From: [redacted]
Sent: 05 March 2018 11:21:06
To: Public Engagement Unit
Cc: Minister for Community Safety and Legal Affairs
Subject: FW: Letter from the NJC for Local Authority Fire and Rescue Services

Attachments: Jt Secs to fire minister Scotland - final 2 mar 18.pdf, EMR CBA Executive Summary (final).pdf, EMR CBA Technical Report (final).pdf, EMR CBA Discussion Paper - Annex A.pdf

Hi,

Please add the attached correspondence to the MACCS system and allocate to the appropriate officials.

Thanks

[redacted]

From: [redacted]
Sent: 05 March 2018 11:14
To: Cabinet Secretary for Justice; Minister for Community Safety and Legal Affairs
[redacted]
Subject: Letter from the NJC for Local Authority Fire and Rescue Services

Good morning,

Please find attached a letter from the NJC for Local Authority Fire and Rescue Services.

Best wishes,

[redacted]

[redacted]

[What_it_takes]
cLXYDJOxDN3FBFio10dTJNpz> more about this exciting event

[#gettingthebest]<https://www.local.gov.uk/about/campaigns/bright-futures>

[redacted]

NATIONAL JOINT COUNCIL FOR LOCAL AUTHORITY FIRE AND RESCUE SERVICES

Mr Michael Matheson MSP
Cabinet Secretary for Justice
The Scottish Government
St Andrew's House
Regent Road
Edinburgh
EH1 3DG

5 March 2018

Dear Cabinet Secretary,

BROADENING THE ROLE OF FIREFIGHTERS

We have previously written to your predecessors to keep them informed of discussions taking place through the National Joint Council on the potential to broaden the role of firefighters. We believe that our shared aspiration to achieve such changes to the role is shared also by the Scottish Government.

The areas covered in the discussions have been:

- Emergency Medical Responses (EMR) - Mobilisation of appropriately trained and equipped Fire and Rescue Service (FRS) employees to emergency medical incidents in collaboration with other partners e.g. the ambulance service in the case of cardiac arrests to impact upon the delivery of EMR to members of the community. In addition, FRS employees could affect an entry to premises to assist NHS and local authority staff (e.g. social workers checking vulnerable clients)
- Multi Agency Responses - Response to terrorist activity (which includes firearms activity) within the warm zone, dealing with fires and casualty evacuation. Aside from the collaboration indicated under the other areas, examples of other potential activities would include a greater role in searching for missing persons, bariatric assistance, water and cliff rescue.
- Environmental Challenges – Utilising FRSs' reputation, inherent skill base and existing work. This could be broadened to focus more widely upon proactive prevention and recovery rather than the current largely reactive approach of dealing with the incident itself.
- Health and Community – Involvement with initiatives that enhance and support the quality of life of the communities served. FRS employees are a well trusted and respected part of the community and are therefore well placed to get access to people in their homes, which is much more difficult for other organisations (e.g. police). Potential activities would take account of a broad range of initiatives within a make every contact/opportunity count approach

- Inspection and Enforcement – Recognising that over the years there have been differing expectations of the fire and rescue service, and mindful of the current debate around a robust regulatory system and assurance to residents that the buildings they live in are safe and remain safe, this area would ensure that from an employment contract perspective the fire and rescue service is well placed to take forward the expected greater level of involvement in the areas of inspections and enforcement.

Some of the activities will be new. Some of the activities above may have been carried out on a voluntary basis by some employees. The purpose of the negotiations is an agreement that would give clarity that such activities were part of the core role. This would give all services access to the wider pool of employees and greater clarity in how they could deploy staff.

Within the NJC, both employers and trade unions are clear that approaches to broaden the roles of employees need to be based on sustainable funding that is not to the detriment of existing core activities. In that context we are raising this matter again with other Ministers across the UK with responsibility for the Fire Service as well as putting in place events to inform politicians of the extent of discussion and the UK-wide cost benefit analysis undertaken in particular around response to cardiac arrests. A copy of the *New Economy* report commissioned by the NJC is included with this letter. However we understand from the Scottish Fire and Rescue Service that your government has already agreed to fund changes to the service that would include many of the issues highlighted above.

