



# **Transforming urgent and emergency care services in England**

## **Urgent and Emergency Care Financial Modelling Methodology**

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**Additional Circulation List**

<b>Description</b>	This document will be used to aid those who are modelling the financial impact of the Urgent and Emergency Care Review. It describes the points one should consider when modelling the financial impact of interventions within the review. The document provides data and data sources that will support the financial modelling and assessments of the evidence relating to non-financial benefits.
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**Cross Reference**

**Superseded Docs**  
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# **Urgent and Emergency Care Financial Modelling Methodology**

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## 1 Document summary

### 1.1 Background

The need to redesign urgent and emergency care services in England and the new models of care which propose to do this are set out in the Five Year Forward View (5YFV). The Urgent and Emergency Care Review (Review) proposes a fundamental shift in the way urgent and emergency care services are provided, improving out of hospital services so that we deliver more care closer to home and reducing hospital attendances and admissions. We need a system which is safe, sustainable and that provides consistently high quality. The vision of the Review is simple:

- For those people with urgent care needs we should provide a highly responsive service that delivers care as close to home as possible, minimising disruption and inconvenience for patients and their families;
- For those people with more serious or life threatening emergency care needs, we should ensure they are treated in centres with the very best expertise and facilities in order to maximise the chances of survival and a good recovery.

As part of the Review a number of products have been developed to help create the conditions for new ways of working to take root and when combined, deliver an improved system of urgent and emergency services. The Review proposes that 5 key changes need to take place in order for this to be achieved. These changes are:

- Providing better support for people to self-care;
- Helping people with urgent care needs to get the right advice in the right place, first time;
- Providing highly responsive urgent care services outside of hospital so people no longer choose to queue in A&E;
- Ensuring that those people with more serious or life threatening emergency needs receive treatment in centres with the right facilities and expertise in order to maximise chances of survival and a good recovery; and
- Connecting all urgent and emergency care services together so the overall system becomes more than just the sum of its parts.

NHS England in collaboration with partners from across the system and patients has developed a suite of guidance documents and tools to support commissioners and providers in achieving the required fundamental shift towards new ways of working and models of care. This suite of guidance, 'Transforming Urgent and Emergency Care Services in England', is designed to be read together and includes the following components:

- Advice for System Resilience Groups: Establishing Urgent and Emergency Care Networks
- Clinical models for ambulance services
- Improving referral pathways between urgent and emergency services in England
- Safer, faster better: good practice in delivering urgent and emergency care
- Financial modelling methodology

## 1.2 Purpose

This document outlines a methodology that a local health economy (LHE) can use in order to model the financial impact of the Urgent and Emergency Care Review suggested interventions on their urgent and emergency care (UEC) system.

Throughout this document we use 'urgent and emergency care' to refer to the range of responses that health and care services provide to people who require – or who perceive the need for – same day advice, assessment, transport, care or treatment. Therefore urgent and emergency care includes both out of hospital and in hospital services.

## 1.3 Audience

We anticipate the key audience for this document being those at CCGs, System Resilience Groups and Urgent and Emergency Care networks who are engaged in assessing the potential financial and economic impact of changes to the Urgent and Emergency Care system in the locality. We expect in the main that this will be finance and analytics staff but also clinicians, operations and contract staff will have involvement in the process and may wish to read parts of this document.

## 1.4 Structure

We set out in section 2 the methodology that was used nationally when forming an assessment of the Urgent and Emergency Care baseline and what the future costs of this would be were the operational and clinical models to stay broadly as they are, but with anticipated pressures on activity and costs factored in (*the do-nothing model*).

Section 3 notes how we have modelled potential interventions that would affect the UEC system (*the do-something model*).

Section 4 notes considerations that ought to be made when assessing the overall impact.

Throughout sections 2 to 4 we also draw attention to the local considerations which will need to be made in the modelling.

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Section 5 contains data and tables which will be of use in the financial modelling undertaken by LHEs.

Section 6 notes non-financial benefits that arise from interventions considered.

### **1.5 How it will be used**

This document will be used to aid those who are modelling the financial impact of the Review.

Those engaged in the modelling may wish to use this in conjunction with an accompanying spreadsheet input template. We publish here:

<http://www.nhs.uk/NHSEngland/keogh-review/Pages/urgent-and-emergency-care-review.aspx>

the template input spreadsheet and instructions on its usage. This spreadsheet can be used as a method of collating the modelled impact of each intervention and will enable one to see the impact of the interventions and the do-nothing position once the appropriate assumptions outlined here have been formed locally.

This document does not provide a step by step guide on how to model the various interventions and could not do so given the local variation between health economies; however the methodology and assumption sets used should enable LHEs to build a local model of the financial impact of the interventions.

