North East Vanguards Programme: Final Evaluation Report

May 2017
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Executive Summary
Following the publication of the *NHS Five Year Forward View* (5YFV) in 2014 a Vanguard programme was set up by NHS England to test different approaches to fulfilling the Triple Aim with its focus on population health, effective care, and per capita cost. The NHS invited individual organisations and partnerships, including those with the voluntary and community sector, to apply to become pilot sites for the new care models (NCMs) programme. In the North East five Vanguards were selected:

- Newcastle Gateshead (Enhanced Health in Care Homes Vanguard)
- North East Urgent and Emergency Care Network (Urgent and Emergency Care Vanguard)
- Sunderland (Multispeciality Community Providers Vanguard)
- Northumbria Foundation Group (Acute Care Collaboration Vanguard)
- Northumberland (Integrated Primary and Acute Care Systems Vanguard)

This study, which is unique in its focus on region-wide issues to complement the separate individual evaluations being undertaken, explores the regional implementation of the five North East Vanguards. Drawing upon Pettigrew et al.’s1 ‘receptive contexts for change’ framework, it aims to identify key aspects that can be shared across all Vanguard sites in the region. In particular, it provides a mapping of the implementation arrangements in five local Vanguard initiatives, focusing on: (1) the organisational (team working, culture and relationships) (Theme 1), (2) the technological (Theme 2), and (3) the cost effectiveness context (Theme 3).

A mixed-methods design, combining qualitative and quantitative approaches, was employed to provide contextual understanding of the complex mix of organisational, technological and economic factors shaping the implementation of the Vanguards programme. The study was conducted in three stages over an eight month period: (1) in-depth review of local documentation, semi-structured interviews with key stakeholders involved in the implementation of each Vanguard to identify organisational and technological enablers and barriers; (2) economic evaluation; (3) overarching analysis and identification of emerging key messages for shared learning.

A number of important lessons have emerged, and are still emerging, from the implementation of the five North East Vanguards. While the context for each Vanguard is separate and distinct, there also exists a set of common issues and themes which have a regional dimension. First, all five sites recognised that the Vanguards programme provides a significant opportunity for the North East to improve the way services are organised and provided to meet the rapidly changing needs of its population. Second, all five sites acknowledged that the Vanguards provides a platform for regional collaboration, innovation and the sharing of good practice with the potential that this offers to strengthen the scale and pace of change, and to do so in a more cost-effective fashion. Third, all five sites acknowledged that the Vanguards have the potential to contribute to the reconfiguration of inter- and intra-organisational relationships and communications which considered to be

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essential if health and social care organisations are to overcome the traditional silos. Finally, it was acknowledged that the resources provided through each Vanguard helped to raise the awareness of the innovative local initiatives taking place across the North East.

Despite the aforementioned regional strengths and opportunities our findings demonstrate that each Vanguard had different aims and purpose, local arrangements and practices. In all the Vanguards these factors had to be seen against a wider context of significant financial tensions, uncertainty around policy and fundamental questions about the future including the impact of STPs which increasingly dominated the agenda. Our findings suggest that all five Vanguards felt that government targets and an emphasis on performance could hinder progress. Of particular concern among all Vanguards was the sheer scale and pace of change at the same time as the NHS was being tasked with making significant, if unrealistic, efficiency savings.

Adopting an open attitude to change was acknowledged by all five sites as a key enabler for organisational and service transformation, however concerns were raised about managing the uncertainty and risks of change. Although the important role of inter- and intra-organisational collaboration was shared across all five sites, each Vanguard experienced a variety of types of key stakeholder engagement and intra-organisational collaboration. Trust between agencies was considered to be essential as well the need for effective leadership. Multi-disciplinary team working was at the heart of each Vanguard however, it was felt that different structures, governance arrangements and related political agendas across organisations could pose barriers.

Technology and digital innovation was considered across all of the Vanguard sites to be an essential catalyst for organisational and service transformation, but concerns were also expressed that it could too easily be viewed by some as a mere ‘bolt-on’ to existing arrangements. Although each site has some distinctive elements it is also the case that much is shared on a sub-regional and regional basis, especially in the case of application development and inter-operability. There appears to be a considerable degree of innovation and sharing of good or promising practice, most notably in relation to information sharing. Securing funding and other resources, coping with inadequate national guidance and developing high trust networks were key issues across all Vanguards. Moreover, poor interoperability arrangements between systems, a lack of information sharing and data exchanges and concerns over data security and patient/citizen engagement were acknowledged by all Vanguards.

In terms of cost effectiveness analysis the results suggest that impact of the Vanguards across the region on key metrics is mixed. For A&E attendances, the introduction of the Vanguard resulted in cost savings in Newcastle and cost increases in Gateshead compared the counterfactual. These results were reversed costs associated with non-elective admissions, which increased in Newcastle and decreased in Gateshead compared to the counterfactual. There were cost increases relating to outpatient appointments following the introduction of the Vanguard in both localities compared to the counterfactual. Length of stay and associated costs fell in both localities. The introduction of the Vanguard in Sunderland resulted in reductions in non-elective admissions for all age groups and associated cost savings compared to the counterfactual. Additionally the introduction of the Vanguard resulted in
cost savings from reduced 30-day readmissions and reduced length of stay compared to the counterfactual. The PACS Vanguard saw an increase in A&E attendances and non-elective admissions for the Northumberland CCG population, resulting in increased costs following the introduction of the Vanguard. The increase in A&E attendances and non-elective admissions appear to be driven by activity at Northumbria Healthcare NHS FT and not by activity in other NHS providers. Overall, the availability of further data and the anticipation of further analysis of the Vanguards may provide a clearer picture in the future.
Introduction and Background

Following publication of the *NHS Five Year Forward View (5YFV)* a Vanguard programme was set up by NHS England to test different approaches to comply with Triple Aim thinking with its focus on population health, effective patient-centred care, and per capita cost \(^2\). The NHS invited individual organisations and partnerships, including ones with the voluntary and community sector, to apply to become pilot sites for the new care models (NCMs) programme. Overall, 50 Vanguards have been established across England charged with the task of designing and delivering a range of NCMs aimed at tackling deep-seated problems of a type facing all health systems to a greater or lesser degree. They include: managing rising demand on accident and emergency services, keeping people out of hospital, effecting rapid discharge for those no longer in need of acute care, integrating health and social care, reducing silo working, and giving higher priority to prevention. In the North East, five Vanguards became pilot sites for the NCMs programme. They span urgent and emergency care, acute hospital, primary, community and social care services and are:

- Newcastle Gateshead (Enhanced Health in Care Homes Vanguard)
- North East Urgent and Emergency Care Network (Urgent and Emergency Care Vanguard)
- Sunderland (Multispecialty Community Providers Vanguard)
- Northumbria Foundation Group (Acute Care Collaboration Vanguard)
- Northumberland (Integrated Primary and Acute Care Systems Vanguard)

This evaluation was commissioned to explore the regional implementation of the five North East Vanguards. Drawing upon a regional analysis, it aims to identify key aspects that can be shared across all Vanguard sites in the North East and which may be of wider interest to other regions in England.

The report consists of six parts. Part 1 outlines the aims and objectives, the conceptual framework and methodology for the qualitative component of the evaluation. Part 2 presents the analysis of the documentation associated with the North East Vanguards. Part 3 presents the analysis of the qualitative interviews for the organisational theme. Part 4 presents the analysis of the qualitative interviews for the technological theme. Part 5 provides the results from the quantitative analysis and health economics. Finally, Part 6 concludes with a discussion of the key issues that are common across all 5 Vanguards in the region, drawing out any emerging lessons to be learned from the implementation with a view to informing future transformational change underway in the NHS.

Part 1: Aims and objectives, conceptual framework and methods

1.1 Aims and objectives
This study seeks to provide an overarching evaluation of the NCMs programme being implemented through the North East Vanguards. In particular, it maps the implementation arrangements in the five Vanguard initiatives, focusing on: (1) the organisational (team working, culture and relationships) (Theme 1), (2) the technological (Theme 2), and (3) the cost effectiveness context (Theme 3).

In so doing, the objectives of this evaluation are to:

- identify the potential organisational and cultural facilitators and barriers to the implementation of each of the North East Vanguards Programme (Theme 1)

- explore the role and nature of multidisciplinary team (MDT) working in the delivery of each Vanguard’s aims and objectives

- explore the role of technology and digital solutions in the delivery of each Vanguard’s aims and objectives (Theme 2)

- assess the costs and cost-consequences as part of an economic evaluation which will provide information on the sustainability of each programme (Theme 3)

- identify key aspects that can be shared across all Vanguard sites in the region and lessons learnt from the implementation to inform the Northumberland Tyne and Wear and North Durham Sustainability and Transformation Plan (Themes 1, 2, 3).

1.2 Research questions
The research addresses the following questions:

1. What new conceptual understandings have been used to develop NCMs and what theories of change underpin them?

2. What new opportunities have become available with the five North East Vanguard Programmes? What challenges have participating organisations experienced in implementing the Vanguard Programmes and how have these challenges been addressed?

3. To what extent, and in what ways, has digital innovation shaped NCMs’ aspirations and achievements?
4. What impact has each Vanguard had on the efficiency of the local health and care economy?

1.3 Receptive Contexts for Change Framework

In order to make sense of the various changes occurring in the NHS arising from the 5YFV, it is desirable and useful to apply an appropriate conceptual framework. This is especially so in regard to large scale change initiatives occurring in complex settings where there is a need to challenge established mental frames and mindsets, norms, rules, structures, economic interests and social relationships which tend to stabilise, if not ossify, systems. While, paradoxically, there is a need for some freezing of systems and organisations to permit change to flourish and become embedded, at the same time it is essential to avoid rigidities in these systems when there is a commitment to transforming them.

In reviewing the various conceptual frameworks we have opted for Pettigrew et al’s³ ‘receptive contexts for change’ framework for the purposes of structuring the analysis and discussion around transformational change and identifying the enablers and barriers affecting its chances of success or otherwise (see Figure 1). There are several reasons for adopting this particular framework which we consider to be especially well-suited to our purposes.

Figure 1

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First, it addresses the whole health system and in particular the role and importance of context in helping to shape change whereas other frameworks tend to focus on individual leaders and ignore the wider environment and context. Second, the framework is derived from a health systems perspective (i.e. from a study of strategic change in the NHS) rather than a business one in contrast to many other frameworks. Third, the framework offers hope and is more optimistic in its outlook than frameworks which tend to focus on failure and the negative aspects of achieving change. Finally, we believe that the framework offers policy-makers and those responsible for doing the implementation an overarching structure and common language in which to pursue a discourse on transformational change and how to achieve it. The framework has recently been successfully employed on an NIHR funded evaluation of the NETS initiative\(^4\). It is also being employed in a WHO Europe project on health system transformation among Member States which involves CPPH at Durham University\(^5\).

The receptive contexts for change framework comprises eight factors which are listed below with brief descriptions.

**Factor 1: Environmental pressure**

Environmental pressure can be especially critical in creating the conditions for transformational change and in ensuring that they remain in place long enough for the change to become embedded. Conversely, if environmental pressure is not conducive to the change efforts being implemented then it can be potentially disruptive.

Large-scale environmental pressure can trigger radical change while short term pressure, especially of a financial nature, can produce adverse effects such as deflecting or draining energy from the system. Financial crises can result in a range of reactions within organisations including delay and denial, collapse of morale, and the scapegoating and removal of managers. Financial crises need not be viewed as a threat to the organisation but can also be seen as an opportunity for radical configuration. However, in health systems there may be a greater tendency to view them as a threat.

As, if not more, important is the political context and impact of politics on shaping the environment governing large-scale change. The importance of politics is a feature of all health systems and can determine whether and how far large-scale change succeeds or not. The temporal challenge is especially acute since electoral cycles often militate against long-term change since results are looked for in the short term. This is especially evident in the


type of change favoured. Whereas structural change or change involving regulation and/or inspection can occur quite quickly and easily, especially in national systems of health care, cultural change of the kind desired to change behaviours and way of thinking about health and wellbeing take far longer to achieve and are often less visible. As Haflon et al\(^6\) point out, if the 3.0 Transformation Framework health system is going to thrive, it will require supportive policies that incorporate longer time horizons. A policy framework that prioritises short-term rewards for existing groups and organisations is no longer ‘fit for purpose’.

**Factor 2: Supportive organisational culture**

‘Culture’ is a fashionable and often over-used term as well as being a difficult topic to study. Here it refers to deep-seated assumptions and values, officially espoused ideologies and patterns of behaviour. Culture can serve as a barrier to change and create inertia. In contrast, a supportive culture can be about challenging and changing beliefs about success and how to achieve it. Leaders can be agents for culture change. Establishing a social contract, or compact, with staff linked to incentives can be important. Key features governing successful culture change include: flexible working across boundaries (e.g. ‘boundary-spanners’, that is, people who operate at the edges of organisations and are skilled at working across them rather than being located at the centre of organisations); encouraging risk-taking; openness to research and evaluation; strong value base. All health systems comprise a complex set of multiple cultures and trying to shape these in order to improve quality of care has been at the heart of many, though not all, large-scale change initiatives. Pettigrew et al\(^7\) found that ‘tremendous energy is required to effect cultural change’.

**Factor 3: Change agenda and its locale**

Research on human resource change in various sectors demonstrates that various features of the locale where change is to occur may inhibit or accelerate change. Building support for organisational changes can result in changes in the power balance between staff groups. In particular the strength and nature of the local political culture can be key as well as the nature of the local NHS workforce (including social care and LAs). While some of these influences may appear beyond management control, awareness of their influence could nevertheless be important in anticipating potential obstacles to change. Some of them might be reshaped by human resource policies and management changes.

**Factor 4: Simplicity and clarity of goals and priorities**

Managers can find it challenging to confine the change agenda to a set of key priorities and to insulate this core set from the constantly shifting short-term pressures apparent in the NHS. The danger arises when the number of ‘priorities’ escalates until they become meaningless. Rather, persistence and patience in pursuit of objectives over a long period seemed to be associated with achieving strategic change. Skills in complexity and conflict reduction may be important here in an effort to contain complex problems in simpler organisational frameworks. The wider issue is the link between the context of change and the rate and pace of change. Implementation is likely to be influenced both by the amount of change involved

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and by the extent of goal consensus among participants. In order to achieve progress in implementing change, shrinking the problem at the outset may be advisable.

**Factor 5: Cooperative inter-organisation network**

The development and management of inter-organisational networks are critical to securing effective and lasting change. Winning influence over sectors where there is no power or direct control is key. Identifying and nurturing ‘boundary spanners’ who can work across organisational and professional boundaries is a means of enriching these networks and ensuring they are effective. The most effective networks are both informal and purposeful and based on sound high-trust relationships. At the same time, as a consequence of personalities and high levels of churn, they are also fragile and vulnerable if the preoccupations and priorities of those leading networks change frequently. At their best, sound partnerships and purposeful networks can be arenas for trust-building, bargaining and deal making all of which are essential in securing health system transformation.

**Factor 6: Managerial-clinical relations**

The managerial clinical interface is critically important especially at a time of rapid health system change. Such relations vary markedly in practice and as Kornacki observes ‘the disconnect between managers and doctors is not exactly news’. Clinicians who are not supportive of change can exert a powerful block on it even going so far as to sabotage it. Working to understand each other’s cultures and roles may seem obvious but does not always happen naturally. Managers need to be immersed in clinical work in order to understand what clinicians value. For their part, clinicians in key managerial posts can be important in gaining commitment from colleagues to change. Managers need to identify such people and foster alliances with them if the anxieties and stress that accompany adaptive change are to be acknowledged and resolved.

**Factor 7: Key-people leading change**

Having people in critical posts leading change is an important feature. This does not mean heroic leaders of a traditional type operating in a command and control fashion but those who exercise leadership in more nuanced and subtle ways and adopt a pluralist and systems-wide approach. Examples might be quiet or servant leaders working across a whole system. Building teams with vision and commitment to see it happen is a key element of such leadership. Paradoxically, stability in the effective leadership of change is a key requirement in terms of likely success and sustainability. This is especially important in regard to major cultural change which requires sustained commitment and continuity. As Berwick notes, ‘culture change and continual improvement come from what leaders do, through their commitment and encouragement, compassion and modelling of appropriate behaviours’.

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10 Greenleaf, R.K., (1991), The Servant as Leader, Indianapolis: Robert K Greenleaf Center

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**Factor 8: Quality and coherence of policy**

The quality of policy developed at national and local levels is found to be important in terms of both its analytical and process perspectives. Having policy that is informed by evidence and data, especially at a local level, is important in presenting a robust case for change and for persuading sceptical staff, notably clinicians, of the merits of the exercise. The most successful policies are those which consider questions of coherence and alignment between goals, feasibility and implementation requirements. A broad vision is more likely to generate support for change than a detailed blueprint.

These eight factors should not be viewed or regarded as a shopping list but rather as a highly interrelated combination which can be used to guide and shape transformational change efforts. For successful change to occur there needs to be some alignment among the factors. If they push and pull in different directions, and there is at the same time instability and frequent shifts in policy often based on no or poor evidence, then preserving and sustaining successful change becomes ever more challenging and far less likely to occur. However, even where such conditions do apply and the settings appear receptive for change, the process in practice remains complex with outcomes often indeterminate and unpredictable. As Pettigrew et al\(^\text{12}\) conclude, there is ‘no simple recipe or quick fix in managing complex change’.

It is also the case that notions of receptivity and non-receptivity are dynamic not static constructs. As Pettigrew et al state, although ‘receptive contexts for change can be constructed through processes of cumulative development, such processes are reversible, either by the removal of key individuals or ill-considered or precipitous action’\(^\text{13}\). Equally, movement from non-receptivity to receptivity is possible, encouraged either by the environment or policy changes at higher levels and by professional and managerial action at local level.

In conclusion, receptive contexts are defined as situations where there are features of context, and also of management action, that seem to be favourably disposed to change, and are associated with forward movement. Conversely, non-receptive contexts are those situations where a combination of conditions effectively creates blockages or resistance to change.

**1.4 Methodology**

To explore the implementation of the NCMs programme through the North East Vanguards, the evaluation employed a mixed methods study design combining qualitative and quantitative approaches to provide contextual understanding of the organisational, technological and economic factors shaping the implementation of the Vanguards Programme and its reported impact in and on practice.

The evaluation was conducted in three stages over eight months: Stage 1: In-depth review of local documentation; qualitative semi-structured interviews with key stakeholders involved in the implementation of each Vanguard programme to identify organisational and technological

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\(^{13}\) ibid. p.276
facilitators and barriers; Stage 2: Economic evaluation; Stage 3: Overarching analysis and emerging key messages for shared learning.

Table 1: Areas for evaluation and methods of inquiry

<table>
<thead>
<tr>
<th>Question areas</th>
<th>Methods</th>
</tr>
</thead>
</table>
| What new conceptual understandings have been used to develop NCMs and what theories of change underpin them? | • Documentary analysis (e.g. board papers from NHS and social care organisations; Health & Wellbeing Boards, etc.)
                                                                                     • Interviews                                                                             |
| What new opportunities have become available with the Vanguards Programme? What challenges have participating organisations experienced in implementing the Vanguard Programmes and how have these challenges been addressed? | • Interviews with key health and social care stakeholders involved in the implementation of NCMs
                                                                                     • Documentary analysis, including local media coverage                                  |
| To what extent, and in what ways, has digital innovation shaped new care models’ aspirations and achievements? | • Access to local documentation                                                            • Interviews with key managerial health and social care stakeholders involved in the implementation at strategic, managerial and operational levels |
| What impact has each Vanguard had on efficiency on the local health and care economy?                                        | • Economic evaluation<sup>14</sup>                                                           |

1.5 Qualitative Interviews

Qualitative data were collected through face-to-face or telephone semi-structured interviews conducted in each of the 5 Vanguards (66 in total) in addition to data gathered from the documentary analysis. The aim of the interviews was to explore participants’ perceptions and experiences of the programmes’ processes, outcomes and impact. Approximately 10-12 interviews, conducted with key stakeholders involved in the implementation of each Vanguard, explored the strategic, managerial, and operational/technological factors shaping the implementation of NCMs in health and social care, and the enablers and barriers to change (see Appendix B for a brief summary of each site). An email invitation was sent to all project leads for distribution within their Trusts. The interviews were scheduled at participants’ convenience in terms of location and time. Participants were provided with information sheets in advance, and consent forms signed prior to the start of the interviews. A topic guide was developed to guide the interviews but the emphasis was on encouraging

participants to discuss and reflect upon their own perspectives and experiences (see Appendix A). Interviews took approximately 45-60 minutes. With the permission of interviewees, all interviews were audio-recorded and transcribed. Participants were able to withdraw at any time during the study.

List of interviewees

<table>
<thead>
<tr>
<th>Vanguard</th>
<th>No. of interviews</th>
<th>Interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>“All Together Better” Sunderland MCP Vanguard</td>
<td>7</td>
<td>Senior Manager, CCG</td>
</tr>
<tr>
<td>“All Together Better” Sunderland MCP Vanguard</td>
<td>1</td>
<td>Senior Manager, LA</td>
</tr>
<tr>
<td>“All Together Better” Sunderland MCP Vanguard</td>
<td>3</td>
<td>Senior IT Manager, CCG</td>
</tr>
<tr>
<td>Northumberland PACS Vanguard</td>
<td>11</td>
<td>Senior Manager, CCG</td>
</tr>
<tr>
<td>Northumberland PACS Vanguard</td>
<td>2</td>
<td>Senior IT Manager, CCG</td>
</tr>
<tr>
<td>Northumbria Foundation Group ACC Vanguard</td>
<td>7</td>
<td>Senior Manager, CCG</td>
</tr>
<tr>
<td>Northumbria Foundation Group ACC Vanguard</td>
<td>3</td>
<td>Senior IT Manager, CCG</td>
</tr>
<tr>
<td>Newcastle Gateshead Enhanced Health in Care Homes Vanguard</td>
<td>14</td>
<td>Senior Manager, CCG</td>
</tr>
<tr>
<td>Newcastle Gateshead Enhanced Health in Care Homes Vanguard</td>
<td>3</td>
<td>Senior IT Manager, CCG</td>
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<tr>
<td>North East Urgent and Emergency Care Vanguard</td>
<td>11</td>
<td>Senior Manager, CCG</td>
</tr>
<tr>
<td>North East Urgent and Emergency Care Vanguard</td>
<td>4</td>
<td>Senior IT Manager, CCG</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>66</strong></td>
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</tr>
</tbody>
</table>

A positive ethical opinion was obtained from Newcastle University Faculty of Medical Sciences Ethics Committee (ref: 01216/2016). NHS Research Ethics approval was not required for this study.
1.6 Data Analysis
Transcribed interview data and fieldwork notes were analysed using thematic analysis to generate category systems and repeated themes\textsuperscript{15}. Drawing upon an interpretative approach, themes were developed iteratively and inductively, breaking down and reassembling the data through a coding process. To ensure analytical rigour two members of the research team independently coded and analysed the qualitative data.

1.7 Overarching analysis from a regional perspective
A particular strength of our evaluation, indeed its principal raison d’etre, is the region-wide focus. This study is therefore designed to complement the separate local evaluations and draw out any findings that have a regional dimension with possible implications for future policy and change in the North East. To meet this requirement, and following the analysis within each Vanguard site, a comparative case study approach\textsuperscript{16} was used to compare and contrast the organisational and technological components across all five Vanguards. The conclusions from the overarching analysis were cross-linked to the Pettigrew et al ‘receptive contexts for change’ framework. This enabled the identification of key aspects (facilitators and barriers) that can be shared across all Vanguard sites in the region and lessons learnt from the implementation to inform the Northumberland Tyne and Wear and North Durham Sustainability and Transformation Plan. For confidentiality reasons, all participants have been anonymised.


Part 2: Document analysis

2.1 Introduction

We interrogated the documents relating to each Vanguard programme, held on the NEVE team’s Sharepoint website, from the perspective of how each of these illuminates our research questions and research objectives. In addition, we collected some publicly available documents and other resources (presentations, web pages, etc) which are also relevant to the five Vanguard programmes in the North East. These include materials from national sources (NHS England, King’s Fund, Nuffield Trust), regional bodies such as the Academic Health Sciences Network and NECS, and local sources such as local authority websites, Health & Wellbeing Boards, press reports and Healthwatch board papers. These secondary documents were helpful in sense-checking some of the ambitions and targets which are set out in the official (and, on occasion, confidential) documents associated with each Vanguard programme. The full list of documents held on the SharePoint website is included as Appendix D.

2.2 Overview of the Vanguards

This section provides an analysis of the documentation associated with the North East Vanguards, using some of the elements from the Pettigrew et al ‘receptive contexts for change’ framework. Commentary follows on each of the five individual Vanguards, focusing on some of the research questions contained in the NEVE proposal.

2.2.1 Environmental pressure

The context in which the North East Vanguards were conceived, developed and implemented is one of considerable environmental pressure, summed up by having to do more, with less. This is reflected in the Vanguards’ logic models, the key organising documents for each programme. Three quotations typify the circumstances faced by local health economies when the national Vanguard programme was being set up, following the principles enshrined in the 5YFV:

“Fragmented urgent care services with multiple points of entry result in patient contact duplication and patient confusion across the region, which is inefficient and does not promote positive patient experience.”

UCE Vanguard logic model.

“Significant reduction in funding, increased pressure on A&E, five day working, gaps and duplication in workforce and limited focus on patient experience”.

Sunderland All Together Better MCP Vanguard logic model.
“There are a number of areas and population groups at greater risk of premature morbidity and mortality, resulting in health inequalities....”

Northumberland PACS Vanguard

In short, the context in which the Vanguards came into being was one of acute pressure on financial resources, concerns over the availability of appropriate staff, evident duplication of roles in some areas, suboptimal use of multi-disciplinary working, continuing problems with data and information exchange, lack of integration between different elements in the healthcare system and between health and social care, and a need to radically improve the patient experience and staff satisfaction. At the same time, health and social care commissioners and providers were asked to resolve these issues without compromising the quality and safety of care.

The five North East Vanguards vary significantly in scope, and naturally in their aims, ranging from the overarching, region-wide Urgent and Emergency Care Vanguard (UEC) which encompasses eight sub-regional project boards and multiple provider organisations, to smaller scale and more tightly focused examples such as the Newcastle Gateshead Enhanced Care Homes Vanguard. All, however, make use of principles of integrated care and MDT working which are commonly supposed to constitute effective means to overcome the challenging circumstances in which health and social care organisations are operating.

2.2.2 Supportive organisational culture and cooperative inter-organisation networks

The Vanguard documentation shows a consistent intent to build an organisational culture and cooperative networks which support the aims of the five Vanguard programmes. How this has happened in practice – or not – clearly depends on the nature and scope of each individual Vanguard.

In the case of the UEC Vanguard, for example, the desire to offer a standardised, single point of entry urgent and emergency care service across a large geographic area meant that the Vanguard had to balance inputs from NHS England, national, regional and local emergency care teams, overarching clinical, transformational and operational boards, as well as local project delivery boards. Each of the eight local project delivery boards also had to knit together an alliance of providers (111 service, ambulance, primary, secondary and community care) while satisfying the performance requirements mandated by local clinical commissioning groups. Trust board papers from some parts of the North East demonstrate a collective willingness to make a success of the UEC Vanguard, driven by a clear realisation that performance in this area of healthcare provision has profound impacts on public perceptions of the NHS, ability to meet a range national and local targets (in some cases with financial implications), pressures on other parts of the health and social care systems (primary care, for instance) and staff recruitment and retention rates.

The Northumberland PACS Vanguard is a whole system programme of reform and reconfiguration of primary care, urgent and emergency care, services for the most vulnerable patients through creation of complex care teams and measures to support prevention and population health, all in the service of creating an Accountable Care Organisation covering the sub-region. It is notable that the PAC Value Proposition document cites the long-
Standing partnership working between Northumbria Healthcare NHS Foundation Trust, Northumberland CCG and the local authority as fundamental to the creation of an environment in which these ambitions can be realised. In other words, this Vanguard already had the building blocks of supportive and cooperative networks, with significant elements of mutual trust and understanding, even before it began formal work on the Vanguard programme.

The Sunderland All Together Better MCP Vanguard is restricted in scope to a focus on developing Community Integrated Teams (spanning GPs, nurses, link and carer support workers and social care professionals) and a programme of intermediate care integration across five localities. The staff survey undertaken in September 2016, which included canvassing views of external stakeholders (overview and scrutiny committees, LMCs, Healthwatch and staff from secondary care), indicates that the Vanguard had had at that stage some success in enhancing information sharing and in building openness and trust within the multi-disciplinary teams. However, this contrasts somewhat with the public’s perceptions of the Vanguard’s work, as captured by a market research exercise undertaken in July 2016. This showed that a significant proportion of the public did not feel that services were well coordinated and integrated and that satisfaction levels were relatively low. These results suggest that MCP Vanguard would have some challenges ahead, requiring a long-term approach, to improve the patient experience and to ensure that the public understand and appreciate the changes that are taking place to health and social care services.

The Newcastle Gateshead Enhanced Health in Care Homes Vanguard builds on earlier work undertaken in Gateshead to meet the changing and challenging needs of the care home sector. In essence, the Vanguard seeks to build an alliance of provider organisations, over three phases of development, which will eventually deliver care to approximately 17,000 people in long/short stay community beds, intermediate/reablement services and home-based services. Such an alliance is clearly reliant on excellent inter-organisational networks, enhanced MDT working and clear relations between commissioners and providers. Given that the Vanguard has proceeded through some degree of best practice transfer from Gateshead to Newcastle MDTs, there has been a need to foster a culture of mutual learning and trust. There is some risk that this may not take root – the ‘not invented here’ culture in some NHS and social care organisations is well known. However, the Vanguard leaders and managers have taken steps to mitigate this risk, by planning to commission a joint Newcastle Gateshead film to illustrate the Vanguard’s principles, showcasing physicians and patient stories from both cities. A local learning forum, open to nurses from both Gateshead and Newcastle, has also been established.

The Northumbria ACC Vanguard differs in scope and intent from the others in the North East, in that it has been established to allow the Northumbria Hospital Group (NHG) to offer a portfolio of services to other trusts, to share and develop clinical best practice through networks and to promote a standard operating model for use by other organisations. This is achieved through a matrix approach. The matrix comprises four “tiers of integration” (commercial services, NHG accredited members, NHG Franchise and NHG Full Members)

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and four work streams which are applicable to one or more of the tiers. The work streams are contracted services, hospital group/service offering, enabling technology and group governance. This approach depends in part on contractual arrangements, but also on members – whether accredited, franchise or full – deciding on what level of collaborative support they require and how much access they need to a range of tried and tested standard operating procedures and expertise. Whether these inter-organisational relations will prosper and stand the test of time will only become clear in the medium to long term.

