
Telemedicine for long term conditions: diabetes; hypertension; cardiac; & frail.	Long term conditions. GP & HOSP.	(Cochrane EPOC 2015; NIHR 2015b)
Self management support: COPD; asthma; & medication adherence.	Existing conditions. GP & PCC.	(The King's Fund 2015; NIHR 2015b)
Increase provision of UEC from community pharmacists & dentists.	PCC.	(RCGP 2011)
Increase recognition of & support for carers including through VCS.	VCS & SYS.	(RCGP 2011)

Aim 5: Reduce avoidable use of expensive services

Throughout the national review process there have been two factors that have clouded the recommendations:

1. The perception that a high proportion of patients are using UEC inappropriately;
2. The assumption that care 'closer to home' will always be better and cheaper for the UCS and wider health system.

Although understanding each of these factors' impact on demand might be worthwhile, the current approach recommended by the national review is a more reasonable one: care should be provided in a cost-effective way avoiding unnecessary use of expensive facilities and unnecessary travel or other inconvenience to the patient. In this respect, if there is potential UEC provision that is closer to people's homes but being underutilised due to lack of service development, lack of public awareness or an incohesive UCS then this should be addressed. This could help to manage demand by better using the whole UCS capacity and reducing the overall cost of care (although where savings to the UCS would go is a matter for the wider health system to consider).

These interventions therefore relate to caring for people 'upstream', whether this be upstream of a journey from home, by ambulance to the hospital, or upstream of an exacerbation of an existing disease. The reviews included refer to avoiding unnecessary use of emergency-type services, including ***emergency ambulance services***, ***ED and unscheduled*** (emergency) ***admissions***, and ***prolonged length of stay in hospitals*** including due to ***delayed discharge***. Although these are likely to be the most expensive contexts of UEC and therefore a good start, there is a paucity of interventions around reducing GP - there are cheaper services, even closer to home and currently under less pressure, such as community pharmacies.

Intervention	Services	Review
Aim 5: Reduce avoidable use of expensive services		
Emergency ambulance service		
Frequent 999 callers: analyse demand & work with GP to manage frequent callers.	999 & GP.	(The King's Fund 2013)
ED and emergency admissions		
Ambulatory emergency care: for 19 sensitive conditions; shared by ED & acute int specialties; good diagnostic support.	ED & HOSP.	(The King's Fund 2015; The King's Fund 2013; NHS England 2015b)
Nurse-led & pharmacy-led medication management in the community for pts with multiple medications and vulnerable pts.	PCC.	(The King's Fund 2015)
OOH services contracted on outcomes, integrated in UCS, & have access to pt records & plans.	OOH & COMM.	(The King's Fund 2013)
Type 3 A&E: integrated fully as part of UCS (opening hours, governance); see & treat model; access to diagnostic; consider co-location in ED.	UCC & ED.	(The King's Fund 2013)
Residential care: care plans; case & medication reviews; GP & geriatrician support; end-of-life & intravenous medicines training & support.	GP, HOSP & SC.	(The King's Fund 2013; RCGP 2011)
Paediatric demand: GP opening 3pm-8pm for school surge; specialist skills in GP; GP presence in ED for high volume times.	GP & HOSP.	(The King's Fund 2013)
Ambulance services managing demand: increase treat on scene provision (Emergency Care Practitioners); access to care plans.	999 & SYS.	(The King's Fund 2013; NIHR 2014a; NIHR 2013a; RCGP 2011)
(Re)admission avoidance: risk stratify with MDT; community & social support.	PCC, SC & SYS.	(The King's Fund 2013; NIHR 2014a)
GP continuity & activity reduction measures: for ambulatory care sensitive conditions; deprived; least educated; socially isolated; multimorbid; & older pts.	GP.	(NIHR 2013b; NIHR 2015b)
GP practices: larger register; easy & same day access (inc telephone consultations); increased in-hours (8am-8pm); & adequate capacity.	GP	(NIHR 2013b; NIHR 2013a; RCGP 2011)

GP coverage: federations; better proximity for patients living far from acute hospitals; co-located in ED for pts nearby.	HOSP & GP.	(NIHR 2013b; RCGP 2011)
GP support: access to secondary care advice; diagnostics inc same day lab reports; improve postgraduate GP education programmes.	SYS.	(NIHR 2013b; NIHR 2014a; RCGP 2011)
Health visitor per 1000 children under 5y.	PCC & COMM.	(NIHR 2013b)
Closely align OOH services with community services including making explicit use of voluntary & community care services (VCS).	COMM, OOH & PCC.	(NIHR 2015a)
Avoid creating demand: no knee-jerk acute bed expansions (eg winter wards).	HOSP.	(NIHR 2014a)
Adequate investment & capacity in community care beds & social care.	COMM & SC.	(NIHR 2014a)
GP care plans: frail older & heart failure.	GP.	(NIHR 2015b)
Stable & cost effective acute care workforce: Emergency Care Paramedics; Emergency Nurse Practitioners etc.	HOSP & ED.	(NIHR 2013a)
Prolonged length of stay and delayed discharge		
Discharge planning: for frail older & complex patients; tailored to individuals; across medical, surgical & psychiatric care.	HOSP & SC.	(Epoc 2013)
Discharge planning for frail older patients: consultant-led estimated date of discharge plan (EDD) & criteria within 12h of admission; daily review of EDD; review all non-clinical delays; dedicated team (inc weekends) inc resident social care team.	HOSP, SC.	(The King's Fund 2013)
Clinical pathways: MDT planning and input to pathways for specific conditions (see Cochrane EPOC).	HOSP.	(Cochrane EPOC 2010)
Frail older patient flow through hospital (see ECIST model) & 'pull' into community.	HOSP, PCC & SC.	(The King's Fund 2013; ECIST 2012)
Stepdown beds: preserved for complex patients awaiting discharge package of care.	HOSP & SC.	(The King's Fund 2013)
Generalist models of inpatient care for acute admissions.	HOSP.	(NHS England 2015b)
Avoid 'boarding' patients on non-inpatient beds or wards apart from assigned consultants.	HOSP.	(NHS England 2015b)