In addition to assisting with the financial modelling we provide in the appendix an assessment of the potential non-financial benefits arising from the Review's interventions. We anticipate that LHEs will want to use the assessment of the non-financial benefits alongside the financial benefits in order to form a holistic assessment of the implications of the interventions in their locality.

As the UEC Review continues we will publish further modelling adjuncts to this document to assist in the financial modelling of future proposed UEC interventions.



## 2 Baseline and do-nothing methodology

### 2.1 Points of care disaggregation

In order to understand the potential effect of considered interventions on the UEC system one must first understand (i) what the current cost of the UEC system is – *the baseline*; and (ii) how that baseline would change over time were the UEC system to remain clinically and operationally as is but with all the anticipated activity and cost pressures factored in – *the do-nothing model*.

The UEC system covers a wide range of points of care (General Practice, NHS111, ambulance services, community care, Emergency Departments etc.) and there is often a choice of point of care at which a patient might first approach with their healthcare need. Thus any intervention is likely to have an impact on many different points of care. (E.g. an intervention which increased the amount of ambulance Hear and Treat care would decrease the number of ambulance See and Treat or conveyances and the number of ED attendances, and thus there would be a financial impact in both providers.)

By disaggregating the baseline and do-nothing modelling by the points of care in the UEC system one can readily compare these to the do-something modelling where activity is in effect shifted between these points of care. (For example the enhanced See and Treat and Hear and Treat ambulance model may see a shift in care from Emergency Departments to more treatment on the scene via see and treat from ambulance providers – by understand what one would have expected to see within ED one can model the shift in care from here and see how this affects both activity and costs.

### 2.2 Activity baseline data sources

It is anticipated that LHEs will have access to baseline activity data by point of care to enable them to capture the baseline costs. Nationally we have used Reference Costs data, Hospital Episode Statistics, 111 Minimum Dataset, AmbSys, and the Mental Health and Learning Disabilities Minimum Data Set, as well as data directly obtained from providers and commissioners. See the appendix for links to where more information about these (and other data sources referred to in this document) can be found.

Many of these ought to be available at LHE level and reflect the particular situation of that LHE. In addition Secondary Uses Services (SUS) and Service Level Agreement Monitoring (SLAM) data may help LHEs in assessing their local level of activity and may do so with more recent data.

### 2.3 Unit cost baseline data sources

In building up the national picture of the baseline unit costs of health care we have used mean national costs in the main for obvious reasons. We anticipate that these costs would vary locally.

Our focus nationally has been in modelling the costs of providing the various services and as such the unit costs are those that are borne by the providers rather

than those which are paid by the commissioner. This way we are able to understand the true system cost and similarly LHEs in following this approach can best understand what the UEC system costs in their locality (rather than what is paid for that system – which may be a different amount).

We have used publicly available data from Reference Costs, Programme Budgeting, the Investment in General Practice Report, and the Personal Social Services Research Unit (PSSRU) Unit costs of Health and Social Care, as well as cost data directly from providers and commissioners.

We anticipate that LHEs will be able to inform much of their unit cost assumptions from their local contracts with providers. Note also that national unit cost data sources may need to be modified for local circumstances. (For example the Reference Costs data provide mean national unit costs but the amount paid locally will be a function of the tariff rate modified by the Market Forces Factor.)

Over the long-term total cost should equal activity multiplied by unit cost, and so while LHEs may not be able to obtain all three sets of data from contracts or other data sources any two of the three ought to enable one to infer the third. Where it is possible to obtain all three sets of data one can triangulate the data and improve accuracy.

## **2.4 Activity pressure**

When modelling nationally we have split the activity growth sources into demographic and non-demographic.

Demographic growth arises from pressures due to changes in the demography of the population (principally the age profile).

Non-demographic growth is due to all other pressures which affect activity but which are not demographic (e.g. rising expectations of healthcare, increased ability to treat conditions and changes in prevalence of condition outside what one would expect from demographic changes alone).

### **2.4.1 Demographic activity pressure**

The baseline demographic data and forecast demographic data which we used nationally were from the Office for National Statistics. We have combined these with age-activity profiles (which give the relative weightings of the amount of activity one would expect by age group). The demographic forecast together with the age-activity profiles enables one to form a prediction of the future demographic activity growth.

We present the age-activity profiles at the appendix to this document but you may wish to use locally informed versions. The Public Health Strategic Needs Assessment for a locality may also be a useful source of data for demographic growth.