Some of the Vanguard programmes are frequently mentioned in the public papers produced by external organisations, such as Healthwatch boards and local authorities. This suggests that communication channels were effectively used to promote the Vanguards’ aims and to enlist support from other sectors. However, from these papers it is difficult to gauge the extent of external support, as well as the degree to which the Vanguard’s objectives were understood.

2.2.3 Simplicity and clarity of goals and priorities

The Vanguard documentation provided good evidence that goals and priorities are well-founded (in the context of the extant environmental pressures) and are being monitored thoroughly.

The logic models and data scoping documents used by each Vanguard make use of very similar templates, which means that Vanguard organisations can easily compare their structures and aims with each other, in the North East and nationally. The format of providing summaries of inputs, activities & outputs, short and medium term outcomes and impacts has the merit of setting out clear links between different elements of each programme, which can be tracked using appropriate national and local metrics.

The goals of the Vanguards vary considerably in scope (from large-scale, region-wide ambitions to much more closely defined, local aims) but appear to have been equally subject to careful thought and analysis before being formally submitted as part of the respective proposals to join the national Vanguard programme. The evidence for this comes from a number of documents: the spreadsheets which list the chosen metrics (which are closely aligned with the goals and priorities), the reports on progress and performance to date and the data scoping exercises which are associated with the Vanguards’ set up phases.

Some of the goals and priorities are common across all the Vanguards. At a high level these include improvements to operational efficiency and to the quality and safety of patient care, usually through enhanced MDT working and various forms of integration. Cost saving is not explicitly mentioned in all of the Vanguard proposals, but it is evident from the subsequent choice of metrics that this is an important element in the overall goals. All of the Vanguards’ scoping documents and logic models mention use of digital technologies to drive efficiencies and to enable the improved data sharing and inter and intra-organisational communications which will be essential if health and social care organisations are to overcome the traditional silos.
Goals and priorities are clear, but they are universally ambitious and wide-ranging. There is therefore a risk that some goals will not be met, or that some priorities will be abandoned. If this is to happen, or has already happened, there should be careful review of the balance of benefits achieved, so as not to lose sight of positive progress where it has occurred.

2.2.4 Quality and coherence of policy

It is difficult, in a rapidly changing health and social landscape, to ensure that change programmes can continue without distraction. As national policy shifts in response to emerging pressures, there is a tendency to focus on fire-fighting rather than the steady push towards realising the benefits of work already undertaken and in the process of maturing. The Vanguards emerged as the first instances of the NCMs, as enshrined in the 5YFV, and there is ample evidence from the documentation associated with the five North East Vanguards that they are all, in various ways, rooted in the NCM principles of more and better integrated care.

From the available documentation there is evidence that the organisations which are leading the five North East Vanguards have maintained a high degree of commitment to their aims and priorities, and have made significant efforts to ensure that a range of stakeholders, including local Healthwatch organisations and local authority scrutiny and overview committees, have been provided with timely information about progress and performance. However, at national level the policy environment has increasingly come to focus on the requirement to make rapid progress with STPs. The goals of the STPs are consistent with the Vanguard programmes, and will no doubt draw on the experience of initiating, implementing and evaluating the Vanguards, but as our qualitative evidence suggests (see 3.3.1 Factor 1: Environmental pressure) there is some risk that the continuing work of the Vanguards may be overshadowed by the larger scale and more controversial STP programmes, and possibly negatively affected by changes to funding streams.
Part 3: The organisational context (team working, culture and relationships)

3.1 Introduction
This section provides an analysis of the qualitative interviews across the five North East Vanguards, with reference to the eight factors which comprise the ‘receptive contexts for change’ framework which has been chosen to structure the discussion which follows later in this section (Pettigrew et al 1992). The factors, plus a brief description of each, are listed in the following sub-section.

3.2 Findings
With reference to each of the eight factors making up the receptive contexts for change framework we present the findings from across all five Vanguards. Although inevitably there is some analysis of each Vanguard, our primary focus is on what may be seen to be common issues and concerns across all five Vanguards. The separate local evaluations of the five Vanguards will provide a deeper description and analysis of issues concerning each site. Our study seeks to complement those studies.

3.3.1 Factor 1: Environmental pressure
For a brief description of Factor 1, see page 11.

*NHS Transformation agenda and change*

The overarching context in which the North East Vanguards were developed, and are being implemented, reflects the ‘triple aim’ which underpinned the vision for transforming the NHS in England set out in the *NHS Five Year Forward View*\(^\text{18}\) and updated in the Next Steps\(^\text{19}\): improving the health of the population; improving the patient experience of care; reducing the cost of health care. Given the rapid pace of policy development, some participants felt that actions or changes imposed by government can affect progress.

*I think we’ve had so many central directive changes over the last 18 months that it really hasn’t helped with trying to get buy-in. From new care models becoming very much NHS-driven programmes, to STP superseding local plans, to various things that just create layer upon layer of uncertainty, really - a lot of goal-post changes.*

For some participants the pace of such change is a particular concern. As participants at the Care Homes commented:

\(^{18}\) NHS England (2014), Five Year Forward View
\(^{19}\) NHS England (2017), Next steps on the NHS Five Year Forward View

31/05/2017
Everything changes so fast. I mean in the last year, there was three new discharge, national discharge documents brought out. So you've got to keep changing and the problem is none of them, it's like government offices don't speak to each other. So one will say you have to do one thing and another will say you need to do something different.

I think one of the challenges has been the speed that we've had to go; the pressure that we've had from NHS England, because of being part of a national programme. I think that the speed and the pressure have suited other work streams, rather than it has mine.

Moreover, the respective roles of NHS England (NHSE), NHS Improvement and the Department of Health could be confusing and contradictory.

I think it's about time that Department of Health, NHS England and NHS Improvement sorted out what exactly they are, whether they're market managers, whether they are system managers, whether they have a doing role or whether they've got a performance management role, or whether they're there just to beat us all up. Because, I've got to say, it is far from clear.

In terms of commissioning, it was felt that national requirements around contracting or governance can also hinder progress:

Nationally the contracts are driven through certain, well a structure. Nationally the perverse incentives [relating to Payment by Results] aren’t being addressed. I think as a regional vanguard we can choose to work against the natural direction of travel, or what is structured at the moment and is in contracts.

Moreover, participants felt that government targets and an emphasis on performance can hinder progress:

When the national paranoia is about here and now, today, yesterday’s percentage performance, then that can very easily detract and distract from that tactical and strategic, because the operational becomes king.

We've been influenced heavily though by the national direction of travel around standards and improvements and national must-dos, which at times has conflicted with what we've been attempting to do.

In this context, pressure for quick results was a major complaint:

There’s been a lot of pressure from NHS England for certain things to be done on frameworks and time series and delivery plan sort of thing, so there is often a push from the
office-based vanguard staff that we need to get certain things done. A clinician always puts the patient first whereas a project manager puts the project first, so that can be quite difficult.

I think that probably one of the hindrances of the vanguard, per se, has been that timescales have been brutal.

In the MCP Vanguard, a number of interviewees pointed to the benefits of being able to draw upon the support from the national programme but there was evidence of a tension between national pressures and the need to maintain locally driven change.

I do think that there has been a real benefit of us joining because of the advice that we've been given but that has been very much driven by trying to find a local solution to some of the local problems that we face.

So the demand to see efficiencies to deliver...feels very top-down from a very high level...particularly in the last year as opposed to the few years before that when we've had time to do a bottom-up drive for designing change.

At the same time, although interviewees believed that hitherto national policy and the New Care Models programme had been an advantage, others spontaneously spoke of their fear that the 'rug would be pulled' from under them with, for example, one model being recommended over all of the others or alternatively, there would be a major change in policy.

From a national driver point of view, what's around the corner? What's going to be the flavour of the month? So we put all this effort into the Five Year View, New Care Models and I think that for me is the main thing.

Similarly, in the PACS Vanguard, discussions regarding the national NHS agenda tended to fall broadly into a number of categories. There was a minority group of respondents who acknowledged the invaluable support they believed they had received through being part of the Vanguard. For most however, this clearly was thought to have come at a price.

There's an incredible level of scrutiny on you to be successful. I think the politics of it play out in the sense of trying to give you enough time to see results but at the same time, wanting results really fast so that they can roll models out nationally...it worries me we get the right answers.

Interviewees also criticised NHSE for failing to appreciate the length of time 'change' takes:

Where am I worried? I am probably most concerned about NHS England's optimism. Their questions and their boxes they want us to tick are expecting that Rome is built in a day. There is an element of some of this is moving a tanker...these things cannot be changed overnight.

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I think the politics nationally is interesting in terms of just the pressure to deliver something quickly so that it can then be disseminated and rolled out elsewhere...and I think there are those quick wins but a lot of the meaningful change takes place over years.

This was particularly the case in that the process was largely iterative and that there needed to be appropriate measurement and monitoring of progress. As a participant in the ACC Vanguard commented:

*I think the biggest gap is around understanding effective measurement and recording of progress. I think because of that gap, we don't understand if we are getting better or not, and we don't monitor and effectively embrace change.*

Further, it was believed by some that the Vanguards were showing the way and NHSE were being slow to react, and some interviewees maintained a sceptical view that tomorrow's agenda would be totally different:

*I think the Vanguard has identified areas which has given NHS England and the Department of Health the time to consider what's required but it's taken a long time for them to catch up. I think they've benefited from that time the Vanguards have had to identify what have been the barriers to delivery, scale and innovation.*

*I suppose there is always a worry that there is another thing that we jump on. Then we just forget everything we have ever done here and do something different because that is the new circus in town.*

In the context of the future direction of the Vanguard initiatives through the development of the Sustainability and Transformation Plans (STPs) within 44 geographical areas or ‘footprints’ (which includes the regional Northumberland, Tyne and Wear and North Durham STP footprint) there was also evidence of a tension between the pulls of the regional STP programme versus those of the local Vanguard initiatives.

*The STP has come in and probably pulled us in slightly different ways...and it has been a big problem in terms of it's been something that has been done and not really shared...I think it probably took some of our health colleagues’ minds off things but also when you look at all of the financial pressures and capital and all their budgets that's going to be wrapped around STPs, does that bring a tension then to where we are with the local Vanguard?*

Whereas some interviewees considered that as yet the plans for the Northumberland, Tyne and Wear, and North Durham footprint were still not well established, even though it may in the future provide a platform for greater collaboration, others noted the regulations
underpinning greater convergence would have to change. This concern was exacerbated, too, by the perception that relationships between hospitals remained poor.

There will have to be some rule changes here for us to go forward. There needs to be more granular detail relating to the plans but in the end I think collaboration is wielded within the STPs. We just need to recognise that the legal aspects of acquisitions, mergers and everything else will hinder some of the collaboration.

A very different perspective contended that merging the Vanguards, let alone areas without them, would be a particularly difficult exercise for which there was limited evidence.

How are you going to roll all five out at the same time? Where is the evidence to say that it works and it doesn't work...I can't understand how we would ever try and do five Vanguards in one go...bearing in mind they are all doing different things.

3.3.2 Factor 2: Supportive organisational culture

For a brief description of Factor 2, see page 12.

Attitude to risk and innovation

Care Homes Vanguard interviewees generally regarded their organisations as being open to innovation (and therefore committed to the Vanguard) and open to some organisational risk because of the pressures of work and the need to reach targets, but never open to anything that might pose a risk to patients.

This open attitude to change was shared by other Vanguard sites. A UEC Vanguard interviewee commented that their organisation was willing to take the risk of working differently via Vanguard.

We want to do things differently from the very beginning. I think we’ve looked at our risk appetite, it’s something that we’ve discussed as a governing body.

However, concerns were raised about other partner organisations’ attitude to change. A UEC Vanguard interviewee suggested that the North East Ambulance Service (NEAS) might not be as open to innovation as their own organisation:

My perception of the ambulance service is they are too embedded down a line that I don’t think they know how to innovate and change, and that’s a big frustration of mine.

Although in previous years there had been a perception that hospital trusts might not be supportive of moves to reduce hospital admissions, that was no longer felt to be the case, as hospitals were aware that they could not cope with the large numbers turning up in A&E seeking attention.
If there are a number of these people that we can manage either without them touching the hospital or with them touching the hospital more briefly, then the hospital is well up for that, I think. I do think the tide has changed a bit on that.

In the MCP Vanguard almost all respondents spoke of a commitment and enthusiasm for innovation and change. There was too a considered view that the partners involved all understood the need for a level of risk but as some interviewees stressed there was probably little alternative.

So we are up for that risk and frankly, because of our financial position, we've probably got nowhere else to go...I think the FTs because of their financial constraints are much less happy to take on risk so there's quite a bit of hand holding going on - we need to help them with that.

My sense that (the appetite) is equal otherwise we wouldn't have partners around the table doing work around development and MCP and we wouldn't have agreement with two acute and have sign-up for a two year contract and a way of working that is about helping them take the costs out.

In the context of the ACC Vanguard, most interviewees appeared to agree that Northumbria was a particularly innovative Trust especially in terms of their ACC programme.

I think we are a very different Foundation Trust compared to probably any other...I think our appetite for risk is proportionate. What we won't do is put at risk our normal day-to-day core business. That is delivering outstanding patient care. But what we will do is look at those opportunities to grow and develop as an organisation to support that even more and if we have to take a little bit of risk we will consider doing that.

I would say Northumbria historically has always been really up for change and I think it has been easier for us to do it. Our managers had always been fairly light touch with business cases for example where if they can see the vision, then they've been prepared to go with it.

Further, one respondent outlined how supporting organisations to change direction inherently carried a level of risk, even in terms of reputation. Moving into non-clinical services within a clinical organisation and shifting away from what they might perceive to be their core operation needed justification and again carried risks.

This is new in terms of mind-set. It is a challenge moving to the right place but the only way we do that is by having a very, very clear case for doing it and how we are managing the risks around it.
We work with partners to share the risk so we will be working with private partners that will share the financial risk rather than the risk of the organisation which is public sector…our risk is a careful risk.

In the context of the PACS Vanguard, discussions were both influenced and underpinned by the comparative financial situation of the Foundation Trust and the CCG. Although there was an opinion voiced that the risk was not to pursue the transformational change, there was also the concurrent view expressed that an ACO was the appropriate model.

We have a bigger need than most because of the financial situation - it is a risk not going for it…I still think however that Northumbria believes that this is the right model and I think we are prepared as a CCG to innovate because of the need to offer services differently.

We are not frightened of taking the next step and thinking about big strategic change and working together to do that…we’ve got a history of doing things so I would say probably every four or five years we’ve got something on the go.

It was also suggested that the nature of the challenge differed depending on the organisation, for example, for the CCG it was financial but for the Trust it was more of a cultural issue. Regardless of which it was, almost all participants expressed a positive attitude towards risk and innovation. Particular emphasis was placed on personalities and change management practices.

So I think some have taken some risks here and there and they have carried the organisations probably on the back of their personalities and charm - there has been real courage and leadership and without that, all of this would have been difficult.

I think all partners round the table have to accept some level of organisational risk but that is the wrong way of looking at it. I think we have got to get away from thinking of organisational territory wrapped around a patient in a system rather than protection for an organisation.

Communications within each Vanguard

Effective inter and intra- organisational communications was considered as a key factor for the successful implementation of each Vanguard. There were varied opinions amongst the Care Home Vanguard interviewees about the communications. Some interviewees recognised that it was far more beneficial to attend the meetings in person than to rely on emailed minutes, as this allowed them to query and to learn more. Some felt they were not told enough:
Within the Vanguard, on a Wednesday, you would have the individual group saying, "This is working well. We're pulling together." But we don't actually get any feedback on if that's going to expand, which groups it's in.

One UEC Vanguard interviewee praised the communications, attributing this to informal rather than formal structures:

There are some really good examples of good communications. Again I'm not sure it is always around the structures and the processes we've got in place, I think sometimes it is very much down to the people and the more informal networks that sit within the network.

However, reflecting on the regional focus of the UEC Vanguard, communication across the network was perceived to be a significant challenge. A UEC Vanguard interviewee was not convinced that communications were good:

I think one of our biggest challenges throughout the Vanguard has been communications. Now, I'm not sure, I've thought about this, is it because we are so big and it is about communicating across the whole of the region, and communicating to the right people at the right time has been difficult, and it has been a challenge? We've done it, but it hasn't been as smooth as you would want it to have been.

Moreover, getting the amount of communication right was a problem for some participants:

I think there's always more that we can do. 'Communication', every single time, comes up as an issue, and you're stuck between a rock and a hard place because the more you do, you're just churning out information for information's sake and people don't read it. If you do less, people say, "Well, we haven't heard anything for three months. We didn't know what was happening. We didn't know where this was going."

In the MCP Vanguard most considered that communication was done well within the Vanguard and the programme in itself had had a particularly positive influence.

'I think the local communication is good, so obviously with the resources from the Vanguard we were able to establish a very robust communication locally around the Vanguard development.

Some contended further that it was not the level or quality of communication that needed greater attention but rather the understanding and the analysis of precisely what needed to be communicated:

I think there is always stuff we need to improve. I think there is that much going on not just through the Vanguard but the whole, how we are managing the surge and pressure on our acute hospitals, what we need is to be able to get data that allows us to say, what has made
the biggest difference...what was the one thing that made a difference or was it because of X, Y and Z?

In the context of the ACC Vanguard, the complexity of negotiating relationships with partners external to the Trust both locally, nationally and internationally had to be seen alongside any difficulties in communicating the nature of the Vanguard with staff internally within the Trust and in particular with clinicians.

I think clinical and operational alignment...(making) sure we are all signed up to go in the same direction and that clinicians understand a wider role in developing beyond the organisation, standard operating models etc.

So is it true that one of our community matrons has gone over the xxx for training? Yes, that's true. So that is an example of it being at all levels of our organisation but until you can honestly say it is supported by all levels of your organisation, you've needed time to spread and embed and create. We are one year down the line.

In the PACS Vanguard, there was a general appreciation of how communication had been carried out within the Vanguard and even though there was an evident assumption that 'there was always room for improvement', it was generally agreed that it had been effective. Some, however, argued that despite the professional use of social media for example, there had been information 'overload'.

I think it is done very professionally. The Comms team are very mindful there needs to be much more in terms of regular updates into the community and into the practices - so they are taking the steps. I think there's an element of information overload.

There was also the perspective that the word, 'Vanguard' should not be pushed in the way that it had been since, as the programme was time-limited, this ran the danger of being seen as a 'flash in the pan'. Moreover, it was thought to be a potential mistake to separate communication about the Vanguard from other communication or similarly, the 'day job'.

We are always conscious that the Vanguard is running parallel with the day job...and I think because of the ACO, they might feel though even though they are employed by an organisation, they are perhaps working for NHS Northumberland rather than the organisation that pays them.

I think all of us are doing it as part of another job, so there is very little resource that is utterly dedicated to Vanguard alone. But I think that is an advantage too because you understand business as usual and you don't end up in a sort of Vanguard ivory tower.
Moreover, almost all interviewees remarked upon the difficulties of information governance and data-sharing with the resultant challenges of analysis. This fed into the complexity of the multi-faceted nature of evidence.

Even if you are doing one particular part of a programme, the cause and effect of that, the external factors, just the normal buzz around the way things happen is quite difficult. I would say that communication has been one of our hardest things about how can we keep people up to date without what is going on but equally, how can we enable other people to share with us what they are doing so we don’t duplicate it.

Communications across Vanguards

There were varied opinions amongst the interviewees about communications across Vanguards. Several interviewees involved in the Care Homes Vanguard had no real knowledge of other Vanguards, although most had at least an awareness of their existence. Some recognised that there could be overlapping issues (e.g. between the Care Homes Vanguard and the Urgent and Emergency Care Vanguard). Other Care Homes interviewees said they had just some awareness of one or two other Vanguards. One interviewee praised the communication across the Vanguard network:

I think we’ve been really well represented in what’s been presented back to NHS England and across the vanguard network. I think we’re very involved in that; we know what goes back. We get feedback from how they represent us nationally and what the feedback is.

One Urgent and Emergency Care Vanguard interviewee said that they kept a very close eye on the other Vanguards, looking for ideas for development.

If some people have taken the steps first, what’s worked for them, but more importantly what hasn’t worked, so that we don’t repeat it.

In the context of the ACC Vanguard, few respondents reported regular contact with the other Vanguards in the North East apart from those leading the Vanguard development. Others commented that their contact had mainly been with other MCPs nationally.

The fundamental point was the ACC Vanguards, the three in the group were completely separate, completely different...are all pursuing our own line within that group...The other PACS groups there has been a lot more sharing within those groupings because they were established because of their commonality.

In the PACS Vanguard, knowledge and contact with the other Vanguards in the North East was largely dependent on the role of the interviewees. Thus those at leadership level attended network meetings as did clinicians within the clinical leaders' regional group. It was observed however, that network meetings did not necessarily result either in greater understanding or in collaboration.
I think a lot of the network meetings are there I suppose and they bring people together but whether or not they actually really result in collaboration and sharing to the maximum degree, I doubt...I don't think we've got an in-depth understanding of each other's Vanguards in the way that you might expect from health economies that are fairly close.

Despite an acknowledgement that time was often a factor which prohibited greater contact, there was a more common view that Vanguards needed to be seen through a local rather than regional lens due to localised factors.

We have to be really mindful of local health economies and their relationships - it's not one size fits all. I think we should be mindful of not imposing a model that works in one place on somebody else - I think cultural that feels very difficult.

It's hard to fit the regional work into the focus of a very local Vanguard.

Further, it was suggested that it was easier to work and collaborate with other MCP Vanguards or indeed with other national or international areas where similar work had been or was being undertaken - for example, Valencia where an integrated clinical and business model between primary and secondary care had been implemented. It was equally important to stress that working and liaising closely with other local Vanguards may be at the expense of pieces of work that had not been granted Vanguard status.

So I think to allow them to flourish on a regional, local or national context, you have still got to acknowledge that really good stuff happens outside Vanguards as well as within them.

**Raising awareness of the Vanguard initiatives**

One interviewee (GN-A) felt that there was increasing awareness of the Vanguard work, to the extent that they were being forwarded lots of related and relevant emails and queries by others in their organisation. However, some interviewees felt that those outside Vanguard did not really understand its relevance to services:

Apart from a few individuals, the organisation as a whole doesn't really have a full awareness of what we're doing and the implications of what we're doing, because I think they think, "Well, that's just care homes, that's just something little."

I think the other doctors in our practice only really know about the care home vanguard.

Several interviewees said that Vanguard needed to publicise more its successes:
I think that's, maybe, one of the issues with Vanguard. I believe that they're doing a lot of good stuff, but I think they need to shout it a bit louder ... sometimes, when I say to people, "I'm going to the Vanguard," they go, "What's that? I've never heard of it."

It was suggested by some interviewees that there was suspicion about Vanguard and the way it was receiving resources. One interviewee suggested that others might feel their roles were under threat.

'It's about making sure that everybody knows we're all doing this together and Vanguard is nothing secretive, it's just protected time to think about stuff ... some people get suspicious that we're wanting to steal ideas and claim it's all Vanguard work.

Some participants felt that this could be addressed by better communication about Vanguard results.

People need to experience some positive change with the Vanguard.

I think we need to spend the next year getting that message out of what we want to achieve, what we could achieve and advertising it a bit more so that there aren't misconceptions about what the vanguard can and can't do.

In the context of the MCP Vanguard those working within the Programme Management Office (PMO) spoke of regular meetings and links for example, with the regional evaluation programme. Most however, reported that links were greater with other MCP Vanguards.

The PMO managers have a network so they do meet and share...I haven't seen any great benefit, yet at anything at a regional level on this. Our benefit has come from working with the national team and from access to other MCP Vanguards.

In the ACC Vanguard, one respondent believed that clinical leads communicated well across the country within the programmes of the ACC but at the same it seemed communication between the non-clinical and clinical did not interlink. The clinical work simply had its own momentum.

The difficulty I have with our current Vanguard - difficulty is the wrong word, but my problem is my availability to know what else is going on. I can't talk in great detail about, for instance, local agency spend and the initiative around that because I have not been directly involved.

There was though, a group of interviewees who considered communication with clinicians was largely irrelevant in the context of the ACC. This appeared to signify not simply the seeming conflict surrounding the more commercial nature of the Vanguard but a lack of
understanding that although the ACC was not based upon clinical models, clinicians still formed an integral part.

**Shared learning within Vanguards**

Shared learning as part of a project was viewed as one of the most important benefits across Vanguards. As participants both at the Care Homes and the Urgent and Emergency Care Vanguard commented:

*I value the Vanguard as a learning opportunity, as much as anything else.... it’s really just the shared learning we’ve all had over the last year, it’s been fantastic and everyone in that group will benefit from that going forward. That won’t be lost or forgotten I think when Vanguard finishes. I think there’s a huge knock on effect for the future.*

*That is the unique selling point, I think of Vanguard is that they have that opportunity if it’s managed well to share that information, to share that learning in a very safe way. It’s a safe and controlled way because it’s not owned by the trust, it's not owned by community. It’s not owned by any individual team of people.*

*I think it [Vanguard] provides a useful and necessary forum for ideas to be exchanged across the patch. I think it's been reasonably successful in that.*

The need to share learning about things that did not work was also emphasised. The Care Homes Vanguard was generally felt to be good at this, recognising when things had not worked and acting to change them. Additionally, the specific learning sessions within the MDT meetings were felt to give considerable value. One interviewee was, however, doubtful that lessons of failure would be disseminated as well as the successes, which was disappointing as ‘I do think that failures are often the things that we learn the most from’.

Similarly in the UEC Vanguard the need to identify and share good practice – both in terms of enablers and barriers – was emphasised.

*For me, being a Vanguard site is about identifying some of the best practice, some of things where, "Yes, these really work well," but, equally, some of the things where, "Actually, if you're going to roll this out elsewhere, here's a long list of things that you need to be wary of and you need not to do."

In the context of the ACC Vanguard, it was felt that the programme offered an invaluable opportunity to breakdown historic barriers and to start to change the mindset of competition and protectionism. Interviewees stressed the underpinning driver was collaboration and support rather than acquisition and although it certainly had a clinical aspect to it, it was not a clinical model.
I think with the ACC vanguard our approach has been not an aggressive one, it's been around trying to share some of our best practice...It's not been a hard sell, it's not been about, let's take you over. It's been a very mild approach in terms of, how can we help you? It's here if you want some help, support...Here's the evidence we've done it before. This is what we can offer.

The other Vanguards are internal looking. Ours is about sharing knowledge and experience...Our model was predicated on providing rather than the acquisition which was the whole aim of the ACC.

It is important to note here that benefits of ‘shared learning’ was not something that emerged in either the MCP or the PACS. The lack of focus on this could be the nature of the Vanguards and the enormity of the organisational transformation.

3.3.3 Factor 3: Change agenda and its locale

For a brief description of Factor 3, see page 12.

Enthusiasm and commitment

Amongst the Care Homes Vanguard interviewees, there was much praise for the very high levels of commitment shown by participants. This was felt to lead to much better outcomes, with people keen to meet objectives and to share experiences or learning.

Everyone in there wants to be there, I think and wants to make a difference and wants to work on behalf of their organisations to start building bridges and improving systems.

I don't think you can deny that there's plenty of enthusiasm. There's very key people who are very keen on making it work and I think we've got the right people to make it work.

One interviewee wondered whether there was also a ‘flipside’ to having the multidisciplinary Vanguard with many committed people:

Because there is a recognised group of people in Gateshead with a real interest in it, I think, the other people almost, not switch off, but they just think, “Oh, we will let those people get on and do what they want to do. They are obviously really enthusiastic about it”.

Overall, participating organisations were felt to have shown commitment by allowing people to engage:

The local authorities are more than willing to engage within the Vanguard, as they've proved by sending somebody along.
In the Urgent and Emergency Care Vanguard buy-in from organisations or particular professional groups was also considered key to success.

*I think what helps the vanguard project is the buy-in ... getting some of the understanding and the buy-in from some of our local authority partners, has been very challenging.*

Enablers? *I think it’s getting buy-in as a network and as a Vanguard for the whole region. We have got a very good governance structure in place and we have had that ability for everybody to agree that this is the direction of travel on particular things, whether those are individual projects or as a network in terms of where we’re trying to move to. It’s been really important to have that, from a really senior perspective.*

Overall, there was thought by one interviewee to be a lot of committed people within the region.

*I think as well that, as a region, as the North East region, we have very dedicated people, that are very keen to progress, and once we’ve agreed something, then we do deliver, I think we’re very good. I think we’ve got a good track record of delivery and commitment.*

Some interviewees suggested that the buy-in from clinical teams was paramount.

*I think if you’ve got clinical buy-in you will drive change and success.*

For some participants, continued participation in Vanguard was also regarded as a measure of commitment:

*I think the very fact that we've still got full participation a year, 18 months down the line shows that the commitment was there and that I think people value the work that's taking place.*

In the context of the PACS Vanguard, participants expressed enthusiasm and passion for the programme and for the future of an ACO with an accompanying confidence that it would improve the health and social care system.

*It's given me a new lease of life with my work - it's lovely to look up at the bigger picture...this sort of, it's for the Vanguard therefore let's try, seems to psychologically give a lot more permissions...I am surprised at the optimism it has developed I guess.*

*I just think over time that culture of we are all working for the same purpose I think has massive opportunities.*
However, interviewees noted that not all providers had fully signed up to working within the ACO. In particular, concerns were raised that the Newcastle Foundation Trust had not yet agreed to participate leading one interviewee to comment as follows:

*The elephant in the room is the fact that we have a great big hospital trust which still sits in the area...It is a bit of a concern because from a needs perspective the people that go to that hospital tend to be more affluent...we are just going, oh that's a bit hard, let's concentrate on the easy stuff, rather than looking at the whole thing.*

Some argued that the programme had been left to key individuals and although other members of staff were kept informed, there was a perception that the understanding had not filtered through into the wider echelons of the healthcare system. It was hard to make the necessary and at-speed change when full collective ownership was not present. Again attention was drawn to the perceived isolated pieces of work and accompanying lack of awareness.