In that context, if you still think that it would be helpful to meet to discuss how the UK-wide work addresses the aspirations for the service in Scotland and/or for a wider event for politicians to be held, we would be happy to do so as soon as possible.

We look forward to hearing from you.

Yours sincerely

[redacted]

cc: Annabelle Ewing, Minister for Community Safety and Legal Affairs

Emergency Medical Response by Fire and Rescue Services

Financial and economic modelling of impact

November 2017
New Economy

new economy

A cost benefit model of emergency medical response by fire and rescue services on a UK-wide footprint, with a specific focus on the impact of cardiac arrest response on long-term health and social care outcomes.

Cost Benefit Analysis & New Economy

New Economy research helps agencies to identify the costs and benefits of new ways of working. We have developed and continue to refine a Cost Benefit Analysis (CBA) model that can be used to estimate the fiscal, economic, and social value of project outcomes, and specify which public agency sees this benefit.

Agencies are using our model to rethink whether activities previously funded and delivered by one agency can be better funded and delivered by partnerships. Topics upon which the model has been applied include support for troubled families, health and social care provision and redesign of the criminal justice system.

New Economy's CBA model has been developed with national experts from HM Treasury and other government departments, and its methodology has been adopted as supplementary guidance within HM Treasury Green Book recommendations on appraisal and evaluation.

Executive Summary

Introduction

Fire and rescue services (FRS) have experienced considerable success in preventing emergency fire incidents over the last decade. Various factors have been recognised as driving this trend – for example societal change, technological improvements, and a concerted focus on risk reduction. There has been recognition by both sides of the NJC that FRS activity in relation to fires, other incidents and public safety needed to be reviewed. In light of the success of their prevention agenda, FRS have been presented with an opportunity to replicate their effective emergency response capability within other operational contexts where services face increasing demand pressures. This potential was also recently recognised in the Policing and Crime Act 2017, which introduced a duty for the police, fire and rescue, and emergency ambulance services to keep opportunities for collaboration under review 'where doing so would improve their efficiency or effectiveness'[1].

Emergency Medical Response (EMR) involves the deployment of FRS operational staff into contexts where they can help protect the health and care of the public. The volume of services deploying staff in EMR conditions has increased greatly over the last few years, largely accelerated by a UK-wide trial instigated by the National Joint Council of Local Authority Fire and Rescue Services (NJC), starting in 2015. A range of EMR offers exist across the UK, and services have differed in their specific focus, but between 2015 and 2017, most FRS have delivered it in one form or another. One of the most common forms of EMR is co-responding. The NJC trials involved a dispatch in parallel with ambulance services, under blue-light conditions, making a particular impact when reducing risk in the event of time critical out-of-hospital cardiac arrests (OHCA). The patient was then transported to hospital by the ambulance service.

In areas where EMR co-responding has been practiced, when a person suffers a suspected cardiac arrest, firefighters are deployed in parallel to the ambulance service under blue-light conditions. Staff from whichever service arrives first immediately begin to provide potentially life-saving treatment before the other arrives. Not only does parallel dispatch therefore facilitate the probability of a timely response; the additional on-scene activity also supports ambulance crews to undertake advanced clinical work while FRS operate in a support capacity.

In early 2017, the University of Hertfordshire delivered 'Broadening Responsibilities', an independent evaluation report commissioned by the NJC which sought to collate the

[1] The National Archive, Policing and Crime Act 2017 (retrieved from www.legislation.gov.uk/uppga/2017/3/contents/enacted)

evidence around EMR activity within the NJC trial, and reflect on its positive impacts. The report identified a strong strategic fit between the rapid intervention capability of firefighters and the circumstances encountered during EMR, suggesting a wider opportunity to involve firefighters in an expanded range of medical response work. One of the report's key findings was that: "appropriately trained and equipped firefighters co-responding to targeted, specific time-critical medical events, such as cardiac arrest, can improve patient survival rates"[2]. It used some of the conventions of health economics to express the 'value' of EMR in terms of its life-saving potential / quality-adjusted life years (QALY) gained by beneficiaries. The authors concluded, based on the available evidence, that the benefits demonstrated in the trial outweighed the costs.