### **2.4.2 Non-demographic activity pressure**

We have calculated non-demographic activity growth by comparing activity growth in the past with the growth one would have expected solely as a result of demographic pressure – taking non-demographic pressure to be the difference between the two. Thus:

Non-demographic Activity Growth = Total Activity Growth – Demographic Activity Growth

## 2.5 Unit cost growth

When modelling nationally expected cost growth we have split provider costs between pay, drugs and other costs in general, and have used national assumptions about each. We then combine this with an estimate of the proportion of each point of care's costs which are made up of the three types and calculate overall cost growth rates for a point of care.

In general these cost growth rates are derived from the expected GDP deflator (being the preferred inflation measure used) but with modifications where further future pressure or reduction is likely because of extraneous factors.

We would expect that LHEs will also want to reflect the anticipated provider efficiencies within their unit costs.

## 3 Do-something methodology

### 3.1 General considerations

#### 3.1.1 Local variation

We expect LHE modelling of the impact of potential interventions to vary markedly from the national modelling because of variations in demography, geography, deprivation, current service configuration etc. between LHEs. (Public Health England are a source of data which may help LHEs with this analysis, we provide a link at the appendix.)

We present here some general considerations that are applicable to each intervention.

#### 3.1.2 Provider cost vs commissioner price

In our national modelling we made the assumption that the provider unit cost (including appropriate overheads) is the price paid by the commissioner. In practice one would expect the price paid and the unit cost to come apart for many reasons, but in the long-term and on average across the UEC system that unit cost ought to be the closest proxy to the sustainable price.

Pricing arrangements where the provider does not get paid on an activity basis provide an example where price and cost might diverge. If analysed based on commissioner unit price paid these contracts would look to be cheaper at higher activity levels but the lower unit costs may be unsustainable in the long-term for the provider and thus the unit cost of provision would be a more useful measure.

### **3.1.3 Double running / cost before activity**

We have made assumptions at a national level about the length of time it would take to bring a new service on line, this will vary by LHE. There may with some interventions be a lag between the new service being set up and the use in that service by patients increasing. We have sought to reflect this impact nationally and again LHEs should use their experience on service uptake in their locality to reflect this in their modelling – bringing on cost increases and activity shifts at different rates as appropriate.

The length of time and extent to which an intervention can be brought on line will also be influenced by resource constraints – for example constraints on the availability of particular types of clinician within a locality. This ought to be reflected in the modelling and LHEs ought to have already an understanding of those areas where resource constraints are likely to have an impact on the ability to fully roll out an intervention (or similarly where there might be further costs incurred in enabling a full roll out to overcome resource difficulties).

Health Education England and its Local Education and Training Boards may be a further source of information on local resource constraints and predicted future clinician availability.

### **3.1.4 Case mix implications**

The impact of changing case-mix ought to be factored in when estimating unit costs of future interventions. Frequently data sources on costs will provide mean unit costs across a wide range of presentations but an intervention may only affect one end of that range and thus it would be inappropriate to use the mean cost. For example, co-locating an Urgent Care Centre (UCC) with an Emergency Department (ED) might shift activity from the latter to the former but the activity shifted might be such that it costs less than the mean ED attendance but more than the mean UCC attendance.

We present below considerations and assumptions particular to specific UEC interventions that a LHE may wish to enact.

## **3.2 Decreasing Ambulance conveyances to Emergency**

### **Departments**

Intervention to increase the use of See and Treat and Hear and Treat while decreasing the number of ambulance conveyances to ED.

When understanding the impact nationally of a greater shift to See and Treat and Hear and Treat we have considered the following assumptions which will need to be made at a local level:

Modelling assumptions:

- Numbers of workforce which require additional training and resultant one-off and ongoing training costs

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- Increased ongoing staff costs for those with enhanced training
- Movement in activity from See and Treat/Convey to Hear and Treat
- Movement in activity from See and Convey to See and Treat
- Change in average unit costs associated with changes in disposition
- Decrease in ED attendances and admissions
- Changes in UCC attendances
- Change in Primary and Community Care costs from patients who would otherwise have been conveyed to ED

### 3.3 Personalised Care Planning

General Practice produced personalised care plans (PCP) for those patients who would benefit the most from this – with potential for care closer to home due to fewer ambulance conveyances and ED attendances and admissions.

Modelling assumptions:

- Numbers of patients to have a PCP
- Initial mean time for drawing up of PCP and type of clinician who will do this
- Average ongoing time associated with updating PCPs
- Estimated new PCPs per year
- Hourly costs of clinicians with overheads of drawing up and updating PCPs
- Estimate of mean ambulance conveyances avoided per year
- Estimate of mean ED attendances avoided
- Estimate of mean ED admissions avoided
- Estimate of multidisciplinary team meeting costs where these are held for patients that benefit from this

### 3.4 Minor Ailments Service (MAS)

The ability for pharmacists at Community Pharmacies to prescribe to those who do not pay for prescriptions for minor ailments without the need for a prescription from General Practice or elsewhere.