*I mean the challenge, which we think we crack but we don't really crack is engagement. Engaging health care workers and other leaders in the system...I would say it is a fragile thing, engagement from leaders to healthcare workers, particularly GPs, it has to be developed.*

Colleagues say, so what is happening with Vanguard? Without really knowing what Vanguard is. Then me having to think, I wonder what Vanguard is...It has almost become a term occasionally bandied around without people really understanding what it might mean for them...I think that is probably because there have been a lot of small pilots that will mean something but they are only happening in certain areas.

**Building on existing networks**

Care Home Vanguard interviewees often referred to the way that the Vanguard built on an existing network, namely, the Gateshead Care home initiative, enabling further development of its ideas. The relationships formed within that network were believed to have enabled Vanguard to get up and running quickly.

*I think we'd already had the idea that was the point that you went to vanguard to bid for the opportunity to take something that you're already doing further and develop it, so we'd already started to do the work and set up the idea before the vanguard was involved. And I think it was already starting to come together and work well, which is probably one of the reasons why we were successful.*

There was no clear consensus amongst UEC Vanguard interviewees as to whether the Vanguard was built on an existing network or whether the two started at the same time. One interviewee said:
You’ve got a Central Department of Health Team that is interested in Vanguards, that is breathing down the necks of the Urgent and Emergency Care Vanguard, which just happens to be the same as the Urgent and Emergency Care Network, which may or may not have a different function in life than what the Vanguard does.

In the context of the ACC Vanguard interviewees emphasised that the Trust had had a strong history of developing external relationships and there was a clear sense in which the Vanguard was seen to have allowed such relationships to be both solidified and developed further.

I think what the Vanguard has allowed us to do is put a bit of skin in the game. In other words we have had some investment which has allowed us to back-fill, to spend some time furthering the partnerships.

Notwithstanding the difficulties, respondents also spoke positively regarding the development of new relationships with both private and public sector clients both within and external to the UK. The alliance with Ribera Salud (a leading healthcare management organization in Spain) for example was seen by a good few as an exciting venture.

I certainly think from an international point of view actually they are growing and they are developing a bit of a powerhouse actually...there is a real opportunity for bringing income in, for selling NHS services in a way that we could never have been able to previously do because that alliance approach gives us capacity and capability across a number of organisations as opposed to just one.

3.3.4 Factor 4: Simplicity and clarity of goals and priorities

For a brief description of Factor 4, see page 12.

Goals and priorities

Participants acknowledged that setting goals and priorities is key to the delivery of each Vanguard’s aims and objectives. A UEC Vanguard interviewee said that a key enabler to success was ‘clarity of scope, purpose and vision’.

Many interviewees commented on the need for participants to share goals, as this enabled ownership and allowed people to feel fully involved and committed. As participants in the Care Home and the Urgent and Emergency Care Vanguard commented:

If you’re not all heading for the same outcomes and you don’t have common purpose across that system, common understanding, and knowledge, and purpose, how can you deliver?
I think we’ve got a common goal and objective that we probably haven’t been sighted on before, and it is how we best do it.

However, for some participants in the UEC Vanguard the lack of common ground between key stakeholders in the network was perceived a significant challenge.

I don’t think we’ve found the common ground, I mean what we do have is the ambulance service that works across all, as a service. But how the acute trusts interface with the ambulance trust is different in every perspective.

**Measuring Performance**

Several interviewees raised the difficulty of choosing the right ways of measuring success, with widespread recognition of the problems of target-setting sometimes being led by the sort of information available.

I think data is an issue, actually. We've been given specific metrics to work to and achieve, but actually, even the things that sound like they should be easily measurable often aren’t, and things that are meaningful often aren’t easily measurable.

I genuinely think that some of the key actions, identified outcomes, identified process indicators will be difficult to measure.

One interviewee pointed to the need for involvement over the metrics:

*Every single metric associated with our Vanguard programme is related to frontline service delivery, and not just clinical care delivery. Therefore, clinical engagement is vital.*

**Availability of resources**

Availability of resources was considered as a key factor for the successful implementation of each Vanguard. With regard to protected time, in the Care Homes Vanguard, those professionals whose time was funded (so that they could get cover for sessions) felt this allowed them to attend meetings and participate to a greater extent.

One of the benefits is having the time to think about what is useful. Normally as a GP you don’t get much time to reflect on the value of what you are doing or why you are doing it, or how you might be doing it.

As such, having dedicated time for the UEC Vanguard was thought very valuable:

*I think their focus is 100% on the aims of what we’re trying to do. I think for the rest of us it’s that conflict between the priorities of the vanguard and your local priorities and where you get that balance.*
However, there appeared to be some resentment that not everyone’s Care Home Vanguard time was covered and that for many the tasks undertaken and meetings attended were just assumed to be part of their everyday responsibilities.

Why was it allowable to pay for GP and consultant time, but not to give something to care homes for their involvement?

Apart from the importance for having dedicated time, other resources, and the ability to access them quickly through the Vanguards, were mentioned, with one interviewee giving the examples of being able to put together a poster for a conference and obtaining funding towards a diploma in elderly care.

Participants also valued the Vanguard’s initiatives for the 'pump priming' that had allowed plans to get underway and be supported earlier than perhaps would have happened otherwise. Financial resources provided to the UEC Vanguard were valued by some interviewees:

It brings some extra capacity into the system to actually do some of the work. Obviously in the past they've also had financial resource, which I think has helped them gain traction and gain influence. I think of pieces of work, like the programme to roll out direct booking for GP practices via NHS 111, I don’t think that would have happened without the financial resource that the Vanguard was able to bring to bear.

Even though we knew it was non-recurrent money it was useful to be able to commission pieces of research, develop training, implement new IT systems. There is still a lot you can do with non-recurrent money. Testing new models enables you to be sure that it's something worth freeing resource to fund on a longer term basis.

However, in terms of funding, the Care Homes Vanguard reportedly only received 44% of what they asked for, so that it was unlikely to be able to fulfil all of its aims. The UEC Vanguard also failed to get the amount for which it bid:

I think the vanguard initially it was a bit of an anticlimax because we were initially all told that the vanguard was bidding for about £30 million worth of funding, and that went down from 30 to 20 to 10, and I think in the end it seemed they ended up with about 8 ½ pence. The scale of their ambition had to be radically reigned in.

There were reportedly disputes over the allocation of the UEC Vanguard allocation.

I think the financial constraints were a massive issue, how the vanguard allocation would be used, who would get access to it, where it should be. I think initially there was a school of thought that the FTs were under considerable pressure when the vanguard was first up and running. Actually, they’re under more pressure now, but in a different kind of way. And I
think the money was originally seen as, by some of the FTs, as maybe a quick fix, a golden bullet: “if you give the cash to us we can improve the floor, we can make the difference”, but that doesn’t necessarily get to the root cause of the problems that we’re dealing with.

I think the frustrating thing is seeing how stretched we are and what a shoestring budget we operate on, so to see hundreds of thousands of pounds going on project management.

In the context of the ACC Vanguard, for many of those interviewed, the work on the ACC was not, as they described, part of their ‘day job’ and for some this created almost an irreconcilable tension:

My role is not the Vanguard ...and that's sometimes the tension because the day job is the day job....but everybody is incredibly pressurised and if you don't keep an eye on the day job, the day job gets worse.

So trying to manage this with our current capacity, not capability, our current capacity is always a stretch when you have the day job. Effectively the Vanguard funding for ACC only allows for an incredibly slim project management function.

Many of the interviewees were highly critical of the reduction in the Vanguard financial support and that there had been no guarantee of funding over the three years.

Sometimes to do a transformational change you do need a bit of pump priming - when you are getting half the funding that you need, that is a bit difficult....I think the challenges are the initial excitement has been a bit tampered down because of the way that the funding allocations were cut in subsequent years.

There was additionally a common perception that the short-term investment was not enough to sustain the work and development and that once the Vanguard support goes, the programme would continue but that the pace would be a good deal slower.

The money was nice but it is not going to be there but as I said it was always going to be our clinical direction of travel so we will be continuing to support it - it's just the pace of change will probably be a little slower than it might have been.

I am not confident with it coming to a sudden end...because if they are not providing any money or any funds how are they going to keep up the impetus on delivery? I don't think we'd stop because we've got that relationship with organisations now - I just don't know if it would continue as extensively as it is doing now.
3.3.5 Factor 5: Cooperative inter-organisation networks

For a brief description of Factor 5, see page 13.

Organisational governance structures

Some interviewees felt that the Vanguard initiatives have the potential to address the problem of silo working, although they felt that it would have been addressed anyway, having long been recognised as a barrier. As participants in the Care Home Vanguard commented:

At the moment, there's a boundary line that comes in between each thing that you do. "That's health. That's social work." It shouldn't be like that. It should be everybody working together for one outcome for the patient or the service user.

It [Vanguard] definitely has the potential to reduce silo working. Very much, it's shifting us towards integrated provision and integrated commissioning. By default, that should bring us a reduction in silo working.

People get very protective about their bits of the patient's journey, but actually this is about the patient and their journey. I think our vanguard is good at putting the patient at the centre.

Although the role of inter-organisational collaboration in the delivery of each Vanguard’s aims and objectives was acknowledged, current organisational arrangements could sometimes be a barrier to successful joint working:

I think the commissioner-provider split didn't help anything, and I think it causes a lot of mistrust and missed opportunities for working together and sharing.

In the context of the UEC Vanguard, different organisational structure and governance arrangements across different providers could become a barrier to the delivery of the programme’s aims and objectives.

Governance from an acute trust is very different. So as a [UEC] network, I don't think the acute trust recognised the regional network, as a formal line of governance for them, as a provider.

We have two acute trusts and the focus in each acute trust is very different, and the pressures in each acute trust are very different, and they conflict.

We’ve got 44 [primary care] practices and they’re all single businesses and entities. They’re influenced by different things, by different people.
In the case of the MCP Vanguard, respondents described a complex matrix of relationships and evolving networks during interviews but there was a unanimous view that relationships within the Vanguard were by and large extremely positive, fostered by collaboration and collaborative partnerships rather than by more directive leadership. They were also thought to have been enabled by the history of partnerships in the area and by the fact that many of the individuals involved had been based in the North East for some considerable time in both the statutory and non-statutory sectors.

*Lots of the work and the vision and the desire for change pre-date the Vanguard. So the basis was there for change, the partnership working...the environment and the culture to have a collaborative approach...so people who step into leadership role come into a well-established culture of collaborative working.*

*We’re all on the chessboard, and we just, kind of, get shuffled about. So you build up your informal networks at the same time, and relationships, and that really helps drive change through.*

However, there was also evidence that support and ownership of the Vanguard among GPs was variable in spite of incentivisation.

*When you speak to a lot of GPs, they know it's there but they don't know what it is doing...so it's not like they have sort of owned it.*

*I think we’ve definitely got room to go with the practices. General practice is under pressure. We’ve funded them additional time recurrently from CCG investment. With practice nurses, I think we have missed a trick and from a MCP perspective, they’d need to pick that up.*

In the context of the ACC Vanguard, most participants agreed that the history of partnership working between health and social care had provided an excellent spring board that underpinned and determined the ACC.

*We were always very strong in terms of clinical, operational, corporate...there is a bedrock round our health care business so now we have not got the commercial bit but I think it has given focus to talk about how we develop further.*

*We’ve had very strong historic relationships with primary and social care. I also think the partnerships that are really strong historically within Northumbria are the managerial and clinical partnerships. The way we organise our delivery of care through business units that are jointly led by managerial and clinicians is that it is sometimes difficult to spot who's the clinician and who is the manager.*
Some interviewees reported how successfully relationships had been developed with different sectors and had encouraged a more external focus.

*You become myopic in some regards because you just see what you do within your own organisation. You just assume that some of the good work that you are doing everybody's doing. You don't necessarily think it is of interest or a benefit to other parts of the NHS. I think the Vanguard work has shifted our mindset around that a little bit.*

However, a central focal point of discussions concerned the difficulties that the work and nature of the Vanguard could cause with external partners. The innate competitiveness of hospital trusts ran somewhat counter to acute care collaboration and at times was thought to harbour suspicion and mistrust.

*Then, there needs to be a bit of a behavioural shift, because by nature hospital trusts are competitive with each other and counter to the collaborative approach, which is what acute care collaboration is about. Generally, it can be quite parochial.*

Asking Trusts to buy into and pay for change when there are severe financial constraints was also clearly an obstacle.

*I think it has quite difficult to get trusts to buy into change when they actually have to stump up in advance. I can see that being a struggle... Everyone is so suspicious they are going to end up spending money.*

*Ultimately the money debate takes over...If people they think they can save money they are more inclined to do it.*

Financial constraints were also thought by respondents to reinforce organisational protectionism which in turn discouraged or prohibited collaborative working with external partners and further encouraged the fragmented nature of the system.

*Organisations protecting, particularly under times of pressure, what they need to protect for themselves and a difficulty in seeing the benefits of working in new ways that is of benefit and a greater good and we have got a mentality of, we don't have enough so we protect that as opposed to thinking we are all part of the solution of making things better.*

It had been harder convincing potential partners that the relationship would be built upon collaboration and not competition or indeed acquisition. In this regard, the difficulties with Cumbria were highlighted but most felt that lessons had been adequately learned.

*I think it is going back to prior to the Vanguard we were going through a process to acquire Cumbria. I think that learning has helped us to understand some unintended consequences*
that we wouldn’t want to repeat around culture, and how during major change cultures collide, and what we would do differently. (But) even in Cumbria we always looked around collaboration and partnership approach.

More complex though was the balancing of collaborating with different partners within different sectors particularly since the concept was clearly not aligned with the profit making motives of commercially based organisations.

As soon as you start developing models with organisations such as Rovera, PWC, Metronics, they have a slightly different incentive. So ensuring we have the right balance and we keep patients at the heart of it, which is what we hope to achieve to do, but you can absolutely understand that will always be a challenge to get to the right place.

In the context of PACS the continually evolving and ameliorating set of relationships, despite inter-organisational barriers, were also set against a context of a range of both managerial and clinical networks, formal and informal. There was evidence of a conscious process in operation that was using informal 'relationships' and networks as a precursor of more formal arrangements operational or otherwise.

We relied very heavily on the working relationship day-to-day outside the Vanguard to get us through some difficult times...So where we have had positive relationships and informal networks, we’ve relied on those to get us through some of the operational movement.

It was implicit however, in the majority of interviews that it was not merely a matter of cross organisational relationships. Although opinions were divided as to the interplay between organisational and personal relationships, the latter were an undeniable factor. Some explained how clashes of personalities had been quite instrumental in subsequent organisational development.

I think it is bound to change. I think we have got good relationships but I think they need to be stronger and it is not just about being happy or comfortable, it is about being able to genuinely prompt, provoke and challenge each other in a constructive way and it is also about how we regain that trust that has gone over the years.

I think the key relationships were very strained at the beginning...there was a clash of personalities, a clash of priorities and just a clash of focus.

3.3.6 Factor 6: Staff engagement and relationships (managerial-clinical relations)

For a brief description of Factor 6, see page 13.
**Relationships and joint working**

There were varied opinions amongst the interviewees about the value of MDT meetings. It is worth noting that within the Care Homes Vanguard, there are specific MDT meetings (long known as MDT meetings, now renamed ‘virtual wards’) and Vanguard meetings attended by people from many agencies and disciplines. Some Care Homes Vanguard interviewees were familiar with the former and could comment specifically on them. Others were able to comment on the multi-disciplinary Vanguard meetings, although not all thought of them as MDT meetings. The protected time for Vanguard meetings was much valued among the participants. As one interviewee commented, the protected time allows one ‘just to think about stuff that’s been going on for years’.

*Usually we don't have any time to do stuff like that, and it just all gets squished by everything clinical, even if you are meant to be doing stuff like that, so that's brilliant ... I think we can achieve a lot... Having that ability to have some protected time to look at these things in a shared group with people from lots of different backgrounds and views is just priceless.*

*Any project requires time and allocation of people's time too. It's that they're dedicated to the project rather than being pulled in 100 different ways.*

Beginning to understand the viewpoints of other organisations – and the reasons for one another’s problems, was believed to be a key outcome of the multidisciplinary meetings for the Care Home Vanguard.

*It’s very easy to sit and look at the people in the next silo and go, "Well, they should be doing it like that. Why are they not doing it like that?" Then actually, you realise, "Well, there are very good reasons why they can't do it like that."*

*It is very important ... to appreciate the pressures that social care are under, the pressure that care homes are under, and how that translates into patient care, really.*

*I think vanguard gets people in the rooms and gets people to see things from other people's perspectives, and I think before you can realistically start to talk about shared working you have to take the time to put in the structure to get people to see other people's point of view. It's very easy to come from a perspective and not have an understanding of what other people's drivers are. I think vanguard does enable people to start to see each other's perspective. I think everybody recognises that there's waste, and frustration, and inefficiency in silo working.*

*We have just got a much better understanding of the care home's completely different perspective.*
We’ve now got a few care home managers that come regularly to the Pathway of Care meetings, it's absolutely brilliant to get their insights so we're not running off and doing something that they know.

And over time I think everybody has been able to see or experience life through somebody else’s lens for at least a period of time.

The multidisciplinary nature of the meetings allowed participants to involve other experts if appropriate, sometimes calling in people they had known through other networks. Some felt that the Vanguards had enhanced other relationships, making it easier to avoid duplication by communicating to others that particular work was happening and taking the relevant issues to the large Vanguard meetings. In this context, the variety of disciplines and agencies represented was felt to make actions more achievable:

You've got potential to achieve so much more because you've got all the relevant partners in the one room.

I think it's helpful to have a focus on improving care and service improvement that sits at a wider level than an individual employer, authority, whatever. So it's really helpful to have that ability and expectation to act together across different providers, authorities, whatever you want to call it.

Making new contacts in the meetings was also deemed important, with interviewees saying they now knew where to go with queries, or who to ask for additional contacts.

It's opened up loads of doors ... it has brought everyone together, much more than ever before, so just having all those people round the room from Newcastle and Gateshead, comparing and contrasting, and just having named people that you know now from being in the same circle of discussion.

Several interviewees felt that the Vanguard Care Homes meetings were helping to combat the silo working for which health and social services have long been accused. Sharing of aims and learning about the viewpoints of others was felt to help with this, along with the growing recognition that joint working was the only way to work in times of severe budget constraints and cuts. However, a few organisations were considered to be underrepresented in the Care Homes Vanguard. Care Home managers had been late to join but their presence was considered invaluable.

Interviewees recognised also that although they valued the multiagency, multi-disciplinary input and the ability to bring in other experts, there could be problems when new
organisations, or new representatives, came along, in terms of bringing them up-to-date with the intentions and progress of the Vanguard.

Some people have come in at a later date who want to reinvent the wheel.

For some participants the inclusion of many different organisations can also add complexity:

You're pulling together lots of different employers and areas of work which, although all the people in the room might be very up for all working together, once you bring the bigger beasts in, it's not as simple as that ... you're wrestling, then, with lots of different sets of values, ability to change, flexibility etc.

In this context, the face-to-face relationship was considered to be really important.

Rather than just an email correspondence and having a mutual patient but never seeing each other. It is actually quite nice to meet the person and know the person a little bit better.

Participants also recognised trust between agencies as essential in the delivery of the Vanguards aims and objectives:

We've got a high level of trust, which you have to have when you're going to communicate across community and secondary care boundaries, across IT boundaries, across care home, hospital inpatient, outpatient, regional, GP boundaries. There’s so much there that could be an obstacle, but if you’ve got that trust, the clinical sharing then becomes easy because you’ve got that relationship.

Among UEC Vanguard interviewees, few regarded their Vanguard meetings as MDT meetings, although one said it was definitely one, ‘because the emergency care pathway is actually a health and social care system issue, not an acute trust A&E problem’. According to one interviewee they were not like large scale MDTs because of the differences in perspective of the different organisations and the differences in governance structures. Another said the MDT has a single patient focus and that at Vanguard level it was really just multi-agency working. Another participant commented:

I wouldn't describe it as a multidisciplinary. What I would describe it as is a regional, operational and a regional, strategic structure. To me, a multidisciplinary meeting would be full buy-in from a local authority. Because it covers a region, how do you truly get represented from each local authority? So we may have one rep but is that true representation?

One participant felt that the meetings were too large while others felt that there were political issues at play in the UEC network board meetings:
The network is a very unwieldy meeting, it's difficult to draw that balance between everyone feeling that they're part of it to having a group that - We often have 40 plus people around the table, with the best will in the world it's really difficult to get everyone to move forward in agreement around all of that.

The politics is really evident in the network board meetings. Maybe not so much in the operational group ... But in the board the politics really comes to the fore, so the relationships between some of the provider organisations and the CCGs, or the provider organisations with the local authorities.

Although trust between agencies was considered as essential participants recognised that good relationships can take time to develop.

I think like any kind of group it takes a little while to develop.

Similarly, in the MCP Vanguard participants argued that in spite of a history of long-term relationships, the transformation that was needed especially with respect to organisational development was inevitably going to take time. More pertinently, previous commissioning relationships particularly with the local authority which had been built within a 'cash rich' environment and climate were now under some pressure given the present harsh cash-strapped financial situation.

In the context of the ACC Vanguard, although there were reports of on-going difficulties, those who were integral to the Vanguard's development argued that given the nature of HIP QIP programme for example, it had necessitated joint working and good communication across a number of specialities.

The project that we are doing on hip fracture involved all specialities, all disciplines of the multidisciplinary team. We have Band 2s and senior consultants all in the same room... I think they find that quite unusual and almost inspirational in that they realise that working with other specialities and areas and disciplines is helpful in leading change.

There was a level of debate across interviews as to whether there was MDT working within the ACC. Some regarded that the emphasis should not be upon the inter-disciplinary teams that may or may not be working within the programme but instead upon best practice and their advisory role. Notwithstanding this approach, there were reports that for instance the teams around the HIP QIP were 'truly multidisciplinary'. Training was also seen to be innovative with all professionals being involved at the same time.

It is not like we sit around and discuss specific patients, like a traditional MDT, but the team is definitely multi-disciplinary and has a very wide range of people involved.
Some of the development work in those collaborative is about learning those skills - the ability to see things in a different way...from a different perspective at the heart of improving and influencing. Some of our teaching and learning on those collaborative is about that very stuff that some people call soft. I don't.

It was argued that efficiencies would be brought by focusing upon and creating new roles, new responsibilities and a more collective leadership approach.

In the context of the PACS Vanguard, relationship building had clearly been a major feature of the Vanguard and there was overall a sense in which there had been huge improvements at different levels and within different paradigms. In the first place, communication and relationship building was continuing to improve between primary and secondary care although it was put forward by a number of participants that the level of trust since the inception of PBR and the commissioner/provider split had been a fundamental barrier. More interesting was the observation that self-confidence of both organisations played a part and within such a complex picture it was difficult to maintain a balance of power or relationship with which people felt comfortable so that it did not feel as if one partner had any leverage.

So I think there is also a bit of how self-confidence both the individuals and organisations are taking part in it...So I think we have got on the one hand a Trust who is relatively self-confident in finances and in reasonable nick and we've got primary care who are in a totally different place....and their ability to have headspace and think differently is a bit more limited...it does need leadership from both sides.

In terms of partnership working it was notable during discussions that on the basis of the complexity of the changing matrix of relationships, it was apparent that respondents found it difficult to focus upon the nature of and changes in inter-professional communication. This was made explicit by one interviewee:

I think if you can create some relationships and friendships way before you start any project you always going to do better than just launching straight in. I think creating the right system and the right relationships make it work...it is essentially then understanding and emphasising with your colleagues and actually looking at where the ability for joint working is.

Clearly too, was the need for the building up of relationships at all levels. Even though relationships between health and social care had been built up over many years, it was thought they hadn’t really materialised on the ground. One respondent reported that the contrast between working within the 'flat structure' of the CCG compared to the bureaucratic and hierarchical structure of the Foundation Trust and council was particularly challenging.
Notwithstanding this, many interviewees did comment upon the long-established working partnership between health and social care exacerbated by co-location but for some this had not necessarily enabled a greater understanding.

*So the people who would be my equivalent colleagues, we don't spend any time together - we don't really understand what each other is doing and whether there is any crossover or conflict.*

Difficulties in operational relationships were also evident again between the acute and community sectors and the seeming lack of enthusiasm among acute clinicians for working in the community.

*We still haven't cracked the relationship and models of care about how we pull our secondary care colleagues out working into the community more. We done some decent pilots of it at a local level, for example in Blyth but what we haven't done is starting looking at that integration of relationships across the whole county that wraps around that.*

*It is a totally different ballgame dealing with people in the community than it is in a hospital - you either work in one box or in the other...That is what we are trying to do break down that barrier a little bit more, but that's an ongoing challenge really.*

Although there were concerns that inter-professional communication and understanding remained a challenge generally it was felt by many that there was evidence that this was indeed shifting.

*I think we are conquering quite a lot of the organisational stuff, but what we haven't landed yet is the culture and mindsets of how clinicians can work together in different ways - we have pockets of it in primary care, it's brilliant.*

The majority of interviewees agreed that in the main MDT working had worked well in that most believed that it was undoubtedly the way forward. Although they were not new, under the Vanguard they had been trialled in a number of different ways, for different purposes such as practice MDTs and enhanced care MDTs.

*I think it’s a funny one with these things because everyone can kind of - everyone says they’re doing it. It’s like a bit motherhood and apple pie, of course it’s a good thing to do, why wouldn’t it be? For me it is getting under the skin of that to what is actually an effective MDT.*

Key protagonists considered that part of the problem had been understanding that an MDT was not merely a group of professionals discussing a patient but instead necessitated structure and 'ownership', resulting in the recruitment of operational managers and/or care navigators.
I think we perhaps naively thought that if you create an MDT and bring experts together they will be able to sort out how best to organise and manage themselves...when it is not working well, nobody seems to have the confidence to hold people collectively to account when they are not working in their own team or organisation.

The most common criticism was that there had been no scaling up but it was also important to ensure and balance consistency with local needs.

We've got enhanced care teams in Blyth for example but we are not doing it on any level of scale...I don't want to end up with the poorest common denominator but actually, as a system, what are we choosing as our way of working that has got a level of consistency across the country but also has local nuance where needed?.

To make this all work, we have got to be able to do it at scale. We are doing an awful lot of very good things in small areas in isolation. We need to be able to do it at scale across the whole patch. That is when I think we will start hitting up against the issues such as geography but also you then look at the resource.

Aside from resources, time and 'back-fill' of staff were additionally considered to be major barriers. Further staff had to see the value and benefit of the team.

I think the biggest issue about MDT working is creating the time where people I think are working exceptionally hard. There isn't an additional workforce that you can put in because there is nobody to back-fill...it is less about the money and more about the workforce.

The challenges have been to try and get people to think differently, just trying to get GPs and community nurses to buy into this. I think people have this perception that an MDT is an expensive resource ...they are not potentially seeing that an MDT could release some staff time for them.

Others drew attention to the importance of not simply understanding roles and remit but equally of understanding each other as individuals irrespective of patients and patient care.

We can count the meetings and count the number of people we talk about but what is actually the key is who are the two people that are doing something or interacting differently and what is the benefit of that relationship? I think some of the work we have had to do is almost like taking people to introduce themselves even if they are sat around the table which people have found really difficult.
3.3.7 Factor 7: Key-people leading change

For a brief description of Factor 7, see page 13.

Leadership and champions

Effective leadership was felt to be the key enabler to ensure success. In the Care Homes Vanguard, many interviewees commented on good leadership, including that shown in the chairing of meetings where all were encouraged to contribute and the chair knew who the best person was to ask for advice or action.

*I think we do have some good leadership in that meeting as well, though. I think the 'Task and Finish' groups have been really well organised and we’ve been allowed to explore. You’ve got your set national metrics with vanguard; we’ve got the additional local metrics. Sometimes we have to be reined in to focus on them but we have been allowed to be visionary and explore as well.*

[The two perceived main leaders] ... have been absolutely exemplary leaders, and you see that in the enthusiasm that they instil in frontline staff. The way that they’ve talked to everybody and engaged everybody from people at trust board level to healthcare assistants in care homes. It has just been outstanding really, I think that's worked really well.

Among UEC interviewees, there was less of a consensus of opinion on the Vanguard leadership:

*I think the leadership of the Vanguard was very much of the mindset that they had a short period of time to do things in and they wanted to make an impact and hit the ground running, which I fully understand. I think my perception of the way that they conducted the business though was generally to set up groups and declare that it was a decision making group and everyone had to be there because the decision was going to be made, and then inevitably people couldn’t get to the meeting and organisations weren’t in the room. Decisions were made and then there was a kind of an attempt to sort of steam roller it through.*

*I think it’s well led ... [the leader] has always communicated and kept everybody apprised of what is going on.*

Whilst initially being asked about champions, many of the Care Homes Vanguard respondents mentioned one or two people, most then changed their minds and said they felt everyone there was a champion. This was also the view of at least one UEC Vanguard interviewee:

*I think the champions are actually every organisation who signed up from the outset and who have lasted the journey. There's nobody dropped out, nobody fallen by the wayside. So if you're looking for me to say one individual then I won't.*
One UEC Vanguard interviewee saw programme managers as champions:

*They’re very much for me the face of the network. I think whenever I’ve had any dealings with them or asked them to do something they’ve done it and they’ve always delivered what they’ve said they would, so in that respect I think they’ve been very capable champions.*

Clinical leads and people working close to the day-to-day operations were also described as UEC Vanguard champions:

*One of the clinical leads ... has been very visible at network meetings. I think, again, a senior clinician that gives some influence, some clout as well.*

*I think having clinicians in key roles within the networks really helps.*

*I think there are champions from different groups or organisations, there are champions of different initiatives.*

In general, interviewees felt there would be a continuing need for champions:

*We’re going to need champions and flag-bearers for a long time to come yet, because frailty has got to become everyone’s business.*

*I would like to think that we get to a point where what the vanguard brought in becomes business as usual, but there will always be a need for people to come forward with new ways of working, new initiatives, new schemes, and that is where we need the champions.*

In the MCP Vanguard, there were some who commented that it was hard to advocate or champion anything in the face of such massive cuts and loss of funding across the board at the same time as trying to deliver services. But almost all drew attention to some whom they considered to be championing the cause. Although there was a group who considered that the Programme Management Office were the true advocates who were linking everyone and maintaining the momentum, interviewees appeared to fall into two groups. Firstly, those who considered that there were champions at every level and, secondly, those who considered it was a more of a moving feast as the Vanguard became more established and gathered momentum.