Intermediate care: strict criteria for admission; adequate capacity; access to & from GP & specialists; MDT (inc mental health MDT).	SYS.	(NHS England 2015b; NIHR 2015b)

Aim 6: Develop system-wide working

Although improvements in quality and efficiency in various distinct UEC providers or for various distinct groups of patients feature in the national review and are likely in the short to medium term to be the 'small things' that make the biggest difference, the bigger picture described is a longer term shift to whole-system working. This aligns with the mood of the wider health and social care system and the idea of 'integration'. However, although it intuitively seems like a good direction, it is not a new idea as such, and the evidence around the effectiveness of higher level reconfigurations of health systems along similar lines is mixed. There is a risk that throwing all into a 'fully integrated' system might be a costly way to find out that a system won't integrate.

With this in mind it is important to 'do what good looks like' as described by the interventions so far, and not ignore this when trying to create bigger change. The interventions described below are primarily those which appear specific, attainable and effective through facilitating system-wide working. Many of the interventions - such as data and information recording and sharing - are essential to improving understanding, evaluation and future improvements. However, some of the interventions are dependent on less reliable and controllable aspects - such as the leadership traits required for effective whole-system commissioning or cooperative behaviours required for effective urgent care networks. Therefore the interventions for this aim should be interpreted with specific local contexts in mind and understanding the long term investment and patience that such improvements often require.

Collaborative planning

This enables the component parts of the UCS that are likely to be affected by UEC activity to give their insight, identify areas that would benefit from change, voice concerns about potential problems with plans to redesign, tailor any changes to the local context, and offer expertise and capacity. It also increases the likelihood of compliance within the UCS if the provider has been involved in the planning.

A particular and recurring area identified as a weakness in reconfigurations of acute clinical services over recent years has been the lack of secondary care's engagement of primary and social care services on which effective change depended.

Information and data sharing

For whole-system working it is essential that the system communicates. This includes:

1. Up to date understanding between providers of their capacity, service provision, pressures and limitations;
2. Feedback loops to highlight particularly effective elements of the pathways and any problems including patient safety issues; and
3. Activity and other data to enable need, supply and demand analysis and ongoing system improvement.

However, at the moment there are many examples of difficulties in data sharing due to incompatible technologies, lack of sharing agreements, poor alignment of data requested for intelligence and that which is actually recorded (often driven instead by payment

mechanisms), and poor quality data due to a lack of prioritisation. These issues need addressing by the UCS as a matter of priority.

Monitoring and evaluation

One of the roles of bodies such as the System Resilience Group is to maintain a healthy UCS and to respond if it is struggling - to ensure the UCS is flexible and 'resilient' to varying pressures. This requires a 'finger on the pulse' of the UCS. Although indicators such as the four hour ED waiting time standard get most press and have some 'smoke alarm' value, alone they can be very misleading as to the source of pressure and the solution to the problem. The UCS therefore needs to understand the data and other information that can provide the whole-system intelligence, and the analytic and dissemination processes required to make best use of it.

It is also essential when so much is being asked of the UCS to change for the better, that services are evaluated for effectiveness and reviewed for necessary improvement or cessation.