Modelling assumptions:

- Estimated number of people who will take up the service who would otherwise have sought GP or UCC appointments
- The saved cost of those GP or UCC appointments
- Estimated cost paid to pharmacist per MAS consultation over and above normal drug costs (assuming that drug costs remain the same as those that would have been prescribed had the patient received their prescription via their GP/UCC)
- Estimated number of people who would have bought drugs over the counter but who instead make use of the MAS

- Consultation costs of these
- Drug reimbursement costs for those who would otherwise have bought drugs over the counter
- Estimated one-off set-up costs

### **3.5 Co-location of Urgent Care Centres (UCCs) with Emergency Departments (EDs)**

Having an Urgent Care Centre located at the same site as an Emergency Department, possibly with a shared triage facility and the ability to refer between the two.

Modelling assumptions:

- Set-up costs – including any decommissioning costs if other UCCs are closed
- Increase in UCC running costs across LHE if no other UCCs are closed
- Effect on UCC running costs and overheads of co-locating with an ED (any economies of scale?)
- Expected numbers of patients who would have attended the ED which will instead attend the co-located UCC
- Price differential (if any) in treating patients at the co-located UCC rather than ED
- Ability to disinvest from co-located ED if there is a predicted decrease in activity

### **3.6 Enhanced Urgent Care Centre Standards**

Increasing opening hours of UCCs and potential changes to clinical and operational models.

Modelling assumptions:

- Increase in running costs over current hours and clinical model
- Degree to which activity will move to UCC from other points of care
- Costs saved at other points of care (to include Community Pharmacy, 111, ED, GP)
- Expected supply induced demand (new patients who would otherwise have self-cared)
- Capital costs associated with changes to facilities

### **3.7 Increased use of Summary Care Records**

Ability of clinicians at more/all points of care to access Summary Care Records (SCRs) and inform their clinical decisions accordingly.

Modelling assumptions:

- IT costs at sites which will be able to access SCRs – both one-off and ongoing
- Training costs for staff to be able to use new systems – both one-off and ongoing
- Increases/decreases in activity at all points of care as a result of greater use of SCRs (e.g. estimate of change in number of ambulance conveyances and consequent ED attendances in preference for Hear and Treat or Community or Primary Care referral)
- Impact on unit cost of treatment at all points of care as a result of any changes in treatment time and choice which might arise because of greater use of SCRs.

### **3.8 Extended General Practice opening hours**

If trying to understand the impact of extending the opening hours of some General Practices during the weekday and at weekends one must form an expectation of the numbers of patients who would have accessed other points of care during the extended opening hours but will instead now access their GP.

Because access to health care services is not uniform across different times of the day and the week it is necessary to understand the numbers of people who access points of care during the extended GP opening hours. Nationally we used HES data for ED and UCC attendances, but these will want to be understood at an LHE level due to potential variations from the national trend.

To obtain information on other points of care may require consultation with providers in order to understand the pattern of presentations throughout the week.

Modelling assumptions:

- Numbers of surgeries open during extended hours and extent of opening hours
- Staff mix and numbers during extended opening hours with resultant staff costs (including any anti-social hours premium)
- Additional estates costs incurred
- Disaggregated by point of care – the proportion of patients who would visit their GP in preference to that point of care were their GP to be open
- Numbers of patients at each point of care during extended hours (see narrative above for further on this)
- Unit costs at points of care from where activity moves to extended hours GPs
- New demand from those who would otherwise have self-cared and not accessed any point of care were it not for the extended GP opening hours.

(Note where there is new capacity in the system this may not present an additional cost.)

- Increased referrals (if any) from the new demand noted above.

### 3.9 Improving referral pathways

All registered health and social care professionals, following telephone consultation or clinical review of a patient, should be empowered to make direct referrals and/or appointments for patients at:

- The patient's registered general practice or corresponding out of hours (OOH) service;
- Urgent Care Centres, and;
- Accident and Emergency departments in Emergency Centres and Specialist Emergency Centres.

Modelling assumptions:

- Changes in numbers referred to each point of care
- Unit cost at each point of care for each of those points of care where patients would have been treated were it not for the improved referral pathways
- Unit costs at each point of care where patients would be treated under the improved referral pathways
- Estimate of increases or decreases in unit costs at point of care where referral takes place (e.g. does it take less time to make a referral and hence lower salary costs associated with each treatment)

## 4 Overall outputs

The above section on do-something modelling notes general considerations when modelling individual interventions together with specific assumptions that will need to be formulated for individual interventions. Here we present the further considerations one may wish to make when combining the outputs of individual models.