*The come from throughout the system...the people who have very much brought into it... I was going to say, fighting the cause, but ...more leading the way and pushing people and getting people involved and moving on.*
I think when we set off, I think the champions were very much the CCG. I think the Vanguard resource has enabled us to establish the PMO and there’s a leadership around that but it has also enabled us to engage with clinicians and practitioners

In the context of the ACC Vanguard, interviewees believed that at this stage, advocates for the Vanguard were largely restricted to those at Board level and project leaders although it was envisaged that this would change as the portfolio changes.

In the PACS Vanguard, consistent leadership across organisations was thought to have been a key enabler and some disruption had been temporarily felt when the Chief Executive of the Foundation Trust had left which was seen to have slowed the process down. Nonetheless, there were feelings across the interviews that management generally was distancing itself.

My concern would be the senior management level is beginning to be a bit detached from day-to-day clinical running. There is a lot of, we are going to do it like this...these are our priorities for the next five years, what do you think? Rather than, what do you think the five priorities should be for the next year?

Despite the majority of GP practices ostensibly being on board, it was frequently remarked upon that it had taken at least 18 months for this to happen and acute care clinicians were also believed to be somewhat resistant. Although this may have been through an inability to see the wider picture, it was equally argued that there were simply not enough leaders amongst primary care in particular and above all their fragmentation led them to feel a lack of parity within provider discussions. There were also reports that among GPs there was a view that this was a plan to ‘destroy primary care’.

But within our CCG, there are a few individuals heavily involved in it and others are sort of almost on the sidelines...Even the clinical directors who are GPs I think their primary concern would be, how is it going to affect them directly, rather than what is the benefit for Northumberland as a whole?

I have no doubt that we've got some great leaders in the county in general practice but their potential is not being unlocked...they are locked into a model of general practice which is gradually, slowly diminishing their energy levels.

There was a mixed picture drawn with regard to champions for the PACS Vanguard and a range of perspectives as to where they presently existed. Some argued for example that they only existed at executive level while others believed that they cut across all sectors including both primary and secondary. Most however, considered that it was an evolving picture and the number of champions would increase as the ACO develops:
I think it will change...we'll be looking at this from clinical pathways so I think with consultants, nursing specialists, we can't do the next stage without these guys. I think if they are involved in the pathway redesign from the beginning, they will own the journey.

Despite a minority who suggested there would be no need for champions once the ACO had come into being, the majority felt that there would always be a need for champions with some suggesting that the nature of the champions was and would change as the ACO develops with different programmes to advocate and outcomes to achieve:

I think they are more promoters than champions now because I think enough people know about it and are positive about it - championing it almost means you are cheerleading it a bit whereas now I think they are more continuing to positively promote it.

I think you are going to continue to need leaders and champions because without consistent leadership integration is going to fall flat on its face.

A number of interviewees commented that there had been a concerted effort not to champion the Vanguard programme as such since this might detract from it becoming embedded into normal practice particularly in the approach to primary care:

We try not to do Vanguard as a special project, it is how are you working and how can we improve what you are doing...it definitely has to be business as usual...there are people who are working on projects who don’t actually know they are part of the Vanguard.

3.3.8 Factor 8: Quality and coherence of policy

For a brief description of Factor 8, see page 14.

Sustainability

Some Care Homes Vanguard interviewees felt that the programme was not feasible within the budget and that money would definitely be needed to complete and continue. There were differing views about sustainability amongst Care Home Vanguard interviewees:

I get the impression that a lot of what they’re trying to do is sustainable within the Vanguard budget that they have at the moment. But then it will fall to the care homes to continue some of them long term. So whether that is doable or not, I don’t know, because they’re all about profit, aren’t they?

The rest of it [the elements of the Care Homes programme not yet completed] needs to continue, post-Vanguard, in another way. What looks, on the political picture, to be the way to do that now will be with the Sustainability Transformation Programmes, the STPs, and the Out of Hospital Agenda. That should be the vehicle for us continuing.
The core model of the enhanced primary care aspect with the LINK GP and the LINK nurse, I think that will outlive the vanguard but the other aspects of it I don’t think will.

There was also variation in the ideas about sustainability amongst UEC Vanguard interviewees:

My worry is Vanguard ends, money ends, and how do we keep the momentum going, and how do we keep the support going? Presumably, the infrastructure, once it’s there, will be there, or does that need extra support? It’ll need extra support ....It’s a lot of money...That will have to come out of commissioning budgets to pay for it ... I think there’s been some good groundwork established, and I think some good structures, systems and processes.

It’s not about sustainability for me, the vanguard was very much around improving, enhancing ways of working. I think it’s been very successful in doing that and I think wherever possible, those changing ways of working will be maintained and sustained.

I think in just getting the conversations going between some of the key partners, I think that will probably the vanguard’s legacy, the networks that have grown out of it ... both the formal and informal networks, really.

In the MCP Vanguard a good number of respondents were reluctant to commit themselves to commenting upon the financial viability and sustainability of the Vanguard and referred instead to the present development of the business case.

Obviously the difficulties are going to be around the current financial challenges that we face from both the NHS and particularly the local authority...and I think we are at a very critical point in almost deciding whether our future model is affordable.

Implicit in the majority of interviews however, was a level of nervousness and uncertainty. At one level some questioned the modelling but others questioned the whole programme:

I suppose it is whether the expected reduction in our activity is realistic and have we got the modelling right around that.

We are now doing our outline business case. If we are unable to demonstrate this financially stacks up then what is our plan B? Because at the moment we haven’t got a Plan B.

In part this was based on the reported evidence that even though there had been a positive impact on non-elective admissions for the cohort that had been within the target groups under
the Vanguard work streams, other admissions had risen. Partly this unintended consequence challenged the risk stratification process and the nature of the target group/s but also it was thought to be due to the way admissions were being recorded because of national targets.

*I think that's still been a leap of faith because the data we've got so far demonstrates for the rest of the population the admissions have gone up. So we need really this year to get into the next tier down, the next big chunk down in the population...there is lots and lots of work to be done...we really need to accelerate that as quickly as possible. If we don't get into that, then I think we will struggle.*

In the context of the ACC Vanguard, there were also contrasting opinions as to the sustainability of the Vanguards in the North East. On the one hand were those who believed that they were more likely be sustained at a regional level because of the historic collaborative nature of the North East but on the other, were those who argued that little thought had been given to sustainability.

*There is almost a naivety in believing the plug and play model of, well it works here so we just replicate it in X, Y and Z. Actually the context in X, Y and Z are completely different, the culture is completely different, the leadership is completely different.*

At one end of the spectrum, there was a minority who contended that it would become business as usual when the funding stopped but, at the other end, were those who suggested that in order for this to happen it would need to have its own structure and management. Most argued that it would be a gradual process.

*With patient experience now it is very much embedded...across a number of work streams, corporate work streams, it's embedded. I think the clinical bit it is hard to make sure it becomes normal, 'business as usual' but we are getting there.*

*It is in a little bubble at the moment, but when that bubble bursts and the word Vanguard disappears, the change will still be there. We will be spreading it because it has proven itself to be of worth it that is not too poetic way of describing it.*

Becoming sustainable however, raised issues of both capability and capacity for many interviewees. A number contended that once there is funding the appropriate staff could then be employed and working with other organisations might also alleviate some of the burden.

*I think you can get staff to make it work. I think what we are very good at in this Trust is training and development so we build that capacity internally.*

In the PACS Vanguard, in terms of its financial viability, there was a common perception that it was 'doable' on the basis it was only funding specific interventions such as the Cramlington hospital or the IT integration. The year-on funding however, worked against this.
I mean the Vanguard is association with some funding to help deliver the aims of the Vanguard but to a degree the scope has cut the cloth to match the funding that was given to it.

And the Vanguard funding can do it but we’ve never been confident because we only get on year’s funding at a time - and I guess if you try and employ people and employ people on a one year contract, you don’t get the best people. You need to employ high level community workers and that hasn’t been possible.

Further, respondents reported how many of the conversations over the past year had been dominated by contracts and financial recovery at the same time as trying to find the space and the enthusiasm for the new system.

If it wasn’t about financial recovery and all we talked about was Vanguard in preparation for the ACO, I think the conversations would have been very different this year.

There are two different conversations. You've got a lovely service development, a vision, a future, which is all happy clappy in Jesus sandals off along the beach together and yet you go into a meeting an hour later with the same group of people and you think, well what services are we going to cut because we haven't got any money and you are cut off by the tide…it is a really difficult balance.

Others bemoaned that given there was simply no money to invest, a transition period would be essential to improve services in the community as a viable alternative to hospital. Certainly it was a common fear that there was not enough money in the system to sustain much of the work. More pertinently, it appeared that there was still a lack of faith in partner organisations:

The whole bit of infrastructure is changing and relies on trust, it relies on confidence of people that we are all going to behave in a grown up way.

Under ACO the consultants will continue to operate on patients until they are told you can only do x amount this month and I am not sure if that is supported. I suppose it won't be until the ACO is signed, sealed and delivered because there's no reason for Northumbria to change their ways at the moment. There is no incentive for them.

**Capacity**

Capacity was thought to be the major barrier to sustainability of the Vanguard programme – in particular human resources, which were already a major cause for concern as there were shortages in many of the key professional groups, including GPs, nurses, and old age psychiatry. Care homes are experiencing severe problems recruiting and retaining staff.
I think one of the difficulties with Vanguard - and with STP, it's exactly the same - is that the resources aren't there to make it reach its potential. ..... I think a lot will be achieved by working differently, and smarter, and less in silos, but at the end of the day some of it is always going to be about finance and resource.

If we want to truly take this forward, you can only really expand something if you expand the amount of clinical time or the number of people available to provide that clinical time, otherwise it's just lip service isn't it? You're just saying you're going to do something, but with the same resource for 14 times as many people you're never going to be able to do it, that's not rocket science.

Some interviewees said that without the protected time afforded by the Vanguards, there would not be the capacity for the work. Rather than expecting to have to increase capacity, one interviewee felt that Vanguard was aiming to free up capacity to enable work to continue:

I think the direction of travel from my point of view clinically is around freeing up capacity and that is part of the goals.

Similarly, in the Urgent and Emergency Care Vanguard participants felt that workforce capacity issues could become a barrier to the delivery of the Vanguard's aims and objectives.

Workforce in general is a big issue across all disciplines, and across all sectors of health and social care.

The only problem that we've now got is the impact of budget constraint. Austerity is really starting to bite within the health and social care sector, which is actually impacting upon some of the ideas, visions that we had right from the outset.

I do not see there being sufficient capacity in huge sections of the system, the whole vanguard system really, at a very local level we struggle with capacity, we haven't got the people on the ground to implement the service change that we need.

Going slightly against the grain, some comments were made about improving efficiency rather than increasing numbers.

I would argue that, actually, we should be making the best of the money that's in the system, rather than always looking for more money. That said, I think we do need to be clear that this will only work if there is a clear project management approach, which would need to be resourced in some way, shape or form.
But I don’t think the professionals that we do have we use as efficiently as we could.

Similarly in the MCP Vanguard it was evident that respondents’ concerns tended to focus on capacity in the future, in particular to emphasise workforce issues in general practice and nursing. More specifically it was argued that given the national shortage of GPs, the problem potentially demanded a re-conceptualising of the training.

Certainly in the GP sector we have a real issue with recruiting GPs. That is a national problem....The clinical skills exist out there. There may be some development work to do around co-ordination of all of those different sets of skills and all the different services that are provided within the community.

Respondents were equally concerned about the resources that may be needed in response to the enormity of the challenge in regard to organisational change. This might require training in, for example, both provider and commissioning teams such as systems leadership or contract management but also the development of a new culture.

In terms of operationalisation of the model, the key challenge is that development of a new culture. It is how do we focus our organisational development continuously on developing that new culture of working.

What’s made the difference is having that focused change management team and the project management team to really drive that work. It's not necessarily having that team but it's having the resource to be able to focus on the change and still drive the improvement and the culture change.

In the context of the ACC Vanguard, there was nonetheless a clear division of opinion which encapsulated a clear tension that the short-term nature of the funding had created.

The capacity and capability within our organisation to develop this group model at the speed that we want and need to develop is a huge challenge for us.

I think other people might think we are worrying lean… it is not dangerously lean just at times it gets fractious but you don't want to put too much resource because you don't know what is going to happen. The funding goes next year, if it's business as usual what happens to the people you have put in place.

Capability

Continued training and learning was thought to be key. One interviewee (UCE) felt there should be cross-organisational training in more generic skills. Another interviewee talked of a lack of skills in nursing care staff:
There’s a huge skills shortage in terms of nursing care staff in nursing homes. I think there are - we need to make sure that the skills that the older person’s nurse specialists have developed become the norm in the district, in the nursing community. That will take some training and support and teaching and resource to go in there.

Moreover, skill mix, as much as overall skills, was felt to be important:

We need to think differently about skill mix, and that will hopefully help to- if we make how we operate exciting, and that these are the opportunities in Sunderland for people in professional roles, we might then make it more attractive for people to come and work in the city.

While one participant felt there was sufficient capability for the UEC projects ‘Capability is there, desire is there, people want to make change’, others felt that there was probably still a bit of a shortage around some of that whole system analysis.

In the PACS Vanguard, in terms of resources, the overriding anxiety expressed by almost everybody focused upon having the appropriate workforce in place. Most agreed that the skills were there but simply not the numbers.

I think the worry that we've got is that is there enough access to the right workforce at the moment to underpin Vanguard working or day to day working...there are beginning to be real pressures around the whole of the workforce issues.

So from a primary care perspective, the main barriers to delivering change have been workforce.

A number of interviewees also argued that part of the problem was identifying the skills needed to design and deliver the new pathways as well as ensuring that staff were being prioritised and used in the most appropriate way. Some also predicted a substantive shift in skill mix which in turn would necessitate a large training programme.

I think from a workforce point of view, we are always looking at opportunities to say, have we got the right skill mix, have we got the right group of people and less about banding or status but more about competency, skills, personal level skills.

There will be a lot more people crossing boundaries and future jobs will not just be based in one place that people will have to train differently and have different training jobs.
It was equally emphasised that although there were clearly potential shortages among healthcare teams, there were also skill gaps in other areas particularly in terms of awareness training and understanding of other professional groups.

*There are training needs, not so much in terms of leadership skills but in terms of understanding the other organisations...so it is very much about walking in other people’s shoes and trying to just see what it is like for them instead of all the time seeing their own problems.*

**Unintended consequences of the Vanguards**

Some negative unintended consequences were mentioned. For example, although awareness of other people’s viewpoints was felt to be a very good thing, at the same time it could reveal other unknown problems in health and social care systems.

*I think you create a monster because once you scratch the surface you just find so much more stuff you didn’t realise you had to address in care homes.*

Similarly, an interviewee felt that Vanguard had shown how huge the scale of urgent and emergency care problem was. This was felt to be partly because there had previously been two separate programme boards, one for UEC and one for out-of-hospital and their merger encompassed the problems in both.

*From a personal workload point of view ... In terms of the structures that we've established, there's a lot of drain on individual resources. In terms of the procedures and ways of working, there are a lot of requests for information. In terms of the outcomes and actions, there's a lot of box-ticking which has gone on, in my view.*

Several interviewees said that the contacts made within the Vanguard had improved other relationships and communication on other issues.

*Because people were talking, there have been quite a few schemes that one CCG might have been piloting that another wouldn't have known about.*

In the PACS Vanguard, there were a number of 'unintended' consequences that were spontaneously reported during discussions. It was suggested that there had been an increase in admissions at the new Cramlington hospital although some considered this was partly due to the way data were being recorded. Some also suggested that this issue was less a factor with the Vanguard than it was with the system more generally.

*I think it is an unintended consequence of the system and the way we designed it...the Vanguard is only one factor of everything we do so I think it is difficult to look at the positive or negative consequences of those projects in isolation.*
Part 4: The technological context

4.1 Introduction

Digital innovation is acknowledged across all of the vanguard sites to be an essential catalyst for organisational and service transformation. Although each site has some distinctive digital elements it is also the case that much is shared on a sub-regional and regional basis. Moreover, activities badged as ‘Vanguard’ often have longer antecedents. In addition to all of this, Vanguard activity is shaped by national policies and guidelines. For these reasons it makes little sense to try isolating ‘Vanguard’ innovation from the wider context within which it sits. Accordingly this theme of the evaluation has broadened out to encapsulate developments at several levels:

- Vanguard Level: specific innovations identified by the ‘Vanguard’ label
- Local Level: the wider perspective contained within the Local Digital Roadmaps
- Sub-Regional Level: aspirations identified in the Sustainability and Transformation Plans
- Regional Level: those innovations spanning very large populations beyond the Vanguard sites
- National Level: the ways in which national policies shape local actions

In addition to considering all of these levels and the ways in which they interact, there is an additional source of literature that affects each of them – the growing national and international evidence base. All of these levels and sources of documentation together with evidence from the qualitative interviews with individuals holding roles in Vanguard digital innovation have been used to shape this section of the evaluation.

4.2 Vanguard Digital Activities

4.2.1 Urgent and Emergency Care Vanguard

The Great North Care Record

It is important to begin the site descriptions with the Urgent and Emergency Care Vanguard given that the prime regional initiative – the Great North Care Record (GNCR) - has been placed under this umbrella and therefore affects each Vanguard site. The UEC vision is of a system that provides the right information to enable people to access the right care provided by the right person in the right place, first time. Technology clearly has a critical role to play in this aspiration. As well as NHS commissioners and providers, the initiative is supported by Connected Health Cities\(^\text{20}\) and covers an area up to the Scottish border and including North Cumbria and Whitby, Richmondshire and North Hambleton.

\(^{20}\) https://www.connectedhealthcities.org/
There are three inter-dependent dimensions to GNCR:

**Information Governance (IG)**

The GNCR initiative has to get the right balance between keeping people’s private information secure and sharing information to promote wellbeing. All organisations with access to patient data therefore need to be compliant with the Information Governance toolkit, and a network of IG leads operates across the region to ensure compliance with regulations. Current legislative safeguards that have to be managed include:

- Data protection Act 1998
- Access to Health Records Act 1990
- Copyright, Designs and Patents Act 1988
- Computer Misuse Act 1990
- Human Rights Act 1998
- Electronic Communications Act 2000
- Freedom of Information Act 2000
- Health and Social Care Act 2001

**Information Sharing Gateway (ISG)**

ISG is an electronic means of supporting the appropriate Information Governance documentation, including relevant Information Sharing Agreements. The agreements were signed off collectively to save time and effort and were implemented by almost all GP practices and healthcare providers by December 2016.

**Medical Interoperability Gateway (MIG)**

The MIG enables the sharing of the specified datasets of patient information between healthcare providers who will be enabled to view agreed details of the GP held medical record. This goes further than the Summary Record – there are ten ‘tabs’ covering such things as problems, diagnosis, medication and previous operations and investigations. The information will be available to NHS providers: hospitals, mental health services, out-of-hours doctors and the ambulance service. Instead of phone calls and letters the new system will make information available electronically but - at this stage - in a view-only format accessed through a secure, encrypted and audited system. Medical professionals will normally ask for patient consent to access the record at the start of each period of care.

Around 96% of GP practices in the North East have agreed to turn on this information sharing agreement and system use grew from around 5000 ‘clicks’ in April 2016 to 18,000 by October. Requests for the most recent data were submitted but were not available at the time of writing. There is a small payment levied on transactions. Although consisting of common parameters there are important local differences in the extent to which information is shared – broadly in the south of the region it is confined to urgent care whereas in the north it is available in the wider hospital setting.
The GNCR project is not static. The vision statement\(^{21}\) declares that ‘the partnership is expected to become even more diverse as time passes’. In coming years it is said that the project expects to:

- allow patients and service users to interact with their own records and exchange information with service providers
- increase the number of health and social care professional users with access to properly joined up records
- develop the way health and social care professionals interact with the technology so it is easier to use and more relevant to what they want to achieve
- use the technology as a tool for service planning and population health and research

**Under 5s Self-Care App**

In addition to the focus on interoperability the UEC Vanguard has developed a smart phone app to help parents and carers of young children to gain confidence in diagnosing common childhood illnesses. It will enable them to treat such ailments at home or advise them of the best place to go if they need further help. The hope is that this will result in: fewer inappropriate attendances at GP practices and U&E care centres; a reduction in calls to 999 and 111; and improved skills and confidence in self-care. The app went live in September 2016.

### 4.2.3 Sunderland MCP (Multi-Speciality Community Provider) Vanguard

The vision of the ‘All Together Better’ MCP is one of implementing an out-of-hospital model based around one provider to deliver the following benefits:

- people staying independent and well for as long as possible
- people living longer with a better quality of life with long term conditions
- people supported to recover from episodes of ill health and following injury
- resilient communities
- high levels of public satisfaction
- improved end of life care

Technology is seen as having an important role in meeting these aspirations. Four main innovations are currently underway:

- Extended Information Sharing: HSCIE
- Enhanced MDT Interoperability
- Health Promotion: the NEWS App
- Patient Preferences: Electronic EPaCCS

\(^{21}\) The Great North Care Record Vision (June 2016)
Extended Information Sharing: HSCIE

The roll-out of MIG by the Digital Solutions Team is underway in Sunderland but in addition use is attempting to be made of the Health and Social Care Information Exchange (HSCIE) - a homegrown system from South Tyneside FT which aims to pull in MIG data as well as information from other sources such as the local authority and police. Sunderland is currently working with STFT to develop a proof of concept for the use of HSCIE within MDT meetings. The intention is that phase one will introduce a platform that connects systems used by social care teams, GPs, telecare, Out of Hours and mental health services for 2000 patients. Phase two would increase this to 5000 social care clients.

Enhanced MDT Interoperability

Community Integrated Teams (CITs) operate in five localities consisting of district nurses, community matrons, GPs, practice nurses, social care professionals, living well link workers and carers support workers. For the CITs to function effectively it is vital that relevant information can flow freely between the partners. This is easier if all parties are on, or can access, the same operating system – in this case the EMIS system for connecting healthcare software and services. The services involved are Sunderland GP Practices, South Tyneside Foundation Trust, Community Teams and Sunderland GP Alliance. The aim is to enable professionals within the CITs to view patient information from each other’s system in order to secure more coordinated care. Social care services are not currently linked to EMIS.

Health Promotion: The NEWS App

Here a telehealth system is being deployed that uses a tablet to aid care home staff to better manage the health of residents. The system uses the well-established National Early Warning Score (NEWS) app to monitor the overall wellbeing of each resident on such things as weight, fluid intake and other health parameters. Although originally developed as a hospital based protocol the model has been amended in Sunderland to suit a care home population. Information is directly recorded onto hand-held tablets and transferred directly into a cloud-based storage system; using standardised protocols and in-built system alerts, care home staff are guided as to the appropriate response and can alert the community nurse team, recovery at home team, GP or ambulance service. Around half of care homes in the city are making use of the initiative – not all of the rest have a Wi-Fi connection.

Patient Preferences: Electronic Palliative Care Coordination System (EPaCCS)

This enables the recording and sharing of people’s preferences and key details about their care at the end of life. Stage 1 has been configured to ensure clinicians have access to view end of life information – this includes GPs, community staff, palliative care, emergency care and out of hours services. Stage 2 will look at interoperable solutions that enable the

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22 [https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news](https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news)
amendment and updating of care plans, rather than simply viewing. The aim was for Stage 1 to be operating by March 2017. The standard roll-out of MIG includes ten datasets but End of Life information is not one of them, therefore the CCG has opted to fund this additional dataset in order to establish Stage 1. A formal information sharing agreement is in place with levels of sharing set for specific job categories, especially for community staff.

4.2.4 Northumbria Foundation Group ACC (Acute Care Collaboration) Vanguard

The ACC Vanguard was not finalised until January 2016. It involves Northumbria NHS Foundation Trust offering a range of clinical and corporate services based on proven best practice to improve productivity and effectiveness. This could involve acquiring or merging with other hospital trusts, providing corporate services to other NHS organisations, creating a standard operating model built on excellent clinical outcomes and offering a ‘membership model’ with a range of options. Four supporting workstreams have been established of which one is ‘Enabling Technology’.

The fact that Northumbria has a direct role in three of the five Vanguards (ACC, UEC and PACS) makes it difficult to isolate activities across the three. However, leaving aside the GNCR, two main digital developments are in train – the patient portal and the COPD app.

**The Patient Portal**

The patient portal is an online repository of patient information to support communications between primary and secondary care. The objectives are greater numbers of healthcare professionals able to access care records; less duplication of services and reduction in physical consultations; and improved continuity of care from hospital discharge to the community. When fully developed, patients will also be able to go online to obtain results, book appointments and access relevant information, rather than receive information by post. Delivery of the portal is envisaged as consisting of three stages: the provision of information; transaction – dialling into the contact centre using a unique identifier; and transformation – self-monitoring and information sharing. As yet the portal is not functioning but a procurement process has been undertaken and a contractor is to be appointed to develop the product.

**COPD App**

The aim of the COPD app is to support the self-care of patients with COPD through ‘telementoring’ as opposed to ‘telemonitoring’. The clinical case rests upon the argument that to some degree it is possible to pre-empt a COPD episode by tracking basic diagnostic data that patients provide on a daily basis. Analysis of this data can then allow the clinician to advise patients and encourage them to make their own decisions on the next steps. A previous attempt to use this model on a paper basis (by keeping diaries) was found to be too cumbersome. The wider aspiration is to develop a similar product for other long-term conditions such as diabetes, heart conditions, hypertension and arthritis.
There are two key components:

- **Customer facing telementoring app:** This is available on IOS and Android platforms and reminds the user to fill in the questionnaire each day – five core questions with multiple choice answers followed by decisions on next steps. The results of these questions and decisions are sent to the Clinician Management System to be stored, analysed and acted upon.

- **Clinician Management System:** The CMS allows clinicians to log into the system and create records of patient data. The system will categorise patients into groups such as high, medium or low risk and display these on a dashboard. Automatic alerts will be sent out via email to clinicians when a patient is categorised as High Severity or where there have been no returns for several days.

There are four objectives here: to reduce the length of time taken for a patient to take a rescue pack – from the current six days to four days; to increase the percentage of patients self-managing; to reduce readmission and mortality rates; and to improve patient quality of life. A pilot programme has been undertaken and roll out of the programme is expected in 2017.

### 4.2.5 Northumberland Primary and Acute Care System Vanguard

The PACS programme is designed to address three problems:

- A population reliance on emergency care services for routine and minor levels of care
- A frail and elderly population with complex needs
- A need for a clinically and resource sustainable model of care operating for seven days a week

In developing new models of care, three clinical service models have been identified:

- **Episodic care:** a high volume, short interaction activity; increasing the range of professionals and environments able to deliver this type of care will create capacity to support the more complex levels of care.
- **Enabling care:** people with long term conditions who regularly use health and care services; the aim here is to release GP time to support the practice nurse to deliver a longer consultation.
- **Enhanced care:** people who have very complex needs and require comprehensive support and intervention.

Technology is seen as central to PACS activity – it is identified as one of the ‘Primary Assertions’ in the PACS ‘Value Generation Hypothesis Tree’. An important response here will be the components of the GNCR outlined above. There is however an aspiration to go further and develop a fully interoperable information and communications system solution.
The intention here is that both patients and staff will be able to share and access patient records. It is anticipated that this will result in:

- patients who engage with their condition earlier and have a greater understanding of how their lifestyle affects their health and wellbeing
- staff making informed decisions with fewer mistakes and reduced multiple requests for the same information
- self-management relationship with healthcare professionals and using technology to self-support
- reduced readmissions and complications

There is still some way to go to ensure consistent access to the same operating system: there is still a mixed economy of GP systems and although there is a single provider organisation covering adult health and social care, interoperability across health and care is still limited.

A further development within the PACS Vanguard is around the use of telephone and video conferencing to facilitate case discussion and to more readily address the needs of people living in remote and rural locations. VCR consultations are already in use for infectious disease consultations and the virtual trauma clinic in Berwick.

**4.2.6 Newcastle Gateshead Enhanced Health in Care Homes Vanguard**

The vision in Newcastle Gateshead is one of ‘right care at the right place at the right time’. The Vanguard started in March 2015 though some features already existed, especially those developed in Gateshead. Thus far the changes have been confined to establishments for older people rather than all adults. There are three key features:

- **GP Practice Link Role**: Each care home has been allocated to a GP practice on a proximity basis. This occurred in Gateshead about eight years ago where there are 34 care homes linked with 16 GP practices. This is now being developed in Newcastle.
- **Older Person Specialist Nurse** is assigned to each care home. Again this was rolled out in Gateshead about eight years ago and since 2015 has begun in Newcastle’s 48 care homes.
- **Multidisciplinary Teams** have begun in both places following Vanguard status but Gateshead is ahead of Newcastle. In the former a weekly MDT meeting takes place consisting of old age psychiatrist, geriatric consultants, hospital consultants, older person specialist nurses and link GPs.

Technology is an important component of these new processes with several activities underway:

**Building on GNCR**: As with all of the Vanguard sites the GNCR and the ways in which it could develop is seen as vital. The ambitious multi-disciplinary model requires the free flow
of information about – and between - patients, users and carers. The Vanguard is exploring the use of IT and technology to facilitate the ‘virtual ward’ and aid referral, communication and record keeping across the MDT. Again the issues here are similar to those facing Sunderland MPC Vanguard, including the need to move towards a consistent GP operating system in order to facilitate the sharing of information that reflects the complexity of the patient journey.

**NEWS App:** A further illustration of regional knowledge sharing is the utilisation of the NEWS app already described above in relation to the Sunderland site – a tablet has been purchased for each floor in every care home with Wi-Fi. It is acknowledged that the workforce will require training and reassurance around using this technology. An education and training framework is being developed in line with competency recommendations made by Northumbria University alongside the introduction of a Practice Educator to support care home staff in the use of technology.

**Wider Apps Development:** There is a wider aspiration to enhance care delivery through telehealth apps and to explore the use of preventive technology to free up time for care. There is interest in exploring: hydration intake; continence; pressure damage; falls; pain; functional status; and weight loss. Additionally there is a need to have functionality to pull all of these together in a summary record of readings to enable good quality up to date information. Already there is agreement on a proposal for a hydration app to be developed by Whzan and evaluated by Northumbria University.