This Executive Summary provides a high-level overview of work undertaken by New Economy between June and October 2017 to build on the work detailed in 'Broadening Responsibilities', with a specific focus on Cost Benefit Analysis (CBA). New Economy was approached to undertake this work because the NJC was keen to develop a financial appraisal of the EMR trials that could: (i) explore in more detail the evidence around benefits of co-responding in the event of OHCA; (ii) take a view on potential benefits of EMR if it were adopted in the standard firefighter role profile; and (iii) weigh up those potential benefits against the full cost implications of a scaled approach.

The remainder of this document will seek to elaborate on the findings of that financial and economic appraisal. As per established New Economy methodology, research involved a synthesis of the best available data, insights from experts, and evidence from academia to develop a clear logic model, based on the 'chain of survival' of a patient following out-of-hospital cardiac arrest

Four main points should be made with regard to the limitations of this analytical exercise:

1. The report hypothesises patient outcomes, in the absence of a longitudinal study of actual case records;
2. The report makes a best – but ultimately estimated – judgement on how much co-responding would take place in a UK-scaled model of EMR, and takes a generalised view of implementation;
3. The report's findings describe the costs and benefits of EMR at the level of the UK, and cannot be disaggregated to the level of individual services;
4. The report's findings include the total costs and total benefits associated with EMR, without reference to the degree to which costs have already been borne by specific services.

More detail is included with regards methodology in the "Research Aims, Methodology and Scope" section of this paper.

[2] University of Hertfordshire, "Broadening Responsibilities", March 2017

Key Findings

Analysis sets out a strong value-for money case for EMR. The indicative benefits to both health and social care partners far outstrip the initial investment required, with an overall financial return on investment of £4.41 per £1 invested, taking a conservative view of the population served. Taken as a very broad average, this equates to a net financial saving of approximately £214 per callout; even accounting for the 79% of co-responding attendances in which it is determined that cardiac arrest has not occurred.

At scale, the intervention is likely to see FRS attend to about 15,000 out-of-hospital cardiac arrests per year (about half of all those seen by ambulance services)[3]. While only 4.3% of cardiac arrest patients are likely to experience a life-altering impact, those that do will be independent and cognitively functional, where before they would have suffered severe, permanent neurological impairment – at sizeable cost to both health and social care partners.

For each individual with new, good cerebral performance, it is broadly estimated that a benefit is created in the order of:

- £24,000 for clinical commissioners as a result of reduced length of stay in intensive care and less costly treatment requirements; and
- £44,500 for social care commissioners as a result of reduced demand for post-cardiac arrest domiciliary care.

Financial Case

Definition of terms: *Financial benefits are the outcomes of an intervention which – depending on context and decisions by stakeholders – can be realised to some degree as a cashable fiscal saving to the public purse. All headline figures quoted in this Executive Summary in respect of financial benefits give an indication of what would be termed the potential fiscal benefits. This is not the actual visible budget impact likely to be experienced by services, but rather a more general expression of the financial savings generated by EMR.*

EMR, when modelled at UK scale, has the potential to create considerable financial benefits over a ten-year time period, and these benefits are estimated to outstrip the projected / estimated costs. The overall financial return on investment (ROI) for the wider public purse is 4.41. This means that for every £1 invested over a ten year period, approximately £4.41 of gross fiscal savings are generated, a proportion of which is likely to be cashable.

[3] British Heart Foundation, March 2017, (retrieved from https://www.bhf.org.uk/news-from-the-bhf/news-archive/2017/march/cardiac-arrest-report)

The financial ROI is calculated based on a comparison of the cumulative costs of rolling out and delivering EMR at UK scale, and the cumulative savings made where outcomes are improved. Economic convention is to apply a 'discount' rate to future costs and benefits, but otherwise the mathematics of the calculation is simply the product of dividing all the benefits by all the costs. The full profile of anticipated costs and benefits over the 10-year modelling period is shown in Figure 1.