### 4.1 Avoiding double-counting and realising synergies

Because interventions do not have neat boundaries it will be the case that some interventions affect overlapping subsets of patients. Thus when one seeks to compound the effect of all the interventions it is important to avoid double-counting the impact. E.g. if activity is moved from the Emergency Department to General Practice through extending General Practice opening hours that same activity cannot then be moved to a co-located UCC from the Emergency Department.

Conversely some interventions when enacted together may have a positive synergistic financial effect – the compounded financial impact being greater than the sum of the interventions' impacts when enacted in isolation. E.g. if there is increased use of Personalised Care Planning at the same time as improved patient pathways there might be more people referred to an appropriate point of care closer to their home than would be the case from the sum of either taken on its own.



## 4.2 Outputs

Because the commissioning route differs across points of care (e.g. the commissioner for Primary Care may differ from the commissioner for Acute Care), we have sought to understand nationally what the impact is by point of care both in terms of activity and financially.

This will be crucial in understanding whether disinvestment is needed at one point of care (or differently whether the amount of planned increased investment will be lower). And then how this disinvestment might be effected in order to justify any investment elsewhere.

The relevant comparison in all cases will be the projected cost/activity by point of care compared against what one would expect if the clinical and operational models were to remain as they are but with the cost and activity pressures applied. I.e. the relevant comparison is the do-something model compared to the do-nothing model (rather than compared to the baseline).

## 4.3 Sensitivity analysis

Invariably a number of estimates of appropriate assumptions will need to be made when conducting the financial modelling and some of these assumptions may be key drivers of the final output of the modelling.

For this reason we recommend producing a sensitivity analysis against these key drivers and key areas of uncertainty in the modelling. This sensitivity analysis should highlight how the outputs will vary with given changes in assumptions and ideally include a range that the values of the assumptions could take.

## 5 Appendix 1 – financial modelling data and data sources

### 5.1 Age-cost curves

The growth or decline in activity at a point of care in a locality depends not just on the change in overall population but rather the change in population within specific age/sex bands within the local population and the relative amount of that type of care that someone within that age/sex band would be expected to use.

We provide below estimated national age-cost curves – these provide relative weightings for each age/sex band with respect to the amount someone in that age/sex band is likely to cost the type of service in question. It is important to note that the absolute numbers below are not what are of importance, instead these numbers show the relative weight of one age/sex band to another.

E.g. if the value for males age 0 to 4 is 0.2 and the value for females age 15 to 19 is 0.5 for a particular type of care then this would mean a female aged 15 to 19 on average would be expected to give rise to a cost at that point care of 2.5 times as much as a male aged 0 to 4 (since  $0.5/0.2 = 2.5$ ).

Thus to calculate the demographic activity pressure in a year (say 15/16) one needs the 14/15 year population estimate by age/sex and the 15/16 population estimate by age/sex together with the appropriate index from below (for example mental health). Then one calculates the sum of the products of the population in 14/15 and the relevant figure in the index (e.g. if there were 2,000 0 to 4 males, and 3,000 5 to 9 males in an LHE then one would sum  $0.001*2,000$  and  $0.253*3,000$  and so on for the rest of the age/sex categories), and then one calculates the similar sum of products for the 15/16 population.

The 15/16 sum divided by the 14/15 sum gives a multiplier which will be greater than 1 if the demographic pressure in 15/16 is positive and less than one if the pressure is negative. To arrive at a percentage growth/contraction one subtracts 1 from this multiplier and expresses the result as a percentage (e.g. if the multiplier were 1.02 then this would be a 2% growth).

The tables below are age-cost curves and not age-activity curves, (i.e. they show the relative weightings of cost by age rather than activity by age). These will in general be appropriate to use for calculating demographic activity pressures since LHEs will be using the resultant pressures in conjunction with mean unit costs.

There is not an age-cost curve for every point of care due to availability of data and so an assessment of the most appropriate age-cost curve to use will need to be made for some interventions.

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**5.1.1 Age-cost curves (male) (as at December 2014)**

N.B. Male and female cost-curves should be used together – relative indices apply across both sexes.