**Development of Care Home Connectedness:** Care homes need to be well placed to implement technological solutions but their capacity to do so will vary. The Vanguard is attempting to identify the technological readiness of all care homes in the area. Fifteen homes have responded to a recent local survey and attempts are underway to engage with non-responding homes and understand the reasons for this situation. Of those homes that have responded, most have high speed business use and two-thirds also have it for patient/relative use. There is also a mix of technology (laptops and tablets) and a mix of care plan recording (digitally or on paper). The Well-Connected Care Home Programme is being evaluated by the Academic Health Sciences Network – a piece of work that includes Sunderland and Gateshead (within the vanguard sites) and County Durham and Darlington FT (which is not Vanguard funded).

4.2.7 Conclusion
These brief site descriptions reveal several things. Firstly there is a great deal of technological innovation taking place across the five Vanguards. Some of this is specific to one site, some involves sharing between more than one site and some applies across every site. There is, in short, a considerable degree of both innovation and sharing of good or promising practice. Secondly, much of this activity is work in progress rather than mission accomplished. Innovative ideas have to be shaped into practical plans which in turn need to be carefully
implemented and closely monitored and evaluated. These things take resourcing and time, and results cannot be expected to be demonstrated quickly. Even where demonstrable progress can be indicated – as in the case of the GNCR – there will be aspirations to take further steps towards ever greater ambitions. Finally, all of this activity takes place within a national, regional, sub-regional, local and operational context. It is this complexity that is the concern of sections two and three of the report.

4.3 The Impact of Multiple Decision-Making Levels

As mentioned in the Introduction, it is not feasible to look at digital innovations in the Vanguards without understanding the multiple policy contexts within which they sit. There is the potential for tensions to exist between local, regional and national levels, and it is therefore important that activities are mutually understood and aligned.

4.3.1 Local-Regional Alignment

Vanguards are nested within Local Digital Roadmaps (LDRs) and the broader Sustainability and Transformation Plans (STPs). LDRs are the main mechanism for supporting and driving the adoption of digital records and information sharing and should describe how local areas will put in place ten ‘universal capabilities’ by 2018 such as information sharing across general practice, secondary care and social care, as well as patient access to records and transactions. Led by CCGs, and setting out a five year vision, the first versions of LDRs were submitted to NHS England in June 2016.

Although LDRs preceded STPs there is an assumption that they will fit together coherently. In the case of digital care and technology the sub-regional STP is, in effect, a summary of the relevant LDRs. The focus is upon enabling the NHS and its partners to become paper free at the point of care within a framework of three organising principles:

- **Supporting Infrastructure**: mobile working for frontline staff at the point of care; systems that connect together to support joint working
- **Connected Information**: information is connected and analysed to support population health management and research
- **Information Sharing Approach**: single data sharing agreement across all providers; robust and compliant information governance; patients informed and able to control who accesses their information

Digital leads from commissioners and providers have been meeting together as part of the regional Digital Care Programme since late 2015 and have been instrumental in developing

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24 https://www.england.nhs.uk/stps/
25 Northumberland, Tyne and Wear and North Durham Sustainability and Transformational Plan (Draft, October 2016)
the GNCR and in aligning the two LDRs that cover the five Vanguard sites. Nevertheless the local-regional interface is still a source of some dispute. For some the local context was seen as paramount – an arena within which known and trusted partners were best placed to make decisions:

*Because of the local issues we’ve had with culture we didn’t want someone coming in from outside and talking to our practices about sharing region-wide.*

*Local feel is what gets things delivered, not running projects on a regional level. You need to understand local culture, history and barriers. Everywhere is different.*

Others, while aware of the dangers of appearing ‘predatory’, took a contrary view and sought to build on the regional relationships that had been established:

*If you’re trying to do a big interoperability project you need to achieve economies of scale and escape NHS organisational churn. You need a certain amount of independence from the churning organisations beneath you by offering them a clear vision of how things could be better.*

*People find it very difficult to compromise and give up some localism for the good of regional working and the bigger picture.*

These issues are assuming greater significance as the NHS organisational and decision-making structure shifts. This is especially so in the case of the relationship between the CCG and STP levels as steps are taken to create STP boards with programme management support and a new set of ‘STP metrics’.

### 4.3.2 Local/Regional-National Alignment

Notwithstanding local and regional developments, the NHS is still a predominantly top-down organisation controlled at central government level. In the case of technological and digital transformation the centre has put in place a range of policies, requirements and expectations that inevitably shape regional and local initiatives.

In 2013 the Health Secretary, Jeremy Hunt, challenged the NHS to ‘go paperless’ by 2018 – an aspiration subsequently extended to 2020. The Wachter Report subsequently suggested 2023 as a more realistic target and more recent assessments stretch as far ahead as 2027.

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This ambition includes:

- data from approved apps feeding directly into personal health records
- patients able to enter symptoms online and receive tailored advice or a call back from a health professional
- patients able to book appointments online, access medical records and order prescriptions
- a new online triage system building on the current NHS 111 non-emergency phone line service

Subsequent commitments in the Five Year Forward View\textsuperscript{28} (FYFV) and PHC2020\textsuperscript{29} are to:

- Enable patients to have access to their health records including: accessing a summary by March 2015; accessing the full record by 2016; viewing information from all health and social care interactions by April 2018; adding comments and preferences to records by April 2018
- Make online access routinely available for booking GP appointments and repeat prescriptions
- Expand the set of NHS-accredited health apps for patients

The NHS Mandate for 2017-18\textsuperscript{30} lays out the overall technology goals for 2020. These include:

- 95\% of patients to be offered e-consultation and other digital services
- ensure all clinical correspondence and transfers of care are shared electronically
- robust data security standards are in place for patient confidential data
- a high quality appointment booking app with access to the full medical record
- a minimum of 10\% of patients accessing primary care services online or through apps

In recognition of the importance of digital technology, £1billion of the additional £8billion of funding agreed for the FYFV was to be invested in digital programmes. Following the seminal Wachter Report, an additional tranche of funding was created for acute hospital digitalisation, with a small number of ‘global exemplars’ receiving around £10m each depending upon their self-assessed level of ‘digital maturity’. While the digital plans produced by CCGs have centred on LDRs, Foundation Trusts have tended to be more focused on bidding for exemplar status.

\textsuperscript{28} NHS England (2014), \textit{The Five Year Forward View}
\textsuperscript{29} National Information Board (2014), \textit{Personalised health and care 2020. Using data and technology to transform outcomes for patients and citizens.}
\textsuperscript{30} Department of Health (2017), \textit{The Government’s Mandate to NHS England for 2017-18}
Most recently there is the seminal FYFV ‘Next Steps’ strategy\(^3\). This marks a shift from strategic direction (which is now assumed to be clearly established) towards a two year plan for implementation focused on four ‘enablers’ – workforce, safer care, innovation and technology. The prime task now is on new ways of delivering services that are more integrated, effective, streamlined and empowering for patients. Activity and experience in the Vanguard sites will be critical to this mission.

4.3.3 The Impact of National Policies on Local Programmes

Although this level of interest and commitment at national level is welcome, and has provided the driver for local actions, the centre-locality relationship remains troubled in several respects – securing funding; legitimating investment; and discovering direction.

**Securing Funding**

The most commonly identified problem relates to aspects of funding – its scale, nature and certainty. The local LDRs (within which the Vanguards are nested) routinely identify future funding as a major risk. The LDR for South Tyneside and Sunderland notes that:

‘*Our plans and aspirations are dependent on significant additional investment being made. Should this not be forthcoming our plans and aspirations will also change to meet the available resources.*’

Similarly the North Tyneside and Northumberland LDR warns that:

‘*Delivery of the roadmap will require investment of financial resources, without which there is a significant risk to being able to deliver. It is imperative that there is not an assumption that this LDR has the financial capability to carry out its intentions without significant investment from external funding.*’

Cuts in the anticipated funding to Vanguard digital developments have already made an impact:

*We were going to do a much wider programme of work, which would have been really good, based on vanguard funding from year one, but that got cut by about 50%.*

*Vanguard funding for urgent and emergency care is absolutely off the table. It has allowed us to get to this point but there is a lot more that could be done.*

\(^3\) NHSE (2017), *Next Steps on the NHS Five Year Forward View*
The goalposts keep moving. You apply for what you think is three year funding then within six months you have to reapply for the next year of funding and then that is reduced. Then you have to do the same thing for your third year and that funding is not guaranteed either.

This is a double difficulty for the Vanguards. The programme itself is a short-term intervention aiming to secure ambitious and sustainable transformation, yet even within this the funding is subjected to unanticipated reductions and other requirements. Although there may be other funding sources - primary care IT funding for delivery of ‘Core IT services’, IT running cost budgets within each partner organisation, Connected Cities funding, Estates and technology transformation fund for primary care and STP area funding – none of these are secure or guaranteed.

**Legitimating Investment**

There is concern within the Vanguards that too much is being expected too soon in terms of demonstrating a ‘return on investment’ in digital capacity.

*Nothing really gets time to bed in before the next initiative comes along – they give you £1m and want to know the return on investment is £1.0325!.*

The NHS is fixated with return on investment for everything we do. It's particularly hard to prove with clinical informatics.

Attempting large-scale digital transformation is complex, can take time to yield benefits and in the short term may even impact on an organisation’s ability to meet operational targets – Wachter (Ref 10) suggests that cost savings may take ten years or more to emerge and that early implementation is more likely to see efficiency losses than gains. The Next Steps paper seems to accept this reality, noting that ‘*the challenges we are tackling require sustained action over several years*’ (p12) and supporting the notion of ‘*evolution not big bang*’ (p29). Currently those with an implementation remit in the Vanguards do not seem to be experiencing the benefits of this longer-term understanding.

Policy-makers might find it wise to accept a lower burden of proof that a digital project justifies ongoing support - Brown\(^\text{32}\) conceptualises this as a shift from ‘regimes of truth’ (about what is ‘known’) to ‘regimes of hope’. With the latter the lack of hard evidence is reframed, with a lower burden of proof, as evidence that further investment is justified. This does not mean an absence of evidence, but rather focusing upon the hard evidence that *is* available rather than the ideal evidence that is not currently available.

Discovering Direction

Centrally directed IT programmes in the NHS have a troubled history and there is ongoing discussion about the respective virtues of national and local ownership of the agenda. On one view there is insufficient national guidance on the digital agenda, along with confusion around the multiple groups and boards operating at that level. From another perspective the centre is simply viewed as poorly placed to advance local improvement:

*The best solutions come from the bottom-up, not the top-down. There’s real concern and confusion about the role of the centre. Do you sit and wait for somebody to tell you what to do? No, you find ways around it.*

*We’ve become much more locally focused and progressed at a rapid pace. Had we been subject to national control of delivery we would never have managed that.*

*What comes out of the centre is often ill-informed. They don’t really understand the real-world challenges.*

There is a fundamental issue to be addressed here on the relationship between central, regional and local digital developments. The centre can set a national framework but unless it looks realistic in terms of funding and direction to those with responsibility for implementation, it will be circumvented – ‘*something to be coped with*’ according to one respondent. And although there can be some rich local developments, questions then arise as to how this can be scaled up to avoid a digital postcode lottery.

Any sustainable improvement in the relationship has to come from the centre. Some were despondent about such a prospect:

*Lots of innovation may be funded in lots of local areas and then we will all invent different wheels. We’ll have a lot of duplication until something emerges that seems sensible and is given the national blessing.*

The director of digital transformation at NHS Digital has herself recently concluded33 that the organisation needs to ‘undergo a cultural revolution’ and ‘move away from thinking of programmes as king’. The test of success for NHS Digital, it is said, will be to support STPs own digital ambitions. Four regional teams are to be established to move the organisation in this direction.

The central-regional-local relationship seems to be in a state of flux and the ways in which these three levels intersect will be crucial to the future of the Vanguard programmes in the

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region. Again, the FYFV Next Steps seems to be signalling a shift in direction, noting the need to ‘accelerate service redesign locally’ and focus upon ‘locally grounded proposals and plans’ (p29).

4.4 Common Digital Vanguard Themes
The first section outlined the digital aspirations and achievements of the five Vanguards in the region. Each has its own local context and features but all face similar challenges and opportunities. This section highlights these recurring themes. The organising framework for exploring these similarities is that used in the LDR for South Tyneside and Sunderland in the figure above – a mixture of information gathering activities connected to technical capacity and some implementation dilemmas. This relates to the vital distinction in the Wachter report (10) between the technical and cultural aspects of digitalisation.

4.4.1 Quadrant 1: Understand what underlying infrastructure is in place
The central concept underpinning a responsive IT infrastructure is that of interoperability, and it is clear from the site descriptions in the first section that this is very high on the regional and local digital agendas. The MIG was described as ‘a game changer’ - an initiative arguably modest in itself but a means of changing the terms of digital debate. Although badged under the UEC Vanguard it is important to remember that this activity on
interoperability spans all of the Vanguards (and beyond) and preceded Vanguard status. Other sites have their own versions of interoperability for different points of care.

Interoperability refers to the ability of different health and care organisation systems and software applications to ‘talk to each other’ and share information. It should be understood as more than the mere exchange of data; it is about sharing information in such a way that other systems can make good use of it in standard, structured forms. This requires some standardisation of clinical terminology - a task NHS Digital is focused upon at national level.\(^{34}\)

The Wachter Review (Ref 10) captures this point well:

‘The goals of interoperability are not merely the technical capability to exchange digital data. Rather it needs to enable integrated workflow, service redesign and clinical decision support. It also needs to support seamless care delivery across traditional organisational boundaries, and ensure that patients can access all parts of their clinical record and, over time, contribute to it.’ (p48)

Currently information about individual patients is often stored in a number of different and inaccessible silos across primary care, community and hospital systems – indeed even within a single provider, data can sit in different departmental systems. The challenge to this aspect of the Vanguard digital agenda is to address such restrictions. Interoperability, however, is not a simple or static concept; rather it is best understood as consisting of different points on a digital journey. The model below taken from Xtelligent Media LCC\(^{35}\) captures the points on this movement.

\(^{34}\) [https://www.digitalhealth.net/2017/05/nhs-digital-clinical-terminology-standardisation/](https://www.digitalhealth.net/2017/05/nhs-digital-clinical-terminology-standardisation/)

Currently the Vanguard sites are somewhere between the ‘Collect’ and ‘Unlock’ stages and interviewees drew attention to a range of implementation issues across the sites.

**Basic Infrastructure**

In some instances even the basic infrastructure upon which to base interoperability is poor. There is a mixed economy of email between the NHS and other local email services including local government, the third sector, private sector and others; GPs simply asking for the email addresses of their patients can still be unusual. Examples arose of buildings without Wi-Fi, of health and social care staff sharing premises but only NHS staff able to access the Wi-Fi, and of iPads unable to offer community staff the same level of functionality as desk computers.

**Unlocking Data**

The Vanguard sites are all making progress in unlocking data so it can flow across the continuum of care to where it is needed most. The point of need is variable – emergency care, the wider acute care setting or community based MDTs – but the need for high quality information flow is the same.

Several key intersections are being tackled. Some localities have already achieved a single solution for GP practice clinical systems in their patch while others still face a mix of EMIS and SystmOne. Where there is disparity this creates challenges for wider process standardisation – for example where GPs are predominantly on EMIS and community nurses on SystmOne. GP-community health standardisation, in turn, needs to be linked to the systems of other key partners, notably hospitals and social care. The former tend to be on a
different system such as MediTech which has restricted access, while the latter is normally on Swift or Liquidlogic – again with no simple access.

All of the sites have plans or aspirations to address these data sharing restrictions. Some are looking to extend data sharing between primary care and acute care to the wider hospital setting rather than simply urgent and emergency care; others at sharing GP data with social care; and some aspire to encompass the third sector. Ideally an operating system should be able to offer real time information from primary care to any other agency involved in a person’s care – secondary, community, social, hospice and third sector. One site is exploring software that can offer this opportunity.

**Exchanging Data**

The limitation of the current position is that patient data is both one-way (from primary care to elsewhere) and view-only. There is wide acceptance across the sites that data exchange needs to be more ambitious on both counts. In the case of dual-flow, GPs will be keen to see patient information flowing back to them, as well as from them – for example on hospital interventions, end of life care and details of crisis interventions by mental health trusts. This would constitute a ‘data reward’ for undertaking their role as data controllers. The next step would be to move from ‘view-only’ to the creation of a live real-time shared record that can be added to and amended by professionals and patients alike.

Currently both mutual data exchange and live record amendment are still at the aspirational stage. One of the key reasons for this is concern about data security. The dominant presumption is that of ‘lock-down’ - information systems designed to support security requirements by locking down information. Even authenticated users can find access inconvenient or even impossible. This premise will only have been strengthened by recent reports of the Home Office demanding confidential patient data from NHS Digital as well as the recent cyber attack affecting the NHS.\(^{36}\)

Challenging this lock-down paradigm is part of the mission for encouraging data exchange. Some see the current position as lacking balance:

*Yes we have to protect patient’s information but if we try to come up with a consent and security model to cover every scenario we’ll never get there.*

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This thinking is behind the consent model adopted for GNCR. In the case of the national Summary Care record the consent of the patient to share data was sought before care, whereas the GNCR seeks it at the time of care. There is every reason to think that patients are agreeable to much wider sharing of their data but this position does need to be better understood, for example by the use of sample surveys or citizens juries. For some interviewees the ultimate answer is to simply put patients themselves in charge of their own data and encourage them to choose their own levels of privacy.

The final consideration here relates to the collection and use of patient data for research purposes. Concerns were expressed on several grounds – that the time lag for obtaining traditional population health data is too long; that the supply of staff to analyse data is lacking (a national problem in the UK); and that population level data is of less value than patient identifiable data. The latter issue is critical and progress will depend upon a new relationship between patients and their own personal health data. The controversy surrounding the relationship between parts of the NHS and Google shows how tricky this issue can be.

The dilemmas around implementing the interoperability ‘journey’ are complex and understandably there is variation across the Vanguard sites and some measure of disagreement about next steps. Some interviewees expressed bemusement at the way GNCR had been ‘pigeon-holed’ under the UEC Vanguard; others felt frustrated that the initial roll-out had not been to all acute settings rather than (in some sites) urgent and emergency settings. On the other hand there was support for the idea that different localities should select and pursue their own priorities.

The reality is that implementation is critically shaped by context, relationships and networks – what works in one locality will not simply transfer into another. It can also be affected by high levels of organisational churn as people leave, networks of high level trust vanish and new relationships have to be established. As one respondent put it:

*You have to remember that technology is rarely the problem. Culture is nearly always the problem.*

This important conclusion leads into the second quadrant of the framework – ‘understanding our digital capabilities’.

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38 Bardsley, M (2017), *Understanding Analytical Capability in Health Care*, London: Health Foundation
4.4.2 Quadrant 2: Understanding our Digital Capabilities

Whereas Quadrant 1 is focused largely on technological imperatives, Quadrant 2 could be said to focus more upon cultural imperatives – the extent to which there is ‘organisational readiness’ for digital transformation. This also ties in with our over-arching framework on ‘receptive’ and ‘non-receptive’ contexts for change as articulated by Pettigrew et al40.

Digital: Bolt-On or Transformational?

The central issue here is the way in which the potential role of digitalisation is understood. Is it a useful add-on to the way in which normal business is conducted or might it be a paradigmatic shift in opening up a route to service transformation?

Respondents were divided on this question. Some despaired at the legacy of missed opportunities:

*We do lots of little pilots and then they go nowhere. The strategy has to be about embedding these into practice.*

*If you just get technology to get services to do digitally what they’ve always done you’re not making a transformational change*

*The vanguard for me was the ideal opportunity to do a paradigm shift. Instead of doing things incrementally, let’s actually do a step change*

The concern here is that technology is too often seen as ‘somebody else’s business’ rather than everyone’s business.

*Technology can be seen as an add-on, something not quite necessary for the day-to-day running, as somebody’s hobby horse.*

Articulating a ‘Digital Vision’

Organisations can and do undertake digital work with or without an overall digital strategy, but setting down a vision, principles and programme is an expression of effective leadership. An initial problem is that the very term ‘digital’ is often conflated with technology. The former is wider – technology is the enabler (often expressed through ICT and customer

service strategies) whereas digital is a broader term for organisational values and practices that seek to capitalise on the opportunities presented by the internet.\(^{41}\)

The most commonly articulated vision expressed in the fieldwork was around the benefits of enhanced interoperability – the idea of digital ‘care without walls’ as one respondent put it.

*I would hope that whoever is at that point of care is the person who is the eyes and ears for the whole health economy. That is where we are going to be in the future.*

Central level requirements were not always seen as helpful to the articulation of a vision. LDRs were sometimes seen as limited in scope and outlook – little more than boxes to be ticked.

*All we did was articulate what we are already doing, identify timelines and put them into a nice lovely document.*

More broadly there is concern that the focus at the centre has been on the digitisation of existing working practices to deliver marginal improvements, rather than a radical redesign or replacement. Indeed, one recent analysis\(^{42}\) concludes that:

*‘The services delivered so far have had virtually no impact on the day-to-day realities of dealing with the NHS and brought about no meaningful shift of care delivery into the hands of patients’* (p12)

All of this suggests that there is scope for further thought about an ‘organising vision’ for digital transformation. For Greenhalgh et al\(^{43}\) this should be:

✔ *informative*: clear about what the technology is and what it might do
✔ *plausible*: free of exaggerated or misplaced claims about the expected outcomes of adoption
✔ *important*: convey a sense of significance about the value of the technology
✔ *distinctive*: present the technology as offering something new over existing products and practices

These principles could serve as a useful framework for rethinking the digital role locally, regionally and nationally.

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\(^{42}\) Newchurch (2017), *Productivity, Technology and the NHS*

\(^{43}\) Greenhalgh, T et al (2016), *The organising vision for telehealth and telecare: discourse analysis, British Medical Journal Open Access, July 13th*
4.4.3 Quadrant 3: Understand the Strategic and Operational Requirements of Clinicians and Support Staff

**Frontline Resistance**

Transformational change requires significant staff time for change management, training and embedding new processes – a big challenge for organisations already operating at maximum capacity. In particular, frontline staff are fundamental to the successful adoption of new services involving technology solutions since there is a need to re-imagine working practices. Failure to convince them of the virtue of change can lead to all manner of resistance strategies arising from inadequate understanding, lack of time, challenges to established routines and fears around job security.\(^{44}\)\(^{45}\)

This stage of the Vanguards evaluation has not involved much opportunity to engage directly with front-line staff, but the stance of professionals on data sharing and data utilisation is a recurring theme. Attitudes on this issue can shape any of the Vanguard initiatives such as care planning within MDTs, the attitude of relatively autonomous community staff and the extent to which care home staff utilise the digital offer.

The most commonly cited issue was the attitude of GPs to sharing access to the primary care record. Sometimes this constituted resistance in principle; on other occasions it was concerns about the detail such as their responsibilities on acting as the legal data controller. The common strand was variability.

*We would be sitting in a room with a bunch of GPs and they’ll have completely different points of view about whether you should share the whole thing or at all. How do we get a consensus on that?*

*GPs weren’t happy to share the whole record, for example they didn’t want administrative staff to have access. They wanted to decide what parts of the record could be seen by whom.*

*There are still pockets of resistance. Some of the GPs see it as very much ‘their’ information, not the patient’s.*

\(^{44}\) Cresswell KM, Bates DW and Sheikh A (2013) *‘Ten key considerations for the successful implementation and adoption of large-scale health information technology’,* *Journal of the American Medical Informatics Association* 20(e1), e9–e13.

Sometimes the principal impediment could be the role of practice managers rather than GPs themselves – an additional layer of influence that is often unexplored. All of this requires the development of a frontline engagement strategy.

**Frontline Engagement**

In order to secure better frontline digital engagement it is important to recruit ‘TEC champions’ who have been involved in the design of products and are well-placed to become advocates with their peers and - more broadly - with patients, users and carers. The Wachter Report (Ref 10), for example, notes:

‘...we were struck by the small number of leaders at most trusts who are trained in both clinical care and informatics, and their limited budgetary authority and organisational clout’ (p35)

Wachter urges a major effort to place well-qualified clinicians with advanced informatics training in every trust, and estimates that an average-sized trust needs at least five such individuals. His recommendation is precisely the model that has been developed in Northumberland with positive results in the development of an integrated virtual electronic health record. Here a Chief Clinical Information Office (CCIO) has been established led by a Health Informatics Director working with a Programme Manager and a clinical team consisting of an emergency medicine consultant, a GP and a chief nursing information officer.

The virtue of this approach is not so much around developing the technology but on persuading colleagues in the field of the importance of the digital offer. Ensuring GP sign-up to the MIG was the big initial task with around 40% needing to be coaxed into consent, especially for the model that stretched beyond emergency care into the wider acute setting. The clinical credibility of the CCIO team was vital here.

*They went round and pressed the flesh with every GP in the area. This was really important. Not a single GP dissented.*

*It was a bit like my personal groundhog day. I did the same presentation again and again and again.*

The important point here is that consent – even enthusiasm – was not secured by top-down edict or traditional project management, but by developing a high-trust relationship with peers. The members of the clinical network who developed this approach did so initially on a voluntary basis on top of their day jobs.
We are a group of movers and shakers who really wanted to make this happen. We used to meet monthly on a Wednesday evening, eating soggy sandwiches and thinking, how can we make this happen?

Although Vanguard status will have made some contribution to this process, the activity preceded this designation and has much deeper inter-personal roots. Other localities can learn from this process of trust-building but will need to develop their own networks – a task that cannot easily be hurried.

GPs are obviously not the only front-line staff needing to be willing to engage with technological change. Reference has already been made to the need to support care home staff who are being asked to work in different ways with a range of apps. A number of difficulties were identified here during the fieldwork including the traditional reliance on paper records, the number of staff whose first language is not English, the general pressure of the job and the suspicion of an initiative that appears to be largely health service focused. Ongoing evaluation by the AHSN will help in understanding how these issues are being addressed.

4.4.4 Quadrant 4: Understand how Patients Want to Access Services Digitally

Much of the analysis within the first three quadrants contains implicit assumptions about the benefits of technology and digital change for patients; the focus has been upon the technology itself, upon organisational readiness and on professional engagement. Ultimately, however, digital transformation is about better outcomes for patients, service users, carers and citizens. Although this phase of the evaluation did not include any direct contact with patients, it is important to consider the ways in which Vanguard activities have, or have not, adopted an explicit patient-focused perspective.

Securing Patient Engagement

Technology varies in the ways in which, and the extent to which, it requires engagement and action on the part of users. At one end of the spectrum a telecare system based upon monitoring and surveillance may require little more than consent to installation of the equipment; at the other end it requires active self-monitoring, self-management and engagement with the technology and with professionals. The implication here is that simply making services or devices available is not enough to ensure uptake; at the very least, raising patient and public awareness of what is available is also vital.

There do seem to be aspirations within the Vanguards to strengthen this aspect of the quadrant. One respondent, for example, wanted to see a ‘self-triage capability’ on GPs websites with an algorithm that might divert patients to other sources of appropriate support. Others, however, acknowledged that patient and public engagement is an area requiring
greater attention. The greatest progress had been made in two areas – developing a range of apps and obtaining patient consent to information sharing.

**Patient/User-Facing Apps**

There is an emerging body of evidence that apps can have a positive impact on diet monitoring, physical activity, adherence to medication and chronic condition management. However, the efficacy of most apps is unknown and more robust evidence is needed. In 2012, NHS Choices launched a health apps library which was withdrawn in 2015 following realisation that many of the apps sent unencrypted data. There are plans to launch another ‘approved’ apps library in 2017 alongside an innovation and technology tariff which will provide automatic reimbursement when an approved app is used.

As previously outlined, a number of apps are already in development or in place across the Vanguard sites including the NEWS, COPD and Under Fives Self-Care apps. Some are the subject of evaluation and all have been trialled during the development phase. More will be learned fairly soon about the effectiveness of apps of this kind, but the literature suggests two important future implementation issues – data sharing and user engagement.

**Data Sharing**

With the increasing number of apps and other patient-controlled tools appearing on the market, there is the need for a more coordinated use of health-related data from these kinds of tools, but EHR systems are not yet equipped to receive and structure this data. The danger here is that growth in mhealth apps simply creates further fragmentation in an already siloed world of health and medical information. Moreover these apps are only really useful if they can allow a two-way digital channel to monitor patient behaviour, apply clinical decision support and interact with users. Salford Royal NHS FT is seen as an exemplar on uploading patient generated wearable data to its EHR and there will be important lessons to be learned from this initiative.

**User Engagement**

Some of the region’s Vanguard apps are simply information giving; others require either professionals or patients to input data and engage in two-way communication. These more complex interventions enable patients to monitor and understand patterns in their condition and take action before things get worse, as well as allowing professionals to capture data over time to spot trends and intervene appropriately. Evidence from evaluations of the Florence (‘Flo’) text messaging system suggests that patient engagement significantly decreases over time but is higher where it forms part of a professional intervention. Solutions include: sending reminders at the time readings are due; limiting all other communications; clearly

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communicating the commitment required; and selecting patients with the interest and capacity for self-management.

There is encouraging evidence within the region of sharing apps and the experiences of putting them into practice. It is important that this continues as the national agenda on app validation gathers pace and learning becomes available from other parts of the country.

**Patient Consent to Data Sharing**

The issue of data sharing has already been alluded to in discussion of the attitudes of professionals who often see themselves as acting on behalf of patients. Much less is known about what patients themselves think about the matter, especially in the wake of the controversy surrounding the withdrawal of the national ‘care.data’ programme.

In the case of GNCR the interesting decision was taken to contact the small number of patients who had refused to consent to sharing their Summary care Record via care.data and seek to persuade them of the virtue of the different data sharing model underpinning the MIG. These people were not seen as in any way awkward; quite the contrary:

*We love them because they are the canary in the mine. We embrace people who are passionate about privacy and we use them to test us to destruction from an ethical point of view. This has got to work for them.*

The results of this exercise are startling – of the 2% of Northumberland’s population who opted out of care.data, only 30% declined to share their health record via the MIG. But however impressive these results, for some they constitute only landing stages on a journey towards full citizen control of their own data and their selection of privacy settings.