Intervention	Services	Review
Aim 6: Develop system-wide working		
Collaborative planning		
Commissioning role: overview & scrutiny in line with strategic vision; allow provider freedom to tailor to resource & population.	COMM & SYS.	(The King's Fund 2013; RCGP 2011)
Community care: planned around key hospital providers; part of health & social support teams.	SYS.	(The King's Fund 2013)
Demand management: matching capacity & demand throughout primary & hospital care.	SYS.	(The King's Fund 2013)
Financial risk/benefit & accountability: develop mechanisms to enable sharing across UCS & reinvestment of savings.	COMM & SYS.	(NHS Alliance 2012; NHS Alliance 2011; RCGP 2012)
Develop collaborative seven day plan across primary & secondary care.	SYS & COMM.	(NHS England 2015b)
Centralise specialist services for expertise and facility pooling: including major trauma, myocardial infarction & stroke.	SYS, HOSP & 999.	(NHS England 2015b)
Evidence-based interventions: aligned with strategy; better financed (co-funded where appropriate); allowed enough time to embed & have effect.	COMM & SYS.	(NIHR 2015a)
Integrate acute, community & social care through a single or main NHS provider.	COMM & SYS.	(NIHR 2015a; NIHR 2014a)
Shift resources, planning & activity away from acute care, into primary, community & social care.	COMM & SYS.	(The Nuffield Trust 2015; NHS England 2014; NIHR 2015b; NIHR 2015a; RCGP 2011)
Commission UEC: reduce competition & tendering in UEC; terminate contracts of poorly performing services; increase GP UEC provision.	COMM.	(NHS Alliance 2011)
Tariffs to support integration & information sharing.	COMM & SYS.	(RCGP 2012)
Commissioner UCS-awareness of structure, activity, expenditure & effect of tariffs.	COMM.	(RCGP 2011)
Programme budgeting of UEC (as per RCGP guidance).	COMM.	(RCGP 2011)

Information and data sharing		
Urgent Care Networks: mapping processes; communication across providers & commissioners; patient safety & critical incident learning.	SYS.	(The King's Fund 2013; NHS Alliance 2011)
Share patient information per episode of care.	SYS.	(RCGP 2011)
Prediction, monitoring and evaluation		
Commissioning outcomes: measure UEC activity by quality & avoid perverse incentives.	COMM.	(The King's Fund 2013)
Type 3 A&Es: rigorous evaluation including need for service, efficiency & demand management.	UCC & COMM.	(The King's Fund 2013)
Bed demand prediction & response: predictive bed modelling (national tools - DH, ECIST, NHS Institute); system escalation mechanism with social & primary care expansion when admission spikes.	COMM & SYS.	(The King's Fund 2013)
Evaluate impact of social & primary care & delayed transfers of care on hospital performance.	HOSP & SYS.	(Monitor 2015)
Suite of whole-system metrics / indicators: shifting focus away from 4hr ED waiting standard & toward informing solutions; include potential adverse consequences of improvement objectives (eg community mortality alongside admission reduction).	SYS.	(The Nuffield Trust 2015; NHS Alliance 2011; The King's Fund 2013; RCGP 2012)
Cost to system: monitor activity according to system-cost (not individual service); monitor duplication of spending; track cost back home to incentivise definitive community-care.	COMM & SYS.	(NHS Alliance 2011)
Evaluation across whole UCS pathway / end-to-end analyses of patient journeys: efficiency, effectiveness & information sharing.	SYS.	(NHS Alliance 2012; NHS Alliance 2011)
System audit: adequately resourced audit team; accountable lead clinician; specific patient pathways across UCS (RCGP/RCEM audit tool).	SYS.	(RCGP 2010; RCGP 2011)
Evaluation of patient experience and direct activities toward year-on-year improvement.	SYS.	(RCGP 2012; RCGP 2011)
Monitor UCS according to CQC standards inc: quality; patient experience; capacity; emergency preparedness; high volume & high risk patients.	COMM & SYS.	(RCGP 2011)

Summary

The UCS is under pressure, with waiting times in ED and bed occupancy in hospital rising. This causes flow blockages in the top tier of a large and complex system and draws attention and resources there. Although investment is needed, building extra alternative capacity such as Type 3 A&E, or short term capacity such as winter wards, induces its own demand rather than managing existing. This approach is proving unsustainable and has created an UCS that is deemed too complex and incohesive.

Better demand management whilst maintaining good quality care is not easy with more need and less money. However, the interventions recommended in the review level literature that has been published around the NHS England national review of UEC provide an inventory of what works toward creating a system that:

1. Flows more efficiently along UEC pathways from community and social care through primary and secondary care;
2. Owns a more cohesive intelligence through communication, data recording and a culture of evaluation;
3. Enables the patient and public to navigate to care appropriate to their self-determined need;
4. Provides convenient assertive urgent care by enhancing community services, broadening the impact and reach of GPs, and cooperating primary with secondary care;
5. Provides expert and resourced emergency care through senior assessment, a broadened workforce, support from diagnostics and specialties and centralisation of certain specialist emergency care;
6. Supports itself by enabling advice and services (including diagnostics) to be accessible across the system and being flexible to alleviate pressures in one part by another part.

Some of these interventions can be implemented in a short timeframe (such as care plans targeted at specific diseases and realigning processes of care for better flow), some require medium term planning (such as developing a more informative directory of service, MDT input to residential care or consultant advice lines), some require longer term planning (such as information recording, analysing and dissemination, and understanding how to monitor the UCS) and some require fundamental and cultural change (such as shifting resources to primary, community and social care to improve performance in ‘frontline services’, and creating an infrastructure that enables risk and benefits to be shared across the UCS).

Much of the hard work is already under way. Hopefully this report (or the extracted tables version) facilitates UEC improvement by providing a quick reference to the effective interventions and processes that are supported by the evidence. What is needed is a local understanding of the parts of the UCS and the groups within the population that are in most need of the improvements these interventions can bring.

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