5-year age sex bands	Age-cost curves			
	General & Acute	Mental health	Primary care prescribing	Primary care
Male 0 to 4	0.118	0.001	0.047	0.449
Male 5 to 9	0.078	0.253	0.052	0.113
Male 10 to 14	0.085	0.253	0.052	0.113
Male 15 to 19	0.082	0.244	0.066	0.115
Male 20 to 24	0.077	0.554	0.066	0.115
Male 25 to 29	0.074	0.714	0.085	0.115
Male 30 to 34	0.077	0.730	0.085	0.115
Male 35 to 39	0.089	0.737	0.137	0.115
Male 40 to 44	0.107	0.682	0.137	0.115
Male 45 to 49	0.132	0.606	0.232	0.244
Male 50 to 54	0.163	0.525	0.232	0.244
Male 55 to 59	0.217	0.457	0.436	0.244
Male 60 to 64	0.287	0.425	0.436	0.244
Male 65 to 69	0.379	0.452	0.754	0.478
Male 70 to 74	0.500	0.532	0.754	0.478
Male 75 to 79	0.642	0.730	1.000	0.679
Male 80 to 84	0.787	0.904	1.000	0.679
Male 85+	1.000	0.877	1.000	0.816

**5.1.2 Age-cost curves (female) (as at December 2014)**

N.B. Male and female cost-curves should be used together – relative indices apply across both sexes.

5-year age sex bands	Age-cost curves			
	General & Acute	Mental health	Primary care prescribing	Primary care
Female 0 to 4	0.096	0.001	0.038	0.411
Female 5 to 9	0.066	0.253	0.047	0.118
Female 10 to 14	0.073	0.253	0.047	0.118
Female 15 to 19	0.094	0.208	0.095	0.249
Female 20 to 24	0.099	0.327	0.095	0.249
Female 25 to 29	0.107	0.430	0.133	0.249
Female 30 to 34	0.117	0.478	0.133	0.249
Female 35 to 39	0.136	0.511	0.190	0.249
Female 40 to 44	0.156	0.511	0.190	0.249
Female 45 to 49	0.177	0.531	0.289	0.381
Female 50 to 54	0.207	0.478	0.289	0.381
Female 55 to 59	0.237	0.456	0.455	0.381
Female 60 to 64	0.282	0.429	0.455	0.381
Female 65 to 69	0.353	0.487	0.687	0.559
Female 70 to 74	0.442	0.630	0.687	0.559
Female 75 to 79	0.562	0.841	0.877	0.785
Female 80 to 84	0.691	1.000	0.877	0.785
Female 85+	0.865	0.926	0.877	1.000

## 5.2 Data sources

### 5.2.1 Ambulance data

Ambsys and other data on Ambulance activity are available here: <http://www.england.nhs.uk/statistics/statistical-work-areas/ambulance-quality-indicators/>

### 5.2.2 GDP deflator

HM Treasury's GDP deflators for use in estimating unit cost growth: <https://www.gov.uk/government/collections/gdp-deflators-at-market-prices-and-money-gdp#history>

### 5.2.3 Mental Health and Learning Disabilities Data Set (MHLDS)

The Health and Social Care Centre's (HSCIC) MHLDS provides attendance data for a range of mental health and learning disabilities services: <http://www.hscic.gov.uk/mhldds>

### 5.2.4 NHS111 Minimum Data Set

For information on NHS111 activity: <http://www.england.nhs.uk/statistics/category/statistics/nhs-111-statistics/>

### 5.2.5 Office for National Statistics (ONS)

The ONS collate and produce demographic data and report this here: <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Population+Change>

### 5.2.6 Investment in General Practice Report

Produced by HSCIC this report is a source of cost data with respect to General Practice: <http://www.hscic.gov.uk/catalogue/PUB14900>

### 5.2.7 Programme Budgeting data

NHS England publishes Programme Budgeting data across whole-care pathways, this may be a source of data for calculating unit costs: <http://www.england.nhs.uk/resources/resources-for-ccgs/prog-budgeting/>

### **5.2.8 Personal Social Services Research Unit (PSSRU) Unit Costs of Health and Social Care**

The PSSRU publish the unit costs of health and social care report annually and this will be a source of information on unit costs:

<http://www.pssru.ac.uk/project-pages/unit-costs/2014/>

### **5.2.9 Public Health England**

Public Health England produces sets of data at a local level on health profiles, health inequalities and disease prevalence among other data: [http://datagateway.phe.org.uk/?lk\\_sr=govphe](http://datagateway.phe.org.uk/?lk_sr=govphe)

### **5.2.10 Reference Costs**

The annually published Reference Costs, collated by the Department of Health, provide data on both activity and costs:

<https://www.gov.uk/government/collections/nhs-reference-costs>

## 6 Appendix 2 -Benefits of Interventions Proposed by the Urgent and Emergency care review

### 6.1 Introduction

*It is important that these non-monetised benefits are considered alongside the financial impacts*

The financial model allows Health Economies to assess the impact of each of the interventions included in the UEC review. This is calculated using the expected benefits of the interventions that result in cost savings.