*The way the citizen interacts with the NHS has to change. You will need a user name and a password to set up an account with the NHS and then you will be asked to choose your privacy settings on what you are prepared to share. It’s not that hard and you only have to do it once.*

**Wider Citizen Engagement**

Citizens are making little use of the NHS digital opportunities already open to them. A review by the King’s Fund, for example, notes that public awareness and use of these opportunities remains minimal. Although most practices have the technological capability,
only around 5% of GP patients report being aware that their practice offers online access to records and less than 1% report having actually used this feature. Data from the national GP survey suggests that only 7.5% of respondents had booked an appointment online in the previous six months, and only 10.7% had ordered a repeat prescription.\textsuperscript{51} The higher uptake for secondary care referrals probably reflects GP usage rather than patient selections.

The Commons Select Committee\textsuperscript{52} estimates that over 12 million people in the UK lack basic digital skills and that this group is primarily made up of people vulnerable to social exclusion and high use of health services – 60% have no qualifications, 57% are over 65 and 49% are disabled. Where an active role for users is envisaged, issues of digital literacy and resistance come to the fore, and localities will need robust strategies to maximise technological familiarity. This could include the provision of public Wi-Fi in ward settings and training health professionals to act as patient digital champions.\textsuperscript{53}

Ideas around wider citizen engagement with digital healthcare still seem to be relatively underdeveloped across the sites. Little was suggested beyond producing accessible summaries of the LDRs (and even these did not yet seem to have materialised) and exploring the opportunities offered by citizens’ juries. And despite the rapid spread and significance of social media there seems to have been little attempt to utilise this as part of a communications and engagement strategy\textsuperscript{54} or as a means of tapping into the millions of unstructured health-related conversations taking place in open chat rooms and forums.\textsuperscript{55}

\textit{A Framework for Patient/User Outcomes}

There is doubtless further work to be done around user engagement and commitment, but it would be a mistake to see even this as an end in itself. The ultimate aim is to improve the quality of life of those using technological support, and here there is little evidence to draw upon. A framework for assessing the effects of digital engagement on the quality of life of older people has been developed by Damant et al\textsuperscript{56} who propose six Quality of Life domains:

\textsuperscript{52} Commons Select Committee (2016) ‘Action needed on digital skills crisis’.
\textsuperscript{53} http://www.tinderfoundation.org/what-we-do/nhs-widening-digital-participation
\textsuperscript{54} McCrea, J (2017), Beyond the Brink: second analysis of social media in the NHS
\textsuperscript{55} https://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/Online_Support_Investigating_role_public_online_forums_mental_health.pdf?utm_source=The%20King%27s%20Fund%20newsletters&utm_medium=email&utm_campaign=8189538\_NEW
\textsuperscript{56} Damant, J et al (2016), Effects of Digital Engagement on the Quality of Life of Older People, \textit{Health and Social Care in the Community}, (Early View Online Version of Record published before inclusion in an issue)
✓ Control over one’s life: including personal cleanliness and comfort, food and drink and accommodation cleanliness.

✓ Personal safety and security.

✓ Social Involvement and Participation: the types and extent of personal relationships and how these are maintained.

✓ Occupation: all the meaningful activities in which people engage including work, information-seeking, hobbies, leisure and entertainment.

✓ Psychological wellbeing: dignity, self-esteem, self-worth and positive feelings.

✓ Physical capability: ability to carry out activities of daily living

Assessing these outcomes in people’s lives is never easy. Damant et al report that quantitative measures tend to yield mostly insignificant results and that unpicking complex human experiences through exploratory qualitative research may provide better insights. It is unrealistic to expect Vanguards themselves to undertake significant research of this nature, though it will be an important part of any ongoing external evaluation of the programme.

4.5 Twenty Learning Points and Messages
In the final section of this part of the evaluation the key learning points and messages arising from the analysis are distilled and summarised. Some of the messages are descriptive and self-evident; some are already in the process of being addressed; others probably have yet to be fully comprehended. In all of this it is important to bear in mind the limited nature of the report – a quick and initial review of the key issues and one that is best understood as a ‘scoping evaluation’.

Key Learning Points and Messages for Development

<table>
<thead>
<tr>
<th>LEARNING POINTS</th>
<th>MESSAGES for DEVELOPMENT</th>
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<tbody>
<tr>
<td>1 Digital innovation is seen as a vital catalyst for service transformation</td>
<td>Much progress has been made; greater opportunities lie ahead</td>
</tr>
<tr>
<td>2 Although each Vanguard is distinctive there is</td>
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<table>
<thead>
<tr>
<th></th>
<th>Algorithm</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Considerable commonality and shared learning</td>
<td>Maximisation of regional and national learning will avoid costly reinvention of the digital wheel</td>
</tr>
<tr>
<td>2</td>
<td>Digital strategies began before Vanguard status and will continue afterwards</td>
<td>It is not helpful to try to isolate digital developments solely badged as ‘Vanguard’</td>
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<tr>
<td>3</td>
<td>Many of the digital innovations are in train but have not yet gone ‘live’</td>
<td>Time needs to be allowed for development and start-up costs</td>
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<tr>
<td>4</td>
<td>There is not necessarily an alignment between local, sub-regional and regional digital activities</td>
<td>A consensus on the balance between the respective contributions of local and regional activity levels is desirable</td>
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<tr>
<td>5</td>
<td>Digital activity is shaped by a plethora of central requirements; these are not always seen as helpful</td>
<td>Agencies of central government would benefit from a better understanding of local implementation dilemmas</td>
</tr>
<tr>
<td>6</td>
<td>Digital innovation is almost always a complex undertaking and demonstrating a return on investment is problematic</td>
<td>Too much might be expected too soon; a lower burden of proof might be more appropriate at this stage</td>
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<tr>
<td>7</td>
<td>Vanguards have been affected by reductions in funding and uncertainty about ongoing allocations</td>
<td>The relationship between funding allocations and expectations of transformative digital change needs to be more realistic</td>
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<tr>
<td>8</td>
<td>The central-local interface on digital healthcare is confused and contested</td>
<td>NHS Digital may need to rethink its relationship to regional and local implementation agencies</td>
</tr>
<tr>
<td>9</td>
<td>Interoperability is the most significant digital strategy in the Vanguards and wider region</td>
<td>Interoperability is still at a relatively early stage of a digital ‘journey’</td>
</tr>
<tr>
<td>10</td>
<td>Data continues to be locked into different operating systems that impede data sharing</td>
<td>The need to unlock siloed data is well recognised and is being addressed; this is not a simple task</td>
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<tr>
<td></td>
<td>Data flow is currently one-way and view-only</td>
<td>The balance between data security and data exchange need to be re-examined if point-of-care information is to be accessible</td>
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<tr>
<td>13</td>
<td>There is uncertainty as to whether digital innovation is potentially transformative or merely a bolt-on to existing arrangements</td>
<td>A robust and compelling digital strategy requires a vision that is informative, plausible, important and distinctive</td>
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<tr>
<td>14</td>
<td>Frontline staff need to be convinced of the value of new ways of working digitally</td>
<td>Most effort has rightly focused on encouraging GPs to share data access; less attention has been paid to other staff groupings</td>
</tr>
<tr>
<td>15</td>
<td>A properly structured Chief Clinical Information Office can radically enhance frontline engagement</td>
<td>The key to success is the development of high-trust relationships within close-knit networks; the ways in which these can be best developed needs to be better understood</td>
</tr>
<tr>
<td>16</td>
<td>Digital transformation is ultimately about better outcomes for patients, users, carers and citizens</td>
<td>The role and place of these groups in the digital journey still remains relatively unexplored and will need closer attention</td>
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<tr>
<td>17</td>
<td>The development of patient-facing apps is underway across all of the Vanguards</td>
<td>Shared learning from the monitoring and evaluation of apps will be important</td>
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<tr>
<td>18</td>
<td>The spread of apps raises issues of data sharing and securing sustained user engagement</td>
<td>Generating more apps without addressing these issues will limit the value of the investment</td>
</tr>
<tr>
<td>19</td>
<td>Relatively little is known about the views of patients and citizens on data sharing and digital engagement</td>
<td>Future developments will need to include a strategy for improving patient and citizen engagement</td>
</tr>
<tr>
<td>20</td>
<td>The ultimate aim of digital investment is to improve people’s quality of life</td>
<td>A clear framework for assessing user outcomes will help to focus attention on the effects of digital innovation</td>
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Part 5: Quantitative Analysis and Health Economics

5.1 Overview
This Part of the report is intended to provide results for the health economics evaluation of three of the North East Vanguards. The results provided are estimates of effectiveness or impact of the Vanguards using routine performance data provided from each Vanguard. In addition, an assessment of the costs of running each Vanguard (where data were available) is provided with additional estimates of cost impact for the health economy following the introduction of the Vanguard. It was anticipated that further analysis would have been conducted on the North East Urgent and Emergency Care Vanguard. However, due to information governance issues, the data has still yet to be obtained and analysed. As was agreed near the start of this work, no analysis has been conducted in the ACC Vanguard due to timings involved with the rollout of the various stages.

5.2 Methodology
This evaluation utilised two statistical techniques in order to make inferences regarding outcomes:

1. Interrupted time series
2. Cox’s regression

In addition, where possible in terms of availability of data, a cost analysis was conducted. This involved an estimate of the costs of running the Vanguards /the economic impact of the Vanguard on the key performance metrics provided.

Interrupted time series

In considering the impact of large-scale interventions (e.g. population based policy initiatives) researchers are often faced with an effective sample size of N=1, where the treated group may be the local community. It is also common in these situations that the only data available are reported at an aggregate level (e.g. morbidity or mortality rates, average costs, median incomes, non-elective admissions.). Where multiple observations on an outcome variable of interest in the pre- and post-intervention periods can be obtained, an interrupted time series analysis (ITS) offers a quasi-experimental research design with a potentially high degree of internal validity.\(^{57}\)\(^{58}\). Such analyses, whilst providing a lower level of validly than say a well-designed pragmatic randomised controlled trial, are more practical and judged


sufficiently robust to be included in systematic reviews conducted by the highly respected Cochrane Collaboration.

In order to investigate count data, each analysis uses a general linear model with an assumed Poisson distribution. Accordingly, the performance results are presented in terms of a percentage change:

\[
\ln\left( \frac{Y_t}{x_t} \right) = \beta_0 + \beta_1 T_t + \beta_2 X + \beta_3 T_t X_t + \epsilon_t
\]

\(Y_t\) is the rate of occurrence of the outcome variable of investigation (i.e. A&E attendance) at time point \(t\). \(T_t\) is the linear time trend for the locality. \(X\) is a dummy variable representing the start of the Vanguard (pre-Vanguard = 0 and Vanguard = 1). \(X T_t\) is an interaction term that represents the change in the time trend following the introduction of the Vanguard.

The coefficient \(\beta_0\) represents the intercept, which is the starting level of the outcome variable. \(\beta_1\) is the coefficient estimate for the linear time trend, which shows the month on month change in of the key outcome variable due to time. The model also estimates the initial ‘step’ change of the outcome of Vanguard start with the \(\beta_2\) coefficient. The estimated change in the time trend following the introduction of the Vanguard is shown by the \(\beta_3\) coefficient. As we are using a log-linear model, the estimated coefficients depicted by \(\text{Exp}(\beta)\) in the results tables shows the percentage change in trends and step changes. A value greater than one shows a percentage increase and a value less than one shows a percentage decrease.

The dependent variable or outcomes analysed vary across Vanguards but non-elective admissions was common to all. Non-elective admissions is an important outcome as each of the Vanguards aim to reduce these. Other metrics/outcomes analysed for each particular Vanguard are specified in the analyses section for each Vanguard.

Cox’s regression

Cox’s regression compares the hazards (as ratios) of the two time periods and allows several variables to be taken into account. The hazard is the risk (probability) of reaching the endpoint (e.g. discharge) at time point \(t\), given that the individual has not reached it up to that point. A HR greater than 1 means that the risk of experiencing the terminating event (in our case, a discharge) is higher than the reference category (pre Vanguard period). The primary endpoint of this analysis is LOS defined as the time from hospital admission to hospital discharge. This is important, as it is a major component of resource allocation for NHS budgets. We assessed the association between LOS and the pre and post Vanguard period using Cox’s regression.

Costs

Subject to data availability, an annual running cost of each Vanguard was provided. Using the estimates from the interrupted time series, the impact of the Vanguard on predicted outcomes was estimated. The model was then adjusted and rerun in order to predict outcomes assuming no Vanguard. The difference in the predicted outcomes estimates the impact of the Vanguard on relevant outcomes. Furthermore, the economic impact of the Vanguard on the differences
in performance metrics provided was estimated by multiplying the difference with resource cost. The unit costs of each element of resource use are shown in table 1 below.

### Table 1: Unit costs

<table>
<thead>
<tr>
<th>Resource</th>
<th>Average unit cost (£)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-elective admission</td>
<td>616</td>
<td>PSSRU 2016</td>
</tr>
<tr>
<td>A&amp;E attendance</td>
<td>138</td>
<td>National reference costs 2015/16</td>
</tr>
<tr>
<td>Outpatient appointment</td>
<td>135</td>
<td>PSSRU 2016</td>
</tr>
<tr>
<td>Secondary care bed day</td>
<td>400</td>
<td><a href="http://www.gov.uk">www.gov.uk</a></td>
</tr>
</tbody>
</table>

### 5.3 Sunderland MCP (Multi-Speciality Community Provider) Vanguard

The Vanguard began in April 2015 although pre-Vanguard elements started to be implemented from 2013. The Vanguard operated over five co-localities (with 51 GP practices): Washington, Coalfields, Sunderland North, Sunderland East, and Sunderland West. This evaluation focused upon the introduction of:

- Community-integrated teams (CIT)
- Intermediate care integrated teams

A community-integrated team operates in each of the five localities. The teams are made up of: district nurses, community matrons, GPs, practice nurses, social care professionals, living-well link workers, and cares support workers. The CITs are GP focused with the aim of improving person centred care. This includes a multi-disciplinary team process in which healthcare professionals meet to discuss complex patients who require access to multiple services. The teams have also been co-located in each of the five areas in order to improve sharing and communication between the different roles.

The aim of the Intermediate care integration programme is to integrate intermediate care (urgent care, 24/7 teams, GP led services). This programme involves the intermediate care hub (located at Houghton primary care centre) made up of health and social care professionals to provide step-up, step-down care. This programme aims to provide a 24-hour single point of access “Recovery at home” service and the providers of this service have been co-located at one centre.

January 2016 was used as the indicator for the Vanguard starting for statistical analysis because it was the month that the Vanguard became fully operational.

### Data

Data was obtained for all non-elective admissions and Length of stay for the Sunderland CCG population from April 2013 until January 2017. Data for 30-day re-admissions was available from April 2015 to December 2016. Data regarding non-elective admissions...
included associated month and year of admission and length of stay. Monthly data regarding non-elective admissions provided 33 data points pre-Vanguard and 13 data points post. There were issues that needed addressing concerning the use of this data. Around the same time as the beginning of the Vanguard programme, there were changes to service provision within Sunderland City Hospitals which would have likely impacted upon key metrics such as non-elective A+E admissions and length of stay. Ambulatory wards were created and it is possible that these admissions would have increased the total number of non-elective admissions than would have otherwise been the case. Therefore, for some of the analysis, the 0 and 1 lengths of stay were excluded for analysis.

**Costs of the Vanguard**

Resource use as a consequence of introducing the Vanguard mainly comprises of staff time (e.g. GP support, community nursing, pharmacy, social workers, and administration), training, community and care home beds, and digital solutions. The total running costs of the Vanguard was estimated at £12,531 for 2016/17.

**Results**

**Result 1: Total non-elective admissions**

Initially the evaluators investigated the effect of the Vanguard on non-elective admissions for the total Sunderland CCG population, regardless of age or length of stay. An interrupted time series model as set out previously in the methodology section was conducted. The results of this analysis are presented in Table 2.

**Table 2: Total non-elective admissions**

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.770</td>
<td>0.0072</td>
<td>2368.118</td>
<td>2275.960, 2851.268</td>
</tr>
<tr>
<td>Time</td>
<td>0.003</td>
<td>0.0004</td>
<td>1.003</td>
<td>1.003, 1.004</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.01</td>
<td>0.0132</td>
<td>1.011</td>
<td>0.985, 1.037</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>-0.002</td>
<td>0.0015</td>
<td>0.998</td>
<td>0.995, 1.001</td>
</tr>
</tbody>
</table>

The results suggest that during the period prior to the Vanguard (April 2013 to December 2015), non-elective admissions for the Sunderland CCG population were increasing by 0.3% per month as depicted by the Time variable. When the Vanguard was introduced in January 2016, there was an initial step increase in non-elective admissions by an additional 1.1% (Time Dummy Variable). In addition to this, from January 2016, there was a reduction in the monthly time trend of -0.2% (Interaction Term), resulting in a post-Vanguard monthly increase in non-elective admissions of 0.1% (Time + Interaction Term).
The results are presented graphically in figure 1. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported figure for total monthly non-elective admissions is also shown by data points on the graph. The graph shows the predicted monthly increase in the months prior to the Vanguard. As reported in the results, there is an initial step increase when the Vanguard starts in month 34 (January 2016), followed by a post-Vanguard monthly increase at a lower rate than previously.

**Figure 1**

![Graph showing non-elective admissions for all ages](attachment:image-url)

Using the cost of £616 per non-elective admission as set out above (Table 1); the evaluators estimated the return of investment related to the introduction of the Vanguard. The model predicted that the introduction of the Vanguard resulted in a reduction in non-elective admissions of 101 between January 2016 and January 2017. This represented a predicted cost-saving to the Sunderland CCG of £62,413.
As mentioned previously, these results may be biased due to the changes that occurred at Sunderland City Hospitals. As such in order to control for these changes, the evaluators have investigated the effect of the Vanguard when excluding patients with 0-1 length of stay. Additionally, the Vanguard may affect older patients differently to younger, as such the evaluators investigated effects in particular age groups.

**Result 2: Non-elective admissions for ages 16-64 (0-1 length of stay removed)**

Following removal of all patients with a 0-1 day length of stay, the evaluators investigated the effect the Vanguard in non-elective admissions for ages 16-64. An interrupted time series model as set out in the methodology section above was used. The results of the statistical analysis are presented in table 3.

**Table 3: Non-elective admissions for ages 16-64**

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>6.320</td>
<td>0.0153</td>
<td>555.382</td>
<td>538.928, 572.338</td>
</tr>
<tr>
<td>Time</td>
<td>-0.003</td>
<td>0.0008</td>
<td>0.997</td>
<td>0.995, 0.998</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.18</td>
<td>0.0304</td>
<td>1.018</td>
<td>0.959, 1.080</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>-0.001</td>
<td>0.0034</td>
<td>0.999</td>
<td>0.992, 1.005</td>
</tr>
</tbody>
</table>

The results suggest that during the period prior to the Vanguard (April 2013 to December 2015), non-elective admissions for age group 16-64 in the Sunderland CCG population were falling by 0.3% per month (Time variable). When the Vanguard was introduced in January 2016, there was an initial step increase in non-elective admissions by an additional 1.8% (Time dummy variable). In addition to this, from January 2016, there was a reduction in the monthly time trend of 0.1% (Interaction term), resulting in a post-Vanguard monthly reduction in non-elective admission of 0.4% (Time + Interaction term).

The results are presented graphically in figure 2. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for non-elective admissions for ages 16-64 is also shown as data points on the graph. The graph shows the predicted monthly decrease in the months prior to the Vanguard. There is an initial step increase when the Vanguard starts in month 34 (January 2016), followed by a post-Vanguard monthly decrease at a slightly higher rate.
Using the cost of £616 per non-elective admission as set out above (Table 1); the evaluators estimated the return of investment related to the introduction of the Vanguard. The model predicted that from January 2016 to January 2017, the introduction of the Vanguard resulted in a predicted additional 47 non-elective admissions for ages 16-64 compared to the predictions related to the counterfactual (had the Vanguard not been introduced). This represented a predicted additional cost to the Sunderland CCG of £28,903.

**Result 3: Non-elective admissions for ages 65+ (0-1 length of stay removed)**

Following removal of all patients with a 0-1 day length of stay, the evaluators investigated the effect the Vanguard in non-elective admissions for ages 65 and over as it anticipated that the Vanguard would have the greatest impact in this age group who are likely to have more...
complex needs. An interrupted time series model as set out in the methodology section above was used. The results presented in table 4.

**Table 4: Non-elective admissions for ages 65 + (0-1 length of stay removed)**

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I</th>
<th>Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>6.687</td>
<td>0.0125</td>
<td>801.986</td>
<td>782.640</td>
<td>821.811</td>
</tr>
<tr>
<td>Time</td>
<td>0.002</td>
<td>0.0006</td>
<td>1.002</td>
<td>1.001</td>
<td>1.003</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>-0.10</td>
<td>0.0232</td>
<td>0.990</td>
<td>0.947</td>
<td>1.036</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>0.002</td>
<td>0.0026</td>
<td>1.002</td>
<td>0.997</td>
<td>1.007</td>
</tr>
</tbody>
</table>

The results suggest that during the period prior to the Vanguard (April 2013 to December 2015), non-elective admissions for ages 65 and over were increasing by 0.2% per month. When the Vanguard was introduced in January 2016, there was an initial step reduction in non-elective admissions by an additional 1%. In addition to this, from January 2016, there was an increase in the monthly time trend of 0.2%, resulting in a post-Vanguard monthly reduction in non-elective admission of 0.4% for ages 65 and over.

The results are presented graphically in figure 3. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for non-elective admissions for ages 65 and over is also shown as data points on the graph. The graph shows the predicted monthly increase in the months prior to the Vanguard. There is an initial step reduction when the Vanguard starts in month 34 (January 2016), followed by a post-Vanguard monthly increase at a higher rate.
Using the cost of £616 per non-elective admission as set out above (Table 1), the evaluators estimated the return of investment related to the introduction of the Vanguard for non-elective admissions for the age group 65 years and over. The model predicted that from January 2016 to January 2017, the introduction of the Vanguard resulted in a predicted additional 58 non-elective admissions compared to the predictions related to the counterfactual (had the Vanguard not been introduced). This represented a predicted additional cost to the Sunderland CCG of £35,697.
Result 4: 30-day readmission rates

In order to investigate the impact of the intermediate care integrated teams and “step up” and “step down” care, 30-day readmissions was estimated by interrupted time series (section 2). The results are presented in table 5.

Table 5: 30-day readmissions

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.880</td>
<td>0.0118</td>
<td>2643.995</td>
<td>2583.424, 2705.986</td>
</tr>
<tr>
<td>Time</td>
<td>0.007</td>
<td>0.0016</td>
<td>1.007</td>
<td>1.004, 1.010</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>-0.04</td>
<td>0.0153</td>
<td>0.996</td>
<td>0.966, 1.026</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>-0.001</td>
<td>0.002</td>
<td>0.999</td>
<td>0.994, 1.003</td>
</tr>
</tbody>
</table>

The results suggest that prior to the introduction of the Vanguard (April 2015 to December 2015), 30-day re-admissions for patients in Sunderland increased by 0.7% per month. When the Vanguard was introduced in January 2016, there was an additional step reduction effect of 0.4%. Following the introduction of the Vanguard, the monthly time trend decreased by 0.1%, giving a post-Vanguard monthly increase of 0.6%.

The results are presented graphically in figure 4. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure 30-day re-admissions also shown by data points on the graph. The graph shows the predicted monthly increase in the months prior to the Vanguard. There is an initial step reduction when the Vanguard starts in month 13 (January 2016), followed by a post-Vanguard monthly increase at a higher rate.
Using the cost of £616 per non-elective admission as set out above (Table 1); the evaluators estimated the return of investment related to the introduction of the Vanguard. The model predicted that from January 2016 to January 2017, the introduction of the Vanguard resulted in a predicted reduction in 30 day readmissions of 444 compared to the predictions related to the counterfactual (had the Vanguard not been introduced). This represented a predicted cost-saving to the Sunderland CCG of £273,288.

**Result 5: Length of stay for ages 65 and over (0-1 length of stay removed)**

The evaluators investigated the effect of the Vanguard on the length of stay for patients aged 65 and over. Length of hospital stay (LOS) in patients over 65 years is variable and directly related to medical costs. Accurate estimation of LOS on admission and during follow-up may
result in earlier and more efficient discharge strategies, which is a key element of the Vanguard. We estimated the impact on LOS for patients in hospital for two or more days. Cox’s regression method set out previously (section 2) was used. The results are presented in table 5, with the survival function shown in figure 5.

**Table 6: Length of stay for ages 65 and over**

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time dummy</td>
<td>-0.084</td>
<td>0.011</td>
<td>0.920</td>
</tr>
</tbody>
</table>

The results suggest that since the introduction of the Vanguard, the hazard of an increased length of stay has decreased by 0.920. In other words, the length of stay has decreased monthly by 8%.

**Figure 5: Length of stay for ages 65 and over**

For the 12 months prior to the introduction of the Vanguard, there were 31,675 bed days. An 8% reduction in length of stay equates to a saving of 2,534 bed days. Given that the average cost of a bed day is £400 ([www.gov.uk](http://www.gov.uk)), this equates to a cost saving of £1,013,600 to the
Sunderland health economy. (This assumes that 2015 admissions would have been the same in 2016 had the Vanguard not been in place).

**Limitations**

- Post-Vanguard data was only available for 12 months; therefore, potential seasonal effects were not controlled for. This will be included as more data points become available.
- As mentioned previously, changes in provision of ambulatory care at Sunderland City Hospitals Foundation Trust had the potential to bias results upwards in terms of non-elective admissions. In order to reduce this potential bias we removed those cases with a 0-1 LOS for parts of the analysis. This may well have added further bias to the results as some of these admissions may not have been to ambulatory care. However, there was no other way to estimate the impact of these cases due to a lack of coding in the data set.

**Summary**

- The total running costs of the Vanguard was forecasted at £12,531 for 2016/17.
- Total non-elective admissions were increasing monthly by 0.3% pre Vanguard and increasing monthly by 0.1% post Vanguard. The Vanguard resulted in a reduction in the rate of monthly increase of non-elective admissions. This resulted in a predicted cost saving as a consequence of the introduction of the Vanguard of £62,413 over 13 months.
- Non-elective admissions for the 16-64 age group were decreasing monthly by 0.3% pre Vanguard and were reducing monthly post Vanguard by 0.4%. The Vanguard resulted in an additional monthly reduction of non-elective admissions of 0.1%. The Vanguard resulted in a reduction in the rate of monthly increase of non-elective admissions. As a consequence of the Vanguard, there was a predicted cost increase of £28,903 over 13 months. Although the predicted cost increase seems to be in contrast to the changes in trend, the additional costs are driven by the initial step increase in the immediate post-Vanguard period.
- Non-elective admissions for the 65 and over age group were increasing monthly by 0.2% pre Vanguard and were increasing monthly post Vanguard by 0.4%. The Vanguard resulted in an additional monthly increase of non-elective admissions of 0.2%. This resulted in a predicted cost increase as a consequence of the introduction of the Vanguard of £35,697 over 13 months.
- 30-day readmissions were increasing monthly by 0.7% pre-Vanguard and were increasing monthly by 0.6% post-Vanguard. The Vanguard resulted in a 0.1% reduction in 30-day readmissions. This resulted in a predicted cost-saving of £273,288 over 13 months as a consequence of the introduction of the Vanguard.
• An estimated cost saving to the local health economy of £1,013,600 due to reduced length of stay for all patients with a length of stay of two or more days.

5.4 Newcastle Gateshead Enhanced Health in Care Homes Vanguard
The Newcastle Gateshead Enhanced Health in Care Homes Vanguard was launched in March 2015. The Vanguard’s purpose is to increase collaborative working and establish partnerships between health and care providers to reduce pressure on primary, secondary and social care services. There are 2315 total care home beds in Newcastle and 1694 total care home beds in Gateshead.

Since launch, the Vanguard has implemented three key features, with varying degrees of implementation across both localities:

1. Link GP Practices
2. Older Person Specialist Nurses
3. Multi-Disciplinary Teams (MDTs)

The Link GP Practices strand of the Vanguard involved signing up all residents of a care home to the same GP practice (usually the closest geographical GP practice). In Gateshead, all 34-care homes were linked to 16 GP practices before the Vanguard was rolled out. Implementation began at the beginning of the Vanguard in Newcastle and as of November 2016, only 19 of 48 care homes currently have a GP link.

Older Person Specialist Nurses have been assigned to care homes in both localities in order to support care home staff in delivering care. There are six nurses in Gateshead and seven in Newcastle assigned since the beginning of the Vanguard.

The Multi-Disciplinary Teams (MDTs) consist of key healthcare professionals such as; geriatric consultants, link GPs, and specialist nurses. Currently MDT meetings occur on a regular basis in Gateshead, but they are not yet implemented in Newcastle.

Analysis was conducted on the relevant outcomes/performance metrics for care homes separately in each locality. This separate analysis was conducted because of the different stages of rollout in each locality. In the case of Gateshead, since the GP links were already present before the Vanguard began, this evaluation will effectively estimate the impact of both the Older Person Specialist Nurses and the MDT meetings. For Newcastle, this evaluation will estimate the impact of the Older Person Specialist Nurses and a partial rollout of the Link GP Practices.

The outcome variables under investigation are:

1. A&E attendances
2. Non-elective admissions
3. Hospital Deaths
4. Outpatient Appointments
Data

Data was obtained from the Vanguard team on the outcome variables of interest from April 2014 to October 2016. The outcomes pertain to care home residents. However, given that specific data cannot be obtained for care home residents, a postcode was utilised as a proxy to identify this population and associated outcomes. This provides the analysis with 12 months of data before the Vanguard began, and 18 months of data following the Vanguard start (April 2015).

Costs

The costs of providing and running the Vanguard comprised of salaries and overheads; measuring impact and tracking progress; listening, engaging and empowering; co-designing care pathways and outcomes; IT & technology; training & education. This resulted in total running costs of the Vanguard of £878,004 and £1,606,598 in 2015/16 and 2016/17 respectively. This results in an average running cost of £1,242,301 across the two financial years.

Results

Result 1: A&E attendances

A&E attendances for care home residents in both Newcastle and Gateshead were investigated using the interrupted time series method as set out in the methodological section above. The results for Newcastle are reported in table 7. In the 12 months before the Vanguard began, there was an estimated monthly increase in A&E attendances of 0.9%. At the start of the Vanguard in April 2015, there was a further step increase of 2.9%. Following the introduction of the Vanguard, the monthly time trend decreased by 1.2%, resulting in a new post-Vanguard time trend of a reduction in A&E attendances by 0.3% per month.