Figure 1 – Fiscal Costs and Benefits of EMR

Fiscal Benefit	Financial Year										Net Present Value (NPV)
	Year 1	*Year 2*	*Year 3*	*Year 4*	*Year 5*	*Year 6*	*Year 7*	*Year 8*	*Year 9*	*Year 10*	
Costs	£10.9m	£4.8m	£4.4m	£4.1m	£4.0m	£3.9m	£3.7m	£3.6m	£3.5m	£3.3m	£46.1m
Benefits	£19.6m	£22.6m	£22.8m	£22.0m	£21.2m	£20.4m	£19.7m	£19.0m	£18.4m	£17.7m	£203.4m

Net Present Budget Impact*	- £157.3m
Overall Financial ROI**	4.41
Payback period***	1 Year

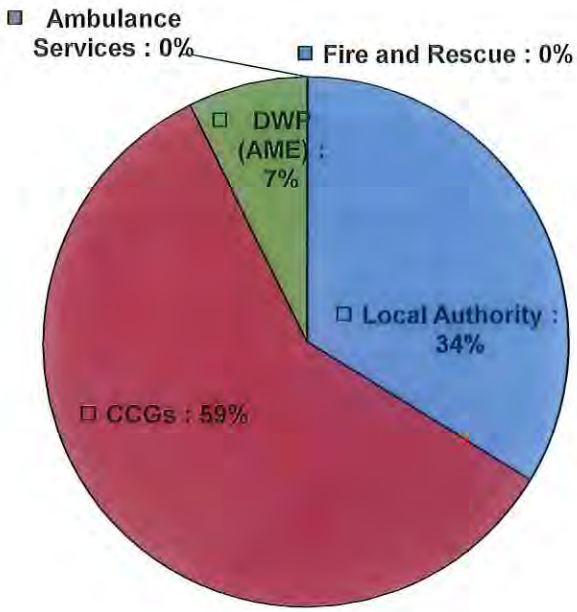
**the degree of additional fiscal benefit created, having accounted for costs.*
***the gain generated by an intervention, relative to the costs invested.*
****the estimated length of time required for an investment to become profitable.*

An alternative way of presenting the financial case is to subtract the cumulative costs from the cumulative benefits. With discounting applied, this provides a figure called the 'Net Present Budget Impact' (effectively an expression of total financial benefits, less total costs). Weighing costs and benefits against one another, EMR's net impact is -£15.7m on public budgets, on average each year – based on an average cost draw of £4.6m and an average cost saving of £20.3m each year. After ten years, it is estimated that EMR will have had a Net Present Budget Impact of -£157.3m. Taken as a very broad average, this equates to a net financial saving of approximately £214 per callout; even accounting for the 79% of co-responding attendances in which it is determined that cardiac arrest has not occurred.

The payback period for return on investment is 1 year, meaning that in the first year, EMR is projected to generate benefits greater than the cost of implementation. This is a reflection of the intensive support cardiac arrest patients require on admission, as well as the immediacy of support required post-discharge; in averting these system costs, the benefits are modelled to accrue quickly once EMR begins.

Value is chiefly created for clinical commissioners and social care commissioners, with ambulance services and fire and rescue services only projected to be secondary beneficiaries. It has been assumed that Clinical Commissioning Groups (CCGs) are broadly responsible for most clinical commissioning, and that local authorities (LA) are broadly responsible for most social care commissioning throughout the UK. Where these groups are referenced, they serve as proxies for national health and social care commissioners. The split of gross fiscal savings by agency is represented in Figure 2.

Figure 2 – Gross Fiscal Benefits by Agency



Reference to Fig 1 shows that the costs of implementing EMR across the UK (some of which are already being borne by FRS who have undertaken co-responding) are estimated to amount to an average of approximately £4.6 million per year. Annual costs are projected to peak in the first year at £10.9 million and decline each subsequent year throughout the ten year model, reaching £3.3 million in the tenth year of implementation. Costs are chiefly borne by FRS and ambulance services (where they commission EMR), with some additional costs incurred by social care commissioners; more detail on the split of cost burden by sector is outlined later in this report. Please see Figure 5, at the end of this executive summary, for a visualisation of costs and benefits contained within this model.

Cashability

A natural next step for strategic leads is to give consideration to the degree to which savings are cashable. Cashability is the extent to which fiscal benefits can be realised in the budget of beneficiary agencies, which in turn influences their spending power. Figures presented in this document are pre-cashable fiscal savings. Factors influencing cashability are unique to the contractual and strategic landscape of individual services.