However it has not been possible to monetise all benefits. Benefits we have not been able to monetise have been evidenced and summarised in this annex. It is important that these non-monetised benefits are considered alongside the financial impact modelled to assess the overall cost effectiveness of interventions and the programme as a whole.

The review recommends the following interventions:

- Decreasing Ambulance conveyances to Emergency Departments
- Personalised Care Planning
- Minor Ailments Scheme
- Extended Access to General Practice
- Urgent Care Centre Standards
- Co-located Urgent Care Centres with Emergency Departments
- Summary Care Records
- Urgent Care Networks
- Improving referral Pathways

It is understood that there is a continuum in the quality of evidence underpinning the non-monetised benefits of the interventions recommended by the review.

### 6.2 Decreasing Ambulance conveyances to Emergency Departments

*Enhanced Ambulance See and Teat and Hear and Treat could improve satisfaction and quality of life for patients*

There is little formal evidence about the benefits of these interventions, in general they should deliver care that is:

- More convenient for patients and closer to home whenever it is safe and appropriate to do so.
- This should reduce pressure on A&E departments and acute hospitals which will lessen overcrowding.
- This in turn should improve both the outcome and experience for those who genuinely need hospital care.

In addition general consensus amongst stakeholders suggests the following additional benefits:

- Improved job satisfaction for paramedics by only attending calls which genuinely need their attention and providing alternative work options via the clinical hub. This could have a positive impact on the ability to recruit and retain staff.
- Improved satisfaction and quality of life for patients through treatment outside of hospital which is closer to home and reducing risks of admission to hospital.
- Less likelihood of accidents involving ambulances if there is less transportation of patients reducing potential injuries and other impacts.

### 6.3 Personalised Care Planning

A recent Cochrane Review<sup>1</sup> of the evidence around care planning for long term conditions concluded that personalised care planning is a promising approach that offers the potential to provide effective help to patients, leading to better health outcomes.

From the review of 19 randomised trials it was found personalised care planning probably led to small improvements in some indicators of physical health including:

- better blood glucose levels
- lower blood pressure measurements among people with diabetes
- control of asthma
- reduced symptoms of depression
- improved people's confidence and skills to manage their health

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<sup>1</sup> <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010523.pub2/abstract;jsessionid=84DA2631970E174CF0BBFB241E316382.f03t02>



Personalised care planning was found to have no effect on cholesterol, body mass index or quality of life. However the review found no evidence of any harms arising from personalised care planning.

The study also concluded that personalised care planning worked best when it included preparation, record-sharing, care co-ordination and review, involved more intensive support from health professionals, and was integrated into routine care

## **6.4 Minor Ailments Service**

### ***Minor ailment schemes appear to reduce GP consultations and GP prescribing for minor ailments***

There is good quality evidence on the benefits of provision of minor ailment services. A systematic review of the evidence on minor ailment schemes suggests the service leads to reduced GP consultations and GP prescribing for minor ailments<sup>2</sup>. However in some studies the total number of consultations for all ailments remained the same. The impact of these schemes on overall workload requires further investigation.

If the minor ailments service leads to reduced GP attendances this in theory will create additional capacity in general practice to treat people with more complex conditions with the potential to improve health outcomes for this group.

Many evaluations looked at satisfaction with these services which was high and comparable to GP consultations for similar ailments.

In theory the service will save patient time and may be more convenient than attending a GP practice.

There is little evidence on the health outcomes that result from minor ailments services. However, reconsultation rates suggest health outcomes from a minor ailments service are comparable to usual GP care.

## **6.5 Co-located Urgent Care Centres with Emergency Departments**

### ***Opportunity for education that may modify future behaviours and system utilisation***

There is little formal evidence about the benefits of this intervention, but the evaluations from areas where co-located UEC centres have been implemented suggest benefits in the following areas:

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2 Paudyal, Vibhu, et al. "Are pharmacy-based Minor Ailment Schemes a substitute for other service providers? A systematic review." *British Journal of General Practice* 63.612 (2013): e472-e481.

- There is evidence that many attendances at EDs could be dealt with in the community<sup>3</sup>. If people are able to access services appropriate to their needs in a UCC rather than being treated in an ED, this would relieve pressure on EDs<sup>4</sup>.
- Access to services for less urgent cases in a UCC may be more timely than in an ED, resulting in saved patient time and improved experience.
- Streaming of suitable patients attending the ED to a co-located UCC provides an opportunity for education that may modify future behaviours and system utilisation, with an emphasis on prevention and primary care.