Table 7: A&E attendances for Newcastle care home residents

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.939</td>
<td>0.0512</td>
<td>139.665</td>
<td>126.323, 154.416</td>
</tr>
<tr>
<td>Time</td>
<td>0.009</td>
<td>0.0069</td>
<td>1.009</td>
<td>0.996, 1.023</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.029</td>
<td>0.0582</td>
<td>1.029</td>
<td>0.918, 1.154</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>-0.12</td>
<td>0.0077</td>
<td>0.988</td>
<td>0.973, 1.003</td>
</tr>
</tbody>
</table>

The results for Gateshead are reported in table 8. In the 12 months prior to the introduction of the Vanguard, there was a monthly reduction of 0.6% in A&E attendances for care home residents. When the Vanguard began, there was an additional step decrease of A&E attendances for care home residents of 3.8%. The post-Vanguard monthly time trend also
increased by 1%, resulting in a post-Vanguard monthly increase in A&E attendances for care home residents of 0.4%.

Table 8: A&E attendances for Gateshead care home residents

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.985</td>
<td>0.0514</td>
<td>146.217</td>
<td>132.202, 161.719</td>
</tr>
<tr>
<td>Time</td>
<td>-0.006</td>
<td>0.0070</td>
<td>0.994</td>
<td>0.981, 1.008</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.085</td>
<td>0.0602</td>
<td>1.088</td>
<td>0.967, 1.225</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>0.10</td>
<td>0.0078</td>
<td>1.010</td>
<td>0.995, 1.026</td>
</tr>
</tbody>
</table>

The results of the statistical analyses are presented in figure 6. In the time period prior to the start of the Vanguard, there were more A&E attendances per month for care home residents of Gateshead compared to Newcastle. However, due to falling A&E attendances in Gateshead and increasing A&E attendances in Newcastle, there were fewer A&E attendances in Gateshead than Newcastle in March 2015 (immediately prior to the Vanguard). When the Vanguard began, there was an additional step increase in both Newcastle and Gateshead. Following the start of the Vanguard, there was a decreasing number of A&E attendances in Newcastle each month, compared to an increase in A&E attendances in Gateshead. This resulted in an estimated higher number of A&E attendances in Gateshead by the end of the follow-up period, compared to Newcastle.
Using the cost of £138 per A&E attendance as set out above (Table 1); the evaluators estimated the return of investment related to the introduction of the Vanguard, separately for each of the localities, between April 2015 and October 2016. For Newcastle, the model predicted that the introduction of the Vanguard resulted in a reduction in A&E attendances of 299 compared to the counterfactual. This represented a predicted cost saving of £41,230. For Gateshead, the model predicted that the introduction of the Vanguard resulted in an additional 505 A&E attendances. This represented a cost increase of £69,668.

**Result 2: Non-elective admissions**

An interrupted time series model, as set out in the methodological section above, was used to investigate the effect of the Vanguard on non-elective admissions of care home residents in
both Newcastle and Gateshead. The results for Newcastle are presented in Table 9. Prior to the Vanguard, non-elective admissions in Newcastle were falling by 1.7% per month. At the start of the Vanguard, there was an estimated additional step increase of 21.4%. The post-Vanguard time trend increased by 1.8%, resulting in a post-Vanguard monthly increase in non-elective admissions by 0.1%.

Table 9: Non-elective admissions for care home residents in Newcastle

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.969</td>
<td>0.0530</td>
<td>143.908</td>
<td>129.719, 159.649</td>
</tr>
<tr>
<td>Time</td>
<td>-0.018</td>
<td>0.0074</td>
<td>0.983</td>
<td>0.968, 0.997</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.194</td>
<td>0.0635</td>
<td>1.214</td>
<td>1.072, 1.375</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>0.018</td>
<td>0.0082</td>
<td>1.018</td>
<td>1.002, 1.035</td>
</tr>
</tbody>
</table>

The results for Gateshead are presented in table 10 below. There was an estimated pre-Vanguard monthly increase in non-elective admissions of 0.1% in Gateshead. The step change following the introduction of the Vanguard was estimated to be a reduction of 29.3%. Additionally, the Vanguard also had an estimated increase in the monthly time trend of 0.3%, resulting in a post-Vanguard time trend of 0.4%.

Table 10: Non-elective admissions for care home residents in Gateshead

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.043</td>
<td>0.0494</td>
<td>155.001</td>
<td>140.706, 170.749</td>
</tr>
<tr>
<td>Time</td>
<td>0.001</td>
<td>0.0067</td>
<td>1.001</td>
<td>0.988, 1.014</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>-0.347</td>
<td>0.0625</td>
<td>0.707</td>
<td>0.626, 0.799</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>0.003</td>
<td>0.0078</td>
<td>1.003</td>
<td>0.988, 1.019</td>
</tr>
</tbody>
</table>

The results of the analyses of non-elective admissions for both localities are presented in figure 7. Prior to the introduction of the Vanguard there were consistently more non-elective admissions in Gateshead compared to Newcastle. Non-elective admissions were increasing in Gateshead and decreasing in Newcastle in the 12-months before the Vanguard began. When the Vanguard started, there was an initial step increase in non-elective admissions in Newcastle, as well as an initial step reduction in non-elective admissions in Gateshead. Both localities had a monthly increase in non-elective admissions following the start of the
Vanguard, although the rate of increase was higher in Gateshead than in Newcastle. Due to the initial step changes, there were consistently fewer non-elective admissions in Gateshead following the introduction of the Vanguard compared to Newcastle.

**Figure 7: Non-elective admissions for care home residents in Newcastle and Gateshead**

Using the cost of £616 per non-elective admission as set out above (Table 1); the evaluators estimated the return of investment related to the introduction of the Vanguard, separately for each of the localities, between April 2015 and October 2016. For Newcastle, the model predicted that the introduction of the Vanguard resulted in an increase in non-elective admissions of 836 compared to the counterfactual. This represented a predicted cost increase of £515,093. For Gateshead, the model predicted that the introduction of the Vanguard
resulted in a reduction in non-elective admission of 805. This represented a cost saving of £496,157.

**Result 3: Outpatient appointments**

**Total Outpatient Appointments**

To investigate the effect of the Vanguard on outpatient appointments for care home residents in both Newcastle and Gateshead, a time series analysis was conducted, as set out in the methodology section above. The results of this analysis for Newcastle are presented in Table 11. Prior to the start of the Vanguard, there was an estimated monthly reduction in outpatient appointments of 0.2%. There was an additional step increase in outpatient appointments of 2.3% when the Vanguard began. In addition to this, following the introduction of the Vanguard, there was an increase in the monthly change of outpatient appointments of 0.3%, resulting in a post-Vanguard monthly increase of 0.1%.

**Table 11: Total outpatient appointments for care home residents in Newcastle**

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.895</td>
<td>0.0324</td>
<td>363.062</td>
</tr>
<tr>
<td>Time</td>
<td>-0.002</td>
<td>0.0044</td>
<td>0.998</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.023</td>
<td>0.0380</td>
<td>1.023</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>0.003</td>
<td>0.0049</td>
<td>1.003</td>
</tr>
</tbody>
</table>

The results for Gateshead are presented in table 12. There was an estimated monthly reduction of 2.9% in the 12 months before the Vanguard started. There was an additional step increase of 32.7% when the Vanguard began. The monthly time trend increased by 3.3%, resulting in a post-Vanguard monthly increase of 0.4%.

**Table 12: Total outpatient appointments for care home residents in Gateshead**

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>6.364</td>
<td>0.0269</td>
<td>580.609</td>
</tr>
<tr>
<td>Time</td>
<td>-0.030</td>
<td>0.0038</td>
<td>0.971</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.283</td>
<td>0.0330</td>
<td>1.327</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>0.033</td>
<td>0.0042</td>
<td>1.033</td>
</tr>
</tbody>
</table>
The results of the analyses for both Newcastle and Gateshead are presented together in figure 8. Gateshead had consistently higher numbers of outpatient appointments through the entire time-period (April 2014-October 2016). In Newcastle, there was a small downward trend in outpatient appointments prior to the introduction of the Vanguard. At the start of the Vanguard, there was a very small initial step increase followed by a continued monthly increase at a slightly higher level. In the case of Gateshead, there was a large monthly reduction in outpatient appointments prior to the start of the Vanguard. When the Vanguard began, there was a large step increase in outpatient appointments, followed by a monthly increase thereafter.

Figure 8: Total outpatient appointments for care home residents in Newcastle and Gateshead
Using the cost of £135 per outpatient appointment as set out above (Table 1); the evaluators estimated the return of investment related to the introduction of the Vanguard, separately for each of the localities, between April 2015 and October 2016. For Newcastle, the model predicted that the introduction of the Vanguard resulted in an increase in outpatient appointments of 387 compared to the counterfactual. This represented a predicted cost increase of £52,200. For Gateshead, the model predicted that the introduction of the Vanguard resulted in an additional 4725 outpatient appointments. This represented a cost increase of £637,879.

**New Outpatient Appointments**

The effect of the Vanguard on care home residents referred for an outpatient appointment as a new case were investigated in order to try and understand trends for particular groups that may explain the overall trends in total outpatients.

The analysis of new cases of outpatient appointments in both Newcastle and Gateshead was conducted using the interrupted time series method set out above in the methodology section. The results for Newcastle are presented in table 13. In the twelve months before the Vanguard began, there was an estimated monthly reduction in outpatient appointments for new cases of 1.1% in Newcastle. There was an estimated one-off step increase of 24.6% of outpatient appointments for new cases when the Vanguard started. There was a reduction in the monthly time trend of 0.2%, resulting in a new post-Vanguard monthly reduction of 1.3%.

**Table 13: New outpatient appointments for care home residents in Newcastle**

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.815</td>
<td>0.0566</td>
<td>123.290</td>
<td>11.348, 137.750</td>
</tr>
<tr>
<td>Time</td>
<td>-0.11</td>
<td>0.0078</td>
<td>0.989</td>
<td>0.974, 1.004</td>
</tr>
<tr>
<td>Time Dummy Variable</td>
<td>0.220</td>
<td>0.0670</td>
<td>1.246</td>
<td>1.093, 1.421</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>-0.002</td>
<td>0.0087</td>
<td>0.998</td>
<td>0.981, 1.016</td>
</tr>
</tbody>
</table>

The results for Gateshead are presented in table 14. In the twelve months before the Vanguard began, there was an estimated monthly reduction in outpatient appointments for new cases of -0.2%. There was an estimated one-off step increase of 42.2% when the Vanguard started. There was a reduction in the monthly time trend of 0.6%, resulting in a new post-Vanguard monthly reduction of 0.8%.
Table 14: New outpatient appointments for care home residents in Gateshead

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.905</td>
<td>0.0532</td>
<td>135.011</td>
<td>121.644, 149.846</td>
</tr>
<tr>
<td>Time</td>
<td>-0.002</td>
<td>0.0073</td>
<td>0.998</td>
<td>0.984, 1.012</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.352</td>
<td>0.0592</td>
<td>1.422</td>
<td>1.266, 1.597</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>-0.006</td>
<td>0.0079</td>
<td>0.994</td>
<td>0.979, 1.010</td>
</tr>
</tbody>
</table>

The results of the analyses for Newcastle and Gateshead are presented in figure 9. There were consistently higher numbers of new outpatient appointments in Gateshead compared to Newcastle throughout the evaluation period (April 2014-October 2016). Both localities followed similar trends, with a monthly reduction in new outpatient appointments prior to the start of the Vanguard. Both localities had a step increase in new outpatient appointments when the Vanguard began, although the step-increase in Gateshead was a much larger. There was a continued monthly reduction in new outpatient appointments in both localities following the start of the Vanguard.
The post-Vanguard time trend reduction in new cases of OP in both localities would suggest that repeat appointments are causing the overall post-Vanguard increase. Further analysis would be required to investigate the cause of the repeat appointments.

**Result 4: In Hospital Death**

The analysis of the Vanguards effect on the deaths of care home residents in hospital was conducted using the interrupted time series analysis set out previously in the methodology section. The results for Newcastle are presented in table 15. In the 12 months before the Vanguard started, there was an estimated monthly increase of 6.6% in Newcastle. When the
Vanguard began, there was an initial step reduction of 46.3%. The monthly time trend was reduced by 5.3%, resulting in a post-Vanguard monthly increase of 1.4%.

Table 15: In hospital deaths of care home residents in Newcastle

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.432</td>
<td>0.1618</td>
<td>11.378</td>
<td>8.287, 15.624</td>
</tr>
<tr>
<td>Time</td>
<td>0.064</td>
<td>0.0202</td>
<td>1.066</td>
<td>1.025, 1.109</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>-0.621</td>
<td>0.1741</td>
<td>0.537</td>
<td>0.382, 0.756</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>-0.054</td>
<td>0.0230</td>
<td>0.947</td>
<td>0.906, 0.991</td>
</tr>
</tbody>
</table>

The results for Gateshead are presented in table 16, where in-hospital deaths were estimated to increase monthly by 7.2% in the 12 months before the Vanguard. When the Vanguard began, there was a step reduction of in-hospital deaths of 38.3%. There was also a change in the linear time trend of 6.3%, resulting in a post-Vanguard monthly increase of 0.9%.

Table 16: In hospital deaths of care home residents in Gateshead

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.199</td>
<td>0.1798</td>
<td>9.013</td>
<td>6.337, 12.820</td>
</tr>
<tr>
<td>Time</td>
<td>0.070</td>
<td>0.0223</td>
<td>1.072</td>
<td>1.026, 1.120</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>-0.483</td>
<td>0.1841</td>
<td>0.617</td>
<td>0.430, 0.885</td>
</tr>
<tr>
<td>Interaction Term</td>
<td>-0.065</td>
<td>0.0250</td>
<td>0.937</td>
<td>0.892, 0.985</td>
</tr>
</tbody>
</table>

The results of the analyses of in-hospital death in Newcastle and Gateshead are presented in figure 10. There were consistently higher numbers of in-hospital deaths in Newcastle compared to Gateshead, with both localities following a similar time-trend. In both localities, there was an initial large monthly increase of in-hospital deaths in the 12 months prior to the start of the Vanguard. When the Vanguard began, there was a large initial step reduction in both localities. There was a reduction in the monthly increase in in-hospital death following start of the Vanguard in both localities, although in-hospital death was increasing at a larger rate in Newcastle than Gateshead.
Result 5: Length of Stay

The effect of the Vanguard on in hospital length of stay was investigated using the Cox’s regression method as set out in the methodology section above. Each locality was investigated separately.

Newcastle

The results for Newcastle are presented in table 17 and are shown graphically in figure 11. For the 12 months prior to the introduction of the Vanguard, there were 15777 bed days for Newcastle care home residents, who did not die in hospital. A 4.7% reduction in length of stay equates to a saving of 710 bed days. Given that the average cost of a bed day is £400
(www.gov.uk), this equates to a cost saving of £283,986 to the local health economy. (This assumes that admissions for 12 months post-Vanguard would have been the same as the admissions for 12 months pre-Vanguard, had the Vanguard not been in place).

Table 17: In hospital length of stay for care home residents in Newcastle

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Dummy variable</td>
<td>-0.048</td>
<td>0.029</td>
<td>0.953</td>
</tr>
</tbody>
</table>

Figure 11: In hospital length of stay for care home residents in Newcastle
**Gateshead**

The results of the statistical analysis for Gateshead are presented in table 18, and shown graphically in figure 12. For the 12 months prior to the introduction of the Vanguard, there were 13485 bed days for Gateshead care home residents. A 14% reduction in length of stay equates to a saving of 1,888 bed days. Given that the average cost of a bed day is £400 (www.gov.uk), this equates to a cost saving of £755,200 to the local health economy. (This assumes that admissions for 12 months post-Vanguard would have been the same as the admissions for 12 months pre-Vanguard, had the Vanguard not been in place).

Table 18: In-hospital length of stay for care home resident in Gateshead

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Dummy variable</td>
<td>-0.150</td>
<td>0.029</td>
<td>0.860</td>
</tr>
</tbody>
</table>

**Figure 12: In hospital length of stay for care home residents in Gateshead**
Limitations

- Data collection used post-code areas around care homes; therefore, bias in terms of overestimation of the impact of this population on outcomes is possible (i.e. data may include non-care home residents who live nearby a care home).
- There was limited data points available for the post Vanguard period hence, potential seasonal effects were not adjusted which could bias the results.

Summary

- The average running cost of the Vanguard across both localities was estimated to be £1,242,301 across the two financial years 2015/16 and 2016/17.

Newcastle

- Total A&E attendances were increasing monthly by 0.9% pre Vanguard and decreasing monthly by 0.3% post Vanguard. The Vanguard resulted in a reduction in the rate of monthly increase of 1.2%, resulting in an overall post-Vanguard monthly reduction in A&E attendances. This resulted in a predicted cost saving as a consequence of the introduction of the Vanguard of £41,230 over 18 months.
- Total non-elective admissions were decreasing monthly by 1.7% pre Vanguard and increasing monthly by 0.1% post Vanguard. The Vanguard resulted in an increase in the rate of monthly decrease of 1.8%, resulting in an overall post-Vanguard monthly increase in non-elective admissions. This resulted in a predicted cost increase as a consequence of the introduction of the Vanguard of £515,093 over 18 months.
- Total outpatient appointments were decreasing monthly by 0.2% pre Vanguard and increasing monthly by 0.1% post Vanguard. The Vanguard resulted in an increase in the rate of monthly decrease of 0.3%, resulting in an overall post-Vanguard monthly increase in total outpatient appointments. This resulted in a predicted cost increase as a consequence of the introduction of the Vanguard of £52200.45 over 18 months.
- Estimated cost saving of £283,986 to the health economy from reduced length of stay.

Gateshead

- Total A&E attendances were decreasing monthly by 0.6% pre Vanguard and increasing monthly by 0.4% post Vanguard. The Vanguard resulted in an increase in the rate of monthly decrease of 1%, resulting in an overall post-Vanguard monthly increase in A&E attendances. This resulted in a predicted cost increase as a consequence of the introduction of the Vanguard of £69,668 over 18 months.
- Total non-elective admissions were increasing monthly by 0.4% pre Vanguard and increasing monthly by 0.4% post Vanguard. The Vanguard resulted in an increase in the rate of monthly increase of 0.3%, resulting in an overall post-Vanguard monthly increase in non-elective admissions. As a consequence of the Vanguard, there was a predicted cost saving of £496,157 over 18 months. Although the predicted cost
decrease seems to be in contrast to the changes in trend, the additional costs are driven by the initial step decrease in the immediate post-Vanguard period.

- Total outpatient appointments were decreasing monthly by 2.9% pre-Vanguard and increasing monthly by 0.4% post-Vanguard. The Vanguard resulted in an increase in the rate of monthly decrease of 3.3%, resulting in an overall post-Vanguard monthly increase in total outpatient appointments. This resulted in a predicted cost increase as a consequence of the introduction of the Vanguard of £637,879 over 18 months.
- Estimated cost saving of £755,200 to the health economy from reduced length of stay.

5.5 Northumberland Primary and Acute Care System Vanguard

The Primary and Acute Care System Vanguard (PACS) began June 2015 with the opening of the Northumbria Specialist Emergency Care Hospital (NSECH). Prior to this, emergency care for the Northumberland CCG population was provided by three type 1 A&E departments (Hexham, North Tyneside, and Wansbeck). The start of the Vanguard saw emergency care provision within this region consisting of NSECH and three GP and Nurse led urgent care centres (UCCs) in Hexham, Wansbeck and North Tyneside. The three UCCs are normally scheduled to operate 24/7 although since October 2016, they have been temporarily closed overnight.

In addition to NSECH, the Vanguard also includes a primary care arm, which consisted of a pilot conducted in Blyth that began June 2016. The full rollout of the Blyth pilot occurred in October 2016, resulting in too few data points available to evaluate its performance in this report.

Data

Performance data was obtained for A&E attendances and emergency admissions for all Northumberland CCG patients from April 2014 to December 2016. This provided data for 14-months pre-Vanguard and 21-months post-Vanguard. The performance data was split further by hospital Trust in order to view those patients from Northumberland who attended emergency care provision outside of the Northumberland area.

Cost of Vanguard

Despite requesting data regarding the cost of Vanguard provision for the PACS, the evaluation team did not receive this.

Results

Result 1: Total A&E attendances

Initially the evaluators investigated the impact of the Vanguard on the total number of A&E attendances for all Northumberland patients across all sites, using the interrupted time series method set out in the methodology section above. The results of the analysis are shown in
Table 19. Before the Vanguard, from April 2014 to June 2015, there was an estimated underlying monthly reduction in total A&E attendances of 0.3%. When the Vanguard began, there was an initial step increase in total A&E attendances of 15.8%, followed by an increase in the monthly time trend of 0.6%, resulting in an estimated post-Vanguard monthly increase of 0.3%.

Table 19: Total A&E attendances

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>9.234</td>
<td>0.0056</td>
<td>10239.350</td>
<td>10127.369, 10352.569</td>
</tr>
<tr>
<td>Time</td>
<td>-0.003</td>
<td>0.0007</td>
<td>0.997</td>
<td>0.996, 0.999</td>
</tr>
<tr>
<td>Dummy Variable (X=1)</td>
<td>0.147</td>
<td>0.0111</td>
<td>1.158</td>
<td>0.921, 0.961</td>
</tr>
<tr>
<td>Interact</td>
<td>0.006</td>
<td>0.0008</td>
<td>1.006</td>
<td>1.005, 1.008</td>
</tr>
</tbody>
</table>

The results are presented graphically in figure 13. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for non-elective admissions for ages 65 and over is also shown as data points on the graph. The graph shows estimated monthly reduction in A&E attendances in the months prior to the Vanguard. There is an initial step increase when the Vanguard starts in month 15 (June 2015), followed by a post-Vanguard monthly increase.
Using the cost of £138 per A&E attendances as set out above (Table 1); the evaluators estimated the return of investment related to the introduction of the Vanguard. The model predicted that from June 2015 to December 2016, the introduction of the Vanguard resulted in a predicted increase in A&E attendances of 42,053 compared to the predictions related to the counterfactual (had the Vanguard not been introduced). This represented a predicted cost increase to the Northumberland CCG of £5,803,377.

**Result 2: A&E attendances by locality**

As total A&E attendances were estimated to have increased following the introduction of the Vanguard, the evaluators decided to investigate changes in A&E attendances according to locality. This was conducted in order to identify whether there were any localities in
particular that were driving the increase. An interrupted time series analysis was conducted separately for each locality as set out previously in the methodology section.

Northumbria Healthcare NHS FT

The results of the statistical analysis for A&E attendances in Northumbria are reported in Table 20. This analysis compares A&E attendance pre and post-Vanguard for all sites providing urgent of emergency care within Northumbria Healthcare NHS FT. Before the Vanguard began, there was an estimated monthly reduction in A&E attendances from April 2014 to June 2015 of 0.2%. With the opening of NSECH in June 2015, there was an initial step increase in A&E attendances of 14.8% followed by an increase of 0.6% in the monthly time trend, resulting in a post-Vanguard monthly increase of 0.4%

Table 20: A&E attendances for Northumbria Healthcare NHS FT

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>9.040</td>
<td>0.0062</td>
<td>843.301</td>
<td>833.903, 8535.934</td>
</tr>
<tr>
<td>Time</td>
<td>-0.002</td>
<td>0.0007</td>
<td>0.998</td>
<td>0.997, 0.999</td>
</tr>
<tr>
<td>Dummy Variable (X=1)</td>
<td>0.138</td>
<td>0.0074</td>
<td>1.148</td>
<td>1.131, 1.164</td>
</tr>
<tr>
<td>Interact</td>
<td>0.006</td>
<td>0.0008</td>
<td>1.006</td>
<td>1.005, 1.008</td>
</tr>
</tbody>
</table>

The results are presented graphically in figure 14. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for non-elective admissions for ages 65+ is also shown as data points on the graph. The graph shows estimated monthly reduction in A&E attendances in the months prior to the Vanguard. There is an initial step increase when the Vanguard starts in month 15 (June 2015), followed by a post-Vanguard monthly increase.
The results for the evaluation of A&E attendances in the Newcastle NHS FT for Northumberland patients are shown in table 21. Before the Vanguard, there was an estimated monthly fall in A&E attendances of 0.6%. At the start of the Vanguard, there was a step increase of A&E attendances of 25.3%. In addition to this, there was a reduction in the monthly time trend of 0.1%, resulting in a post-Vanguard monthly reduction of 0.7%.

*Newcastle Upon Tyne Hospitals NHS FT*

The results for the evaluation of A&E attendances in the Newcastle NHS FT for Northumberland patients are shown in table 21. Before the Vanguard, there was an estimated monthly fall in A&E attendances of 0.6%. At the start of the Vanguard, there was a step increase of A&E attendances of 25.3%. In addition to this, there was a reduction in the monthly time trend of 0.1%, resulting in a post-Vanguard monthly reduction of 0.7%.
Table 21: A&E attendances for Newcastle Upon Tyne Hospitals NHS FT

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.142</td>
<td>0.0161</td>
<td>1263.689</td>
<td>1224.514, 1304.117</td>
</tr>
<tr>
<td>Time</td>
<td>-0.006</td>
<td>0.0019</td>
<td>0.994</td>
<td>0.991, 0.998</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.225</td>
<td>0.0194</td>
<td>1.253</td>
<td>1.206, 1.301</td>
</tr>
<tr>
<td>Interact</td>
<td>-0.001</td>
<td>0.0022</td>
<td>0.999</td>
<td>0.995, 1.003</td>
</tr>
</tbody>
</table>

The results are presented graphically in figure 15. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for A&E attendances is also shown as data points on the graph. The graph shows estimated monthly reduction in A&E attendances in the months prior to the Vanguard. There is an initial step increase when the Vanguard starts in month 15 (June 2015), followed by a post-Vanguard monthly decrease at a greater rate than previously.
Gateshead

Table 22 shows the results for the A&E attendances in Gateshead for Northumberland patients. In the 14 months before the Vanguard (from April 2014), there was an estimated monthly increase in A&E attendances of 5.1%. When the Vanguard began, there was an estimated initial step reduction of 17.6%. There was also a reduction in the monthly time trend of 4.5%, resulting in a post-Vanguard monthly increase of 0.6%.
### Table 22: A&E attendances for Gateshead

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.837</td>
<td>0.0453</td>
<td>126.028</td>
<td>168.961, 222.607</td>
</tr>
<tr>
<td>Time</td>
<td>0.049</td>
<td>0.0049</td>
<td>1.051</td>
<td>1.040, 1.061</td>
</tr>
<tr>
<td>Time Dummy variable (X=1)</td>
<td>-0.193</td>
<td>0.0474</td>
<td>0.824</td>
<td>0.751, 0.905</td>
</tr>
<tr>
<td>Interact</td>
<td>-0.045</td>
<td>0.0057</td>
<td>0.956</td>
<td>0.946, 0.967</td>
</tr>
</tbody>
</table>

The results are presented graphically in figure 16. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for non-elective admissions for ages 65 and over is also shown as data points on the graph. The graph shows estimated monthly increase in A&E attendances in the months prior to the Vanguard. There is an initial step increase when the Vanguard starts in month 15 (June 2015), followed by a post-Vanguard monthly increase.
Result 3: NSECH Vs Non-NSECH

The sub-group analysis of A&E attendances by providing organisation suggests that the overall increase in A&E attendances are driven by patients attending emergency care provided by Northumbria Healthcare FT. As such, the evaluators decided to investigate whether the reason for this was due to increased attendances at NSECH.

Statistical analysis

A time series model was used to investigate the changes in A&E attendances for both NSECH and non-NSECH groups and was set out as:
\[ Y_t = \beta_0 + \beta_1 T_t + \varepsilon_t \]

\( Y_t \) is the dependant variable A&E attendances. \( \beta_0 \) is the coefficient estimate for the intercept, which is the starting level of A&E attendances in month 1. \( T_t \) is the underlying monthly time trend variable, with \( \beta_1 \) coefficient being an estimate of this. \( \varepsilon \) is the error term of the model. As count data is used, the model is a generalised linear model using a Poisson distribution. This will allow us to report results as a percentage change.

This model investigates the trend for NSECH and non-NSECH groups from July 2015. The reason June 2015 is excluded is that, although NSECH opened 16\(^{th}\) June 2015, A&E attendances only occurred for half a month. As such, included this month in this model would bias the estimated time trends. There are a total of 18-time periods in this model (July 2015 to December 2016).

As this sub-group analysis only considers time-periods following the Vanguard implementation, no analysis of the costs was made as there was no before and after comparison. The purpose of this subgroup analysis is to try to investigate if, and to what extent, NSECH is driving the increase in A&E attendances.

**NSECH**

**Table 23: A&E attendances at NSECH**

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (( \beta ))</th>
<th>95% C.I Exp (( \beta ))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>8.411</td>
<td>0.073</td>
<td>4496.697</td>
<td>4433.206, 4561.097</td>
</tr>
<tr>
<td>Time</td>
<td>0.004</td>
<td>0.0007</td>
<td>1.004</td>
<td>1.003, 1.005</td>
</tr>
</tbody>
</table>

In the months between July 2015 and December 2016, A&E attendances at NSECH for patients in Northumberland increased at a monthly rate of 0.4%.
Non-NSECH

In the months between July 2015 and December 2016, A&E attendances at all non-NSECH sites for patients in Northumberland increased at a monthly rate of 0.1%.
Table 24: A&E attendances at all non-NSECH sites

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>8.863</td>
<td>0.0058</td>
<td>7068.914</td>
<td>6988.640, 7150.109</td>
</tr>
<tr>
<td>Time</td>
<td>0.001</td>
<td>0.0005</td>
<td>1.001</td>
<td>1.000, 1.003</td>
</tr>
</tbody>
</table>

Figure 18: A&E attendances at all non-NSECH sites

The results from this simply time series suggest that A&E attendances are rising faster in NSECH compared to non-NSECH providers.
Result 4: Total non-elective admissions

The results are presented in table 25. Non-elective admissions for Northumberland patients across all sites were estimated fall monthly by 0.3% prior to the Vanguard. The introduction of the Vanguard resulted in an initial step reduction of 4.3%. There was also an increase in the monthly trend of 1.1%, resulting in a post-Vanguard monthly increase of 0.8%.