If taking a longer-term view of the cashability of EMR, assuming systemic transformation and large-scale engagement, the return on investment ratio of EMR is 2.90. Based on this analysis, for every £1 invested in EMR, £2.90 of benefit to the public purse is modelled and cashable.

Long-term cashability (sometimes called 'large-scale' cashability) is designed to simulate an achievable, realistic degree of benefits realisation following a more systemic change within local systems, following strategic decisions by commissioners taken over time. Whether through commissioning and procurement decisions, workforce reform or other forms of funding redistribution, most agencies have a general strategic context for cashing a saving. Savings associated with long-term cashability take a broad view of what 'normal' realisation looks like following such engagement. The timing of retrievability for long-term cashable savings is contingent on the timings of engagement.

Figure 3 – Long-term cashable savings of EMR

Long-term cashable benefit	Financial Year										Net Present Value (NPV)
	Year 1	*Year 2*	*Year 3*	*Year 4*	*Year 5*	*Year 6*	*Year 7*	*Year 8*	*Year 9*	*Year 10*	
Costs	£10.9m	£4.8m	£4.4m	£4.1m	£4.0m	£3.9m	£3.7m	£3.6m	£3.5m	£3.3m	£46.1m
Benefits	£11.9m	£14.8m	£15.1m	£14.6m	£14.1m	£13.6m	£13.1m	£12.7m	£12.2m	£11.8m	£133.9m

Net Present Budget Impact*	- £87.7m
Overall Financial ROI**	2.90
Payback period***	1 Year

**the degree of additional fiscal benefit created, having accounted for costs.*
***the gain generated by an intervention, relative to the costs invested.*
****the estimated length of time required for an investment to become profitable.*

Please refer to Figure 3, and the technical discussion paper attached to this summary, for New Economy's indicative calculations on the broad cashability of EMR. Please also see Figure 7, at the end of this executive summary, for a visualisation of New Economy's starting assumptions about the cashability of EMR.

Economic Case

Definition of terms: *Public value benefits refer to the value generated by an intervention as expressed in terms of changes in the wider economy or in wider societal effects. Public value includes:*

- *(i) all fiscal benefits except transfer payments that just move money from one place to another;*
- *(ii) net growth in the local economy; and*
- *(iii) wider social benefits, including gains to society such as improvements to health; educational attainment; safety; etc.*

Public value benefits cannot be attributed to any one agency and do not amount to a pot of potential fiscal savings.

EMR is estimated to create an average public value benefit of approximately £158.9m p.a. over ten years. Almost all (more than 99%) of the public value created by EMR is the result of prevented loss of life. In *Broadening Responsibilities*, the University of Hertfordshire derive the value of a life saved through an analysis of Quality-Adjusted Life Years (QALY) gained. Anticipated survival gains were applied to a set of assumptions made about the average remaining life expectancy of the national trial cohort. A further weighting was applied to recognise the expectation of health-related quality of life (HRQoL) after a cardiac arrest episode where neurological deficits were incurred. This underlying approach has also been used by New Economy[4].

The additional element of public value benefit captured by New Economy is the economic output of an individual, and the resultant benefit to the wider economy. This is monetised through factors such as their participation in the labour market, the tax system and generic public service utilisation. New Economy calculations of economic benefit include an in-built allowance for factors influencing the extent of additional value, such as leakage displacement and substitution.

There are smaller - but in the scheme of this particular model less substantial - public value impacts associated with prevented admissions to residential care, the release of episodic NHS resource where cerebral performance is improved, and long-term relief to central government in terms of employment support.

[4] University of Hertfordshire, 'Broadening Responsibilities: Consideration of the potential to broaden the role of uniformed fire service employees', January 2017

Impact on Services

Fire and Rescue Services

The costs accounted for in this model are based on the average experiences of fire and rescue services in delivering EMR. Due to tremendous variation in preferred local approach, it is unlikely that this model depicts an accurate representation of the experience of any specific service. It is estimated that costs incurred by FRS, if co-responding was delivered at scale, would equate to approximately £3.3m per annum over ten years (though, in fact, the truer representation is that the model predicts an initial investment of £7.8m in the first year, followed by an average recurrent expenditure of £2.8m for each year thereafter). This does not include any additional costs covered by ambulance services or other clinical partners.