## 6.6 Enhanced Urgent Care Centre Standards

### *People access a local service that is more responsive to individual needs and circumstances*

There is little formal evidence about the benefits of this intervention, but feedback collected from stakeholders of the review suggests potential benefits in the following areas:

- 1) People are able to access appropriate services closer to home for more of the time. This would result in the benefits of:
  - Saved patient time
  - Reduced travel distance and inconvenience
  - Improved patient experience as a result of accessing a local service that is more responsive to individual needs and circumstances

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<sup>3</sup> Why do patients with minor or moderate conditions that could be managed in other settings attend the emergency department? Penson et al 2011

<sup>4</sup> How we reduced emergency admissions through an urgent care centre. (<http://www.pulsetoday.co.uk/how-we-reduced-emergency-admissions-through-an-urgent-care-centre/20004077.article#.VBIXO6HTW1s>)

- 2) If the understanding of the public of UCCs improves additional capacity provided by the UCCs may relieve pressure elsewhere in the system. This would result in the following:
  - Avoiding a proportion of emergency department visits – although there is no strong evidence that this would be cost saving.
  - Benefits to patients in primary care and emergency departments from more timely access to these services.
- 3) There is a risk that the enhancement of services in UCCs may create additional demand.

## 6.7 Increased use of Summary care records

### *Enables more informed clinical and treatment decisions*

Use of the summary care records (SCR) has demonstrated a number of efficiency savings in addition to significant safety improvements. Current data demonstrate that use of the SCR can avoid an adverse drug event in 1 in 42 patients<sup>5</sup>, which leads to an average of 8.5 additional days in hospital<sup>6</sup> valued at £273 a day<sup>7</sup>.

There are other qualitative benefits associated with use of the SCR:

- Improved decision making with 93% of respondents<sup>8</sup> agreeing that using the SCR enabled them to make more informed clinical and treatment decisions.
- Improved patient experience: increased patient satisfaction as their information is available to clinicians; increased patient confidence in clinicians and the NHS by providing joined up care across care settings and increased support for people with communication difficulties.

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5 Summary Care Record Hospital Audit 2013-2014, , sample size 918

6 Vincent C et al, Adverse events in British hospitals: preliminary retrospective record review. British Medical Journal, 2001; 322:517–519

7 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/261154/nhs\\_reference\\_costs\\_2012-13\\_acc.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/261154/nhs_reference_costs_2012-13_acc.pdf)

8 SCR Benefits Questionnaire Report September 2014, sample size 333

- A recent questionnaire revealed that 73% of clinical users agreed that use of the SCR improved patient experience<sup>4</sup>. Work is underway to capture feedback directly from patients.

## 6.8 Extended Access to General Practice

### ***General practices that provide more timely access to primary care have fewer self-referred discharged ED visits per registered patient***

Access to primary care is a well-evidenced driver of visits to emergency departments<sup>9</sup>. For example in a population-based analysis of patients registered with 7,856 general practices in England it was found that General practices providing more timely access to primary care had fewer self-referred discharged ED visits per registered patient (for the most accessible quintile of practices, RR = 0.898; P<0.001)<sup>10</sup>.

Additionally, the Royal College for Emergency Medicine suggest that 15% of A&E attendances (over 2.5 million) are inappropriate and could have been dealt with in primary care. There is little formal evidence about the patient benefits of increased access to primary care through longer opening hours; however, it is expected that people would be able to access appropriate services closer to home for more of the time. This would also result in the benefits of:

- Saved patient time
- Reduced travel distance and inconvenience
- Improved patient experience as a result of accessing a local service that is more responsive to individual needs and circumstances.
- Meeting unmet need – some people may not access services at all when a GP is not available.

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<sup>9</sup> Huntley, Alyson, et al. "Which features of primary care affect unscheduled secondary care use? A systematic review." *BMJ open* 4.5 (2014): e004746.

<sup>10</sup> Cowling, Thomas E., et al. "Access to primary care and visits to emergency departments in England: a cross-sectional, population-based study." *PloS one* 8.6 (2013): e66699.

Also if people are able to access services appropriate to their needs in primary care rather than being treated in an ED, this would relieve pressure on EDs.

## **6.9 Improving referral pathways**

***Improving referral pathways could avoid unnecessary and inappropriate delays to definitive care.***

The review proposes that registered health and social care professionals be able to make direct referrals and/or appointments for patients at:

1. The patient's registered general practice or corresponding out of hours (OOH) service;
2. Urgent Care Centres, and;
3. Accident and Emergency departments in Emergency Centres and Specialist Emergency Centres.

There is little formal evidence on the benefits of improved referral pathways, however Guidance on improved referral pathways for improving referral pathways will be published soon. This will include information on the system and patient level benefits of improving referral pathways. Generally it is thought that such pathways could avoid unnecessary delay to definitive care and the duplication of assessments.