This model includes both direct and indirect resourcing of the EMR programme, and accounts for three different elements of cost:

(i) **The value of operational staff resource.** This recognises that, while there is no additional spend incurred while deploying existing whole-time firefighters (and the model accounts for this), there is an inherent value to that operational resource[5]. It also includes an element of expenditure with regards retained firefighters;

(ii) **Additional direct expenditure that is required in order to co-respond.** This chiefly accounts for newly purchased uniforms and equipment, as well inoculations/vaccinations and training[6]; and

(iii) **Associated costs to services that result indirectly as a consequence of co-responding.** Costs which are not an explicit component of the EMR service delivery model, but which are an inherent output of implementation[7]. Some of these are attributable to FRS, and some to social care commissioners.

All FRS in the UK which have delivered co-responding, regardless of involvement of the NJC trial, were given an opportunity to input into a survey of implementation leads and chief fire officers, undertaken throughout September 2017. Estimations of costs and (in-part) benefits were calculated with reference to detailed inputs provided by 42 FRS from across the UK who responded.

[5] Because this involves no additional budgeted expenditure, this is included as an in-kind cost but not reflected in the return on investment or other figures described elsewhere in this document. This cost is described in more detail in the discussion paper attached to this report.

[6] A small number of services have delivered co-responding work for several years, making it difficult to delineate organisational spend which is specifically in service of EMR.

[7] Specifically, additional demand within the wider system is accounted for where it relates to 'new' referrals made for cardiac arrest sufferers into the adult social care system and 'new' members of the workforce referred into counselling as a result of undertaking EMR activity.

Ambulance Services

41% of FRS state that they have received financial support from a partner ambulance service to deliver EMR. Based on the nature of remuneration, which most often takes the form of a contractual arrangement similar to a Payment by Results (PbR) mechanism, it is estimated that there is a cost implication for ambulance services across the UK equating to approximately £1.3m p.a. on EMR (again, a truer reflection of the investment requirement would be £3.1m p.a. for start-up costs in the first year of activity, and recurrent annual costs of £1.1m p.a.).

In the context of a parallel dispatch, the impact of EMR on ambulance services is not to reduce demand. It is possible that in some cases, due to expedited on-scene activity, the duration of total on-scene time may be reduced. This might enable ambulance crews to more quickly attend to other time-critical medical incidents in a timelier fashion.

Clinical Commissioners

The financial benefits of EMR for clinical commissioners arise as a result of NHS savings accrued in the context of acute medical healthcare. The CBA considers those occasions where improved neurological performance in the period immediately following a cardiac arrest translates into different (and less costly) provision of inpatient hospital care. Specifically, an association of EMR response times with cerebral performance outcomes suggests that some out-of-hospital cardiac arrest sufferers achieve cerebral performance outcomes which are both 'new' and 'good'. In this instance, 'new' refers to outcomes which would not have been obtained without the presence of a co-responding FRS, and 'good' refers to 'good-to-moderate' cerebral performance (i.e. CPC1 or CPC2) such that severe neurological deficit is avoided. Where this is the case, duration of stay in hospital and the nature of support in an intensive care setting is partially mitigated. It should be noted that the volume of patients benefitting in this way is relatively small – just 4.3% of cardiac arrests attended. However, the gross saving created per 'new' and 'good' neurological outcome is significant for each individual who does benefit. The gross fiscal saving to clinical commissioners is approximately £12.6m p.a.

The core methodology which supports this is a modelled calculation of the relationship between EMR response times (where an additional responding resource leads to faster response), return of spontaneous circulation (ROSC) prior to arrival at hospital, and cerebral performance outcomes. Published literature in this area provides the basis for the modelling. The level of estimated savings to clinical commissioners have been presented in the model in appropriately conservative terms, in part to reflect this.

A consensus paper jointly published by NHS England, the UK Resuscitation Council and the British Heart Foundation acknowledges and affirms the commonly-referenced statistic that each minute without defibrillation and CPR is likely to reduce a patient's