Table 25: Total non-elective admissions

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.888</td>
<td>0.0110</td>
<td>2663.796</td>
<td>2606.992, 2721.838</td>
</tr>
<tr>
<td>Time</td>
<td>-0.003</td>
<td>0.0013</td>
<td>0.997</td>
<td>0.995, 1.00</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>-0.044</td>
<td>0.0137</td>
<td>0.957</td>
<td>0.932, 0.983</td>
</tr>
<tr>
<td>Interact</td>
<td>0.011</td>
<td>0.0015</td>
<td>1.011</td>
<td>1.008, 1.014</td>
</tr>
</tbody>
</table>

The results are presented graphically in figure 19. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for non-elective admissions is also shown as data points on the graph. The graph shows estimated monthly reduction in non-elective admissions attendances in the months prior to the Vanguard. There is an initial step reduction when the Vanguard starts in month 15 (June 2015), followed by a post-Vanguard monthly increase thereafter.
Using the cost of £616 per non-elective admission as set out above (Table 1); the evaluators estimated the return of investment related to the introduction of the Vanguard. The model predicted that from June 2015 to December 2016, the introduction of the Vanguard resulted in a predicted increase in non-elective admissions of 3334 compared to the predictions related to the counterfactual (had the Vanguard not been introduced). This represented a predicted cost increase to the Northumberland CCG of £2,053,861.
Result 5: Non-elective admissions by NHS provider

Northumbria Healthcare NHS FT

The results of the analysis for Northumbria are presented in table 26. There was an estimated pre-Vanguard monthly reduction of 0.3%. When the Vanguard began, there was an estimated additional step reduction of 13.2%, followed by a monthly time trend change of 1.9%, resulting in a post-Vanguard monthly increase of 1.6%.

Table 26: Non-elective admissions in Northumbria Healthcare NHS FT

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.618</td>
<td>0.0126</td>
<td>2033.760</td>
<td>1984.130, 2084.631</td>
</tr>
<tr>
<td>Time</td>
<td>-0.003</td>
<td>0.0015</td>
<td>0.997</td>
<td>0.994, 1.000</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>-0.141</td>
<td>0.0160</td>
<td>0.868</td>
<td>0.842, 0.896</td>
</tr>
<tr>
<td>Interact</td>
<td>0.019</td>
<td>0.0018</td>
<td>1.019</td>
<td>1.016, 1.023</td>
</tr>
</tbody>
</table>

The results are presented graphically in figure 20. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for non-elective admissions is also shown on the graph by the data points. The graph shows estimated monthly reduction in non-elective admissions in the months prior to the Vanguard. There is an initial step increase when the Vanguard starts in month 15 (June 2015), followed by a post-Vanguard monthly increase at a greater rate than previously.
Newcastle Upon Tyne Hospitals NHS FT

The results for the analysis of non-elective admissions for Northumberland patients in Newcastle Upon Tyne Hospitals NHS FT are reported in table 27. There was an estimated pre-Vanguard monthly reduction of 0.1% per month. The Vanguard introduction resulted in an initial step increase of 39.4%. There was also a reduction in the monthly time trend change of 1.9%, resulting in a post-Vanguard monthly reduction of 2%.
Table 27: A&E attendances for Newcastle Upon Tyne Hospitals NHS FT

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>6.264</td>
<td>0.0247</td>
<td>525.209</td>
<td>500.403, 551.245</td>
</tr>
<tr>
<td>Time</td>
<td>-0.001</td>
<td>0.0029</td>
<td>0.999</td>
<td>0.993, 1.005</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.231</td>
<td>0.0297</td>
<td>1.260</td>
<td>1.189, 1.336</td>
</tr>
<tr>
<td>Interact</td>
<td>-0.019</td>
<td>0.0034</td>
<td>0.981</td>
<td>0.974, 0.988</td>
</tr>
</tbody>
</table>

The results are presented graphically in figure 21. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for non-elective admissions is also shown on the graph by the data points. The graph shows estimated monthly reduction in non-elective admissions in the months prior to the Vanguard. There is an initial step increase when the Vanguard starts in month 15 (June 2015), followed by a post-Vanguard monthly decrease at a greater rate than previously.
Gateshead

The results for the statistical analysis of non-elective admissions in Gateshead is presented in table 28. There was an initial pre-Vanguard monthly increase of 0.3%. When the Vanguard began, there was step increase of 23.6%. There was a reduction in the time trend of 0.2%, resulting in a post-Vanguard monthly increase of 0.1%.
Table 28: Non-elective admissions in Gateshead Health NHS FT

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Exp (β)</th>
<th>95% C.I Exp (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.622</td>
<td>0.1512</td>
<td>13.761</td>
<td>10.231, 18.509</td>
</tr>
<tr>
<td>Time</td>
<td>0.003</td>
<td>0.0177</td>
<td>1.003</td>
<td>0.969, 1.038</td>
</tr>
<tr>
<td>Time Dummy Variable (X=1)</td>
<td>0.125</td>
<td>0.1789</td>
<td>1.133</td>
<td>0.798, 1.608</td>
</tr>
<tr>
<td>Interact</td>
<td>-0.002</td>
<td>0.0205</td>
<td>0.998</td>
<td>0.959, 1.039</td>
</tr>
</tbody>
</table>

The results are presented graphically in figure 22. The estimated effect is shown by the line with the 95% confidence interval surrounding it. The reported monthly figure for non-elective admissions is also shown on the graph by the points. The graph shows estimated monthly increase in non-elective admissions in the months prior to the Vanguard. There is an initial step increase when the Vanguard starts in month 15 (June 2015), followed by a post-Vanguard monthly increase at a smaller rate than previously.
Limitations

- Some patients were potentially recorded twice in the data set, which could bias results. This occurred if they were sent to NSECH after visiting a UCC.
- The current analysis does not address operational issues relating to the roll out of the Vanguard. For example, the reduction in operating hours of the UCCs since October 2016 may have impacted out-of-hours attendances at NSECH. Furthermore, some patients from Hexham were redirected to Newcastle-upon-Tyne Hospitals NHS FT for emergency care instead of NSECH for a limited period.
- This analysis focuses on the Northumberland CCG population and is not representative of total activity at NSECH.
Given limited data, there is no control of potential seasonal trends.

Without analysing length of stay, it is difficult to infer the full economic impact of the Vanguard.

Summary

- Total A&E attendances were decreasing monthly by 0.3% pre-Vanguard and increasing monthly by 0.3% post-Vanguard. The Vanguard resulted in an increase in monthly A&E attendances of 0.6%. This resulted in a predicted cost increase as a consequence of the introduction of the Vanguard of £5,803,377 over 21 months.
- A&E attendances in Northumbria Healthcare NHS FT were decreasing prior to the Vanguard and increasing following the introduction of the Vanguard.
- Total A&E attendances monthly time trends in the Newcastle-upon-Tyne Hospitals NHS FT were decreasing prior to the Vanguard. Monthly time trends post-Vanguard saw a reduction in this trend.
- Monthly time trends regarding total A&E attendances to Gateshead Health NHS FT were increasing prior to the Vanguard. Post-Vanguard saw reduction in the rate of increase.
- A&E attendances by NHS provider suggests that the overall increase in A&E attendances are driven by patients attending Northumbria Healthcare NHS FT.
- Analysis of A&E attendances for NSECH versus all other alternative providers suggests that attendances at NSECH were increasing by more than the increased trends elsewhere.
- Total non-elective admissions were decreasing monthly by 0.3% pre-Vanguard and increasing monthly by 0.8% post-Vanguard. The Vanguard resulted in an increase in monthly A&E attendances of 1.1%. This resulted in a predicted cost increase as a consequence of the introduction of the Vanguard of £2,053,861 over 21 months.
- Non-elective admissions to Northumbria Healthcare NHS FT were falling prior to the Vanguard. Post-Vanguard the monthly trends were increasing.
- For non-elective admissions, in Newcastle Hospitals NHS FT, there was a downward trend both pre- and post-Vanguard.
- Non-elective admissions to Gateshead Health NHS FT were increasing both pre- and post-Vanguard.

5.6 Discussion and Conclusion
A common limitation of the analyses for all Vanguards was that there were limited data points for the post-Vanguard period. As such, models did not control for seasonality and potential roll out issues. These results should therefore be interpreted with the caveat that further analysis is required before any recommendations can be made regarding the effectiveness and efficiency of the Vanguards. Furthermore, the analysis for the Newcastle Gateshead Enhanced Health in Care Homes Vanguard was reliant on proxy data by postcode, which could have biased all results by overestimating the use of resources. The results suggest that impact of the Vanguards individually is mixed. For example, the results from Newcastle Gateshead Enhanced Health in Care Homes Vanguard show for Gateshead in particular, the costs of A&E attendances have increased whereas the costs of non-elective
admissions have decreased. In addition, the data utilised to evaluate impact were high-level performance metrics. We may not have controlled for all changes that could have impacted on these metrics in addition to the introduction of the Vanguards. Hence, bias may be included in the results of all confounding factors that are not controlled for. Furthermore, the use of performance metrics as markers of enhancements of efficiency may ignore the impact of system-level quality improvements.

The introduction of the Vanguard in Sunderland resulted in reductions in non-elective admissions for all age groups and associated cost savings compared to the counterfactual. However, when 0-1 lengths of stay were removed there was a cost increase relating to non-elective admissions in both the 16-64 and 65 years and over age group compared to the counterfactual. This suggests that the cost savings in total of non-elective admissions are driven in part by patients with 0 and 1 lengths of stay. However, further analysis would be needed to clarify this. Additionally the introduction of the Vanguard resulted in cost savings from reduced 30-day readmissions and reduced length of stay compared to the counterfactual.

Cost estimates regarding the Newcastle Gateshead Enhanced Health in Care Homes Vanguard were mixed. For A&E attendances, the introduction of the Vanguard resulted in cost savings in Newcastle and cost increases in Gateshead compared the counterfactual. These results were reversed costs associated with non-elective admissions, which increased in Newcastle and decreased in Gateshead compared to the counterfactual. There were cost increases relating to outpatient appointments following the introduction of the Vanguard in both localities compared to the counterfactual. Length of stay and associated costs fell in both localities.

The PACS Vanguard saw an increase in A&E attendances and non-elective admissions for the Northumberland CCG population, resulting in increased costs following the introduction of the Vanguard. The increase in A&E attendances and non-elective admissions appear to be driven by activity at Northumbria Healthcare NHS FT and not by activity in other NHS providers. The impact of the Vanguards on a regional basis in terms of cost impact is depicted in the table below.

Table 29: Economic impact as a consequence of the introduction of the Vanguards

<table>
<thead>
<tr>
<th>Vanguard</th>
<th>Costs of A&amp;E attendance</th>
<th>Costs of non-elective admissions</th>
<th>Costs relating to length of stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunderland MCP Vanguard</td>
<td>N/A</td>
<td>Cost saving</td>
<td>Cost saving</td>
</tr>
<tr>
<td>Newcastle Gateshead Vanguard</td>
<td>Newcastle</td>
<td>Cost saving</td>
<td>Cost increase</td>
</tr>
<tr>
<td></td>
<td>Gateshead</td>
<td>Cost increase</td>
<td>Cost saving</td>
</tr>
<tr>
<td>Northumberland PACs Vanguard</td>
<td>Cost increase</td>
<td>Cost increase</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Key: Green denotes cost saving following introduction of Vanguard (compared to the counterfactual)  
Red denotes cost increase following introduction of Vanguard (compared to the counterfactual)  
N/A denotes not applicable
The analysis from the data provided to the evaluation team suggested that the impact of the Vanguards across the region on key metrics is mixed. The availability of further data and the anticipation of further analysis of the Vanguards may provide a clearer picture in the future.
**Part 6: Discussion**

**6.1 Important lessons**

A number of important lessons have emerged, and are still emerging, from the implementation of the five North East Vanguards. While the context for each Vanguard is separate and distinct, there also exists a set of common issues and themes which have a regional dimension. These are our primary focus of attention in this final Part and may assist in informing other Vanguards elsewhere faced with confronting similar transformation challenges in regard to health and social care service delivery.

Overall, all five sites acknowledged that the Vanguards programme provides a significant opportunity for the North East to improve the way services are organised and provided to meet the rapidly changing needs of its population. From a regional perspective, it was recognised among those interviewed that the Vanguards provided a platform for regional collaboration and the sharing of good practice with the potential that this offers to strengthen the scale and pace of change, and to do so in a more cost-effective fashion. Moreover, it was acknowledged that the resources provided though each Vanguard helped to raise the awareness of the innovative local initiatives taking place across the North East.

But despite some regional strengths and opportunities, in many respects the five sites are not comparable and there is a potential danger of over-simplifying critical features, such as MDTs, in order to draw comparisons across them. This risks undermining the complexities and context-specific features of each Vanguard. Although common strands may be identified, for example in MDTs or even in relationship-building, the prevailing ethos of each Vanguard appeared to be very different. Our findings demonstrate that each Vanguard had different aims and purpose, experiencing a variety of types of key stakeholder engagement, and intra-organisational collaboration (all five Vanguards seemed to operate respectively in their protective coating, isolated from the rest of the organisation/s). In all the Vanguards these factors had to be seen against a wide context of significant financial tensions, uncertainty around policy and fundamental questions about the future including the impact of STPs which increasingly dominated the agenda.

Northumbria ACC, by its very nature, stood apart from the others. In particular, it did not involve a transformation of the workforce in the same way as other Vanguards and it also actively sought to broaden the support and services (i.e. commercial/contractual services, consultancy/advisory as well as a range of clinical and corporate services) the Trust can provide to other parts of the NHS through acquiring and/or merging with other hospital trusts. On the other hand, it seemed hard to conceptualise for many and the commercial element was perceived as a barrier in different ways to various groups. A consistent strand evident both externally and internally was the importance of ‘collaboration’ and understanding what this meant in practice. It also seemed apparent that it had somewhat paled into insignificance compared to the PACS Vanguard. Indeed, in the PACS interviews, the ACC Vanguard was hardly mentioned which was not the case in reverse.
In some respects, the PACS and MCP Vanguards had much more in common. Nonetheless, there were also key differences between them. There appeared, for example, to be far greater uncertainty about the viability and future of the MCP than our interviewees in Northumberland felt about the ACO. In part this might have been because of the far greater degree of transformation that was a feature of the latter not only because it included the acute sector but also because it involved a far larger and more diverse geographical area in every respect (Northumberland is the most sparsely populated county in England covering over 5000 square kilometres). Certainly in the PACS interviews there was a greater focus upon regulatory issues, the financial imbalance and the historic mistrust between providers.

The Newcastle Gateshead Enhanced Health in Care Homes Vanguard involved the reconfiguration of health (primary, community and secondary) and social care to support the health and wellbeing of older people in residential and nursing care homes. Nonetheless, differences in the ethos and practices between the two different Trusts and related GP practices were perceived as a potential barrier. Moreover, concerns were expressed in relation to the profit-making motives of pharmacies and care homes. Care homes as private organisations were also complex, with their own set of legal requirements, CQC requirements and the fact that some were part of chains with specific ways of working, making full standardisation of procedures and processes across the Vanguard area unlikely.

Finally, the UEC Vanguard was possibly the most complex and wide-ranging of the North East Vanguards, as it covers the entire region and has had to be implemented in a consistent way in eight different areas, each with its own delivery board. There were a number of barriers evident such as the diversity of urgent and emergency care services and practices across the region, the number and variety of organisations involved in the network, and variations in the intentions of the commissioning organisations.

What united all five Vanguards was their perception of the wider context within which they operated. They were critical in various ways of NHS England, particularly in terms of the unrealistic pressure placed upon them to deliver outcomes. In both the PACS and MCP, there was a sense in which the pressure being felt was forcing the Vanguards to deliver without the appropriate substantive change being in place or sufficiently embedded and without being able to show adequate evidence to support change. Similarly, in both the Care Homes and the UEC Vanguards there was a perception that government targets and an undue emphasis on performance was hindering progress. The overriding impression, particularly in the PACS Vanguard, was that there were pockets of excellence and impressive examples of new working but this was not replicated evenly or consistently across the Vanguard programme as a whole. There was, though, some evidence emerging in terms of the development of local hubs or federations of GPs which were thought to be sustainable. Of particular concern among all Vanguards was the sheer scale and pace of change at the same time as the NHS was being tasked with making significant, if unrealistic, efficiency savings.

The need for, and importance of, relationship-building was also common to all five sites but in each there appeared to be different obstacles to progress, as detailed in the preceding analysis (see Part 3). It was suggested that the Vanguards helped individual sites to build inter- and intra-organisational relationships. Nonetheless, common to all five was the significant amount of effort and time that had been put into creating better relationships.
among partners. The need to ensure adequate support across, and within, the relative organisations, employing both personal connections and available structures in varying degrees, was another common theme across all Vanguards. Some respondents across the sites struggled with the concept of networks, either informal or formal, seemingly on the grounds that they were either simply unaware of their existence or because such networks were not perceived to be particularly relevant to the Vanguard development. In Northumberland, however, there was definitely a perception that networks were being driven more purposefully.

In the Care Homes it was felt that the Vanguard helped to raise their profile and also contributed to the wider understanding of care home issues. In the UEC it was felt that the Vanguard enhanced or speeded up certain actions (in particular regional MDT involvement). However, the need for a system-wide approach was recognised and an emphasis was placed on collective rather than individual action. It was felt that there were economies of scale to be achieved because of the way the ambulance service covered a much larger area than an individual CCG. In both the PACS and the MCP, there was very much a sense that this was the only way to go given the financial difficulties which existed but this did not detract from a genuine belief that it was also the right way to proceed in terms of patient care. Indeed, there was criticism, especially in Sunderland, that certainly underlay some of the discussions that the Vanguard should have been more 'system and patient driven' rather than 'cost' driven. In Northumbria, the Vanguard seemed to exist in splendid isolation with a sense that there was little appreciation of the money that the ACC could accrue. In all sites there were tensions between the need for real investment in terms of capacity, capability and finance, the accompanying risk, and the ability to deliver outcomes.

There were varied opinions amongst the interviewees about the value of MDT meetings. In the Care Homes it was felt that a sharing of aims and learning about the viewpoints of others was helping to combat the silo working for which health and social services have long been accused and often found guilty, alongside a growing recognition that joint working was the only way to operate during times of severe budget constraints and cuts. However, there was also a feeling that the inclusion of many different organisations could add further complexity. Similarly, in the UEC it was felt that the differences in perspective among the various organisations, related political agendas and the differences in governance structures across organisations could pose barriers. Trust between agencies was considered to be essential but, at the same time, it was recognised that good relationships can take time to develop. MDT working was seen by both the PACS and MCP as something which needed clear thought with respect to purpose, stratification of patients and appropriate management. In both Vanguards there was also a need to 'rethink' skill mix. The experience of using community pharmacists in Northumberland was seen by almost all as a huge success and an example of how skill mix might work. Whereas in the MCP the main barrier appeared to be moving to one organisation, in the PACS it was the importance of scaling up the pilots but without losing the local nuance.

Technology and digital innovation was considered across all of the Vanguard sites to be an essential catalyst for organisational and service transformation, but concerns were also expressed that it could too easily be viewed by some as a mere ‘bolt-on’ to existing arrangements. Although each site has some distinctive elements it is also the case that much
is shared on a sub-regional and regional basis, especially in the case of application
development and inter-operability. There appears to be a considerable degree of innovation
and sharing of good or promising practice, most notably in relation to information sharing. It
is important to note here that some of these initiatives are still under development while
others are in the early stages of their implementation. As such, results (return on investment)
cannot be expected to be demonstrated quickly. Securing funding and other resources, coping
with inadequate national guidance and developing high trust networks were key issues across
all Vanguards. Poor interoperability arrangements between systems, a lack of information
sharing and data exchanges and concerns over data security and patient/citizen engagement
were acknowledged by all Vanguards. The most challenging agenda was identified as cultural
rather than technical.

In terms of cost effectiveness analysis the results suggest that impact of the Vanguards across
the region on key metrics is mixed. For A&E attendances, the introduction of the Vanguard
resulted in cost savings in Newcastle and cost increases in Gateshead compared the
counterfactual. These results were reversed costs associated with non-elective admissions,
which increased in Newcastle and decreased in Gateshead compared to the counterfactual.
There were cost increases relating to outpatient appointments following the introduction of
the Vanguard in both localities compared to the counterfactual. Length of stay and associated
costs fell in both localities. The introduction of the Vanguard in Sunderland resulted in
reductions in non-elective admissions for all age groups and associated cost savings
compared to the counterfactual. Additionally the introduction of the Vanguard resulted in
cost savings from reduced 30-day readmissions and reduced length of stay compared to the
counterfactual. The PACS Vanguard saw an increase in A&E attendances and non-elective
admissions for the Northumberland CCG population, resulting in increased costs following
the introduction of the Vanguard. The increase in A&E attendances and non-elective
admissions appear to be driven by activity at Northumbria Healthcare NHS FT and not by
activity in other NHS providers. Overall, the availability of further data and the anticipation
of further analysis of the Vanguards may provide a clearer picture in the future.

6.2 Looking forward
This initial exploratory evaluation over a short period of time (eight months) provides a
mapping of the implementation arrangements in five local Vanguard initiatives in the North
East. Our findings have demonstrated the need for a fuller and deeper understanding of
developments by looking in more depth at the development of STPs that are now occupying
centre stage in NHS transformation efforts. In addition, there is a need to explore the wider
national policy context as well as to understand the perceptions of front-line staff and service
users in order to establish the degree of alignment or where policy and practice is at risk
pushing or pulling against each other. We would recommend that further research is needed
to examine and understand the current implementation of the North East Vanguards with a
view to establishing how far, if at all, the regional dimension is a significant factor in
transformation efforts and one perhaps meriting additional support and attention.
6.3 Conclusion

The evaluation of the five North East Vanguards has been conducted within a short eight month period during which time there has been considerable policy churn, notably developments surrounding STPs and continuing financial pressure on the NHS. Inevitably, this has raised issues and concerns about the sustainability of the positive developments underway across the Vanguards which have been identified and to which we have drawn attention in this report. Ensuring that the changes have a chance of becoming embedded over time requires a continuing commitment to invest in support and development as well as creating and protecting the space to enable change to occur and prosper.

As our evaluation reports, with its focus on the regional dimension, there are a number of issues that are common across the Vanguards which fall into both barriers to, and enablers of, change. Indeed, these issues are not unique to the North East Vanguards and are evident in respect of all major transformational change as we know from the earlier NETS evaluation, referred to at the start of the report, and from work being conducted for WHO Europe in which some of us have been closely involved.

Using the receptive contexts for change framework has enabled us to highlight those factors which are evident in major change initiatives and which can determine their ultimate success or failure. If any one factor gives cause for concern, then it is likely there will be negative implications for the change initiative as a whole. But if sufficient attention is paid to the eight factors then the prospects for successful change are likely to become more promising.

At this stage, it is far too early to conclude with any confidence that a successful outcome for the Vanguards programme will be forthcoming. Early indications show some signs of promise, especially where there was evidence of the ground having been prepared and changes already being put in place prior to the official launch of the Vanguards initiative. But the overall context in which the complex and ambitious changes are being implemented remains both fragile and fluid. Managing such a context will be critical if the changes are going to survive and yield the desired impact on health and wellbeing for the population in the North East. And in this regard both leadership and relationship-building skills will be at a premium.
Appendix A – Topic Guide

Interview Topic Guide

A. Introduction/Background
1. What is your position/role within your organisation?
2. How long you have you been in your current position?
3. Do you have a clinical and/or managerial background?
4. Can you please tell me about your role?
5. How are you/ or have been involved in the implementation of the Vanguard programme?
6. We are interested in the regional dimension of the 5 North East Vanguards. Are you aware of the other Vanguards in the North East? Any or all of them? Have you had any direct involvement in any of them?

B. Implementing Vanguards: Challenges/Opportunities
In examining the implementation of the Vanguards we are interested in both the nature of the local and wider (regional and national) contexts in helping to create (or not) a supportive environment. We know that the Vanguard programme nationally is seeking to support change not by top-down directive or prescription but through bottom-up efforts to tackle long-standing concerns by doing things differently. We are interested to know if this approach to change is
working in practice and is effective – or if not, why not. We are also interested in looking ahead to the future and the likely fate of Vanguards in the context of the continuing fiscal squeeze on the NHS and the advent of STPs and the changes they may lead to.

1. What do you think are the factors that will either enable or prevent/hinder successful implementation of your local Vanguard programme?

2. At a regional level, what do you think are the key enablers required to sustain the current Vanguard models?

**C. Organisational (team working, culture and relationships)**

Change in complex settings requires working across professional and organisational boundaries so we are keen to understand the ‘soft power’ factors which may enable or prevent success. These centre on leadership style, relationship-building, partnership working, understanding different professional cultures and beliefs. We are interested in knowing how these may develop and change in future with the arrival of STPs.

1. How would you sum up the key relationships in your Vanguard? Do you think they will change over time? Are they what you expected?

2. Can you tell us about the networks within your organisation, and with other organisations, which are relevant to the Vanguard? Are these formal or informal in nature? Are they evolving over time? Are they effective?

3. What do you know about your organisation’s history of partnership working? Has this been a strength in the past? Are you (and is your organisation) now forging new relationships with other organisations and key individuals?

4. Local, regional and national politics will have a significant impact on the success or otherwise of the Vanguards? Do you have a view on how ‘politics’ is currently helping or hindering the Vanguard work?

5. Health and social care is well known for silo working, and for occasional difficulties in communication between different professional groupings. Has the work on the Vanguard programme encouraged better different inter-professional communication? As a result of the Vanguard programme, do you feel that you understand better the viewpoints of other individuals and organisations? Is communication – of data, analysis, opinion – done well?
6. Financially, times are tough for health and social care organisations. To what extent do you feel that the Vanguard programme is ‘do-able’ within existing budget constraints? Do you think that success of the Vanguard will encourage or oblige a different flow of money around the system? Financially, will there be ‘winners’ and ‘losers’, or is that kind of perspective on the way out? How do you assess the ability of the Vanguard programme to improve system efficiency and help to alleviate some budgetary pressures?

7. Do you think the Vanguard will help to maintain or improve the quality of the health and social care system? Have you seen any evidence yet of ‘unintended consequences’ – good or bad?

8. Who are the champions for the Vanguard? Where do they come from in the system hierarchy? Are they clinicians, managers or other frontline staff? Do you think this will change over time? Will there come a point when the Vanguard programme is ‘business as usual’, with no need for special champions?

9. How would you characterise your organisation’s appetite for innovation and risk, in the context of the Vanguard programme? Does this differ from your partner organisations? If so, how do you reconcile the differences?

10. This question addresses the issue of capacity and capability to ensure sustainability and embeddedness of the Vanguard programmes. Vanguard programmes mean that individuals will work in different ways. Do you think the resources are in place to support this change in working? Are there enough staff to make it work, and do they have enough dedicated ‘Vanguard time’? Do the staff who are involved in the Vanguard have the right skills? What are the training needs?

**MDT**

**NB:** Multi-disciplinary teams (MDTs) are emerging as a means of delivering patient-centred integrated care. They are at the heart of the new models of care in Vanguards. MDTs are evolving differently across diverse health and social care settings – in the form of a partnership, alliance or other collaboration - to meet local needs.

The following are general MDT questions across all the Vanguards.

1. How has MDT working developed in your Vanguard programme?
   - *Was MDT working already in place before the Vanguard started?*
• What have been the challenges and successes to date?
• What have been the limiting and enabling factors in implementing MDT working?
• What changes have you see in relation to MDT working? (- This question is about organisation, culture and outcomes - )
• Have you seen changes to the behaviour and culture of colleagues and teams, within your organisation and in other organisations?
• To what extent is MDT working supported by different professional groups?
• Can you see evidence to date of a positive effect on patient care as a result of implementing MDT working?
• Are you aware of greater efficiencies in providing health and social care services, specifically linked to MDT working?

The following are Vanguard-specific MDT questions.

**Sunderland MCP**

1. What is your assessment of progress towards implementing the Recovery at Home, Community Integrated Teams and the Enhanced Primary Care model?
   • Do you feel that there is / have evidence for improved management of patients with high health and social care needs, as a result of implementing these modes (links to a short-term goal of this Vanguard)
   • Is there evidence that teams are working in a more cohesive way, such that team members identify more with the team than with their employing organisation? (links to a medium-term goal - culture change)
   • How have the new models of care, with their emphasis on MDT working, changed the use of resources (medium-term goal)

**Northumberland PACS**

1. How have community, primary and complex care services changed as a result of MDT development?
• Community care: have the nurse practitioners, prescribing pharmacists and other health and social care workers changed their practice and culture in significant ways?
• Complex care: Do the complex care teams appropriately draw on guidance and advice from primary, secondary and social care colleagues? If so, does this happen more than previously?
• In particular, has enhanced care for people with very complex needs been improved through MDT working? Will this develop further in the coming months and years?

Northumbria ACC

1. What has been the impact of implementing the ACC model on MDT working?
   • Have there been changes to staffing ratio/mix as a result of the emphasis on MDT working?
   • Have there been changes to the way staff are trained?
   • Can you see evidence of better use of resources as a result of MDT working (links to a target for reducing agency spend)

Newcastle Gateshead Enhanced Health in Care Homes/PAN

1. What is your assessment of the impact of MDT working in residential and nursing care homes?
   • Is there evidence of standardisation of care delivery? (e.g. reductions in variation)
   • Have you seen improved coordination of care?
   • Do you think that residential and care home residents have seen a more patient-centred approach?
   • Have you seen changes to the skills of the workforce?
   • Are there any imbalances in the commitment to MDT working? If so, where and why do these exist?
   • What do you envisage will be the benefits of enhanced MDT working in the Newcastle Gateshead Vanguard?
   • Is there early evidence of improved collaboration within the Provider Alliance Network (PAN), and how does that link to the aim of enhanced MDT working?
• Have the clinical audits of care pathways provided a robust rationale for MDT working?
• Which aspects of organisational and team culture do you envisage as being the most important to tackle in relation to the PAN?

**UEC**

1. Are the providers in this Vanguard programme beginning to see themselves as part of a large-scale multi-disciplinary team?
• If so, which elements of the UEC implementation are most helpful in achieving this: the governance structure, the investment in communications technology, willingness to share care plans across provider organisations or implementation of clinical hubs?
• To what extent will the success of this Vanguard programme depend on successful implementation of MDT working in other settings?

**D. Technological**

The technology interviews will explore two related issues – site specific developments and generic issues. The former will explore the different developments (and some common developments) in each of the Vanguards, whilst the latter will provide a framework for some comparative themes across the region. The site specific questions will be based on the documentation that has been made available to the evaluation team. Thus far this is rather variable. The generic questions aim to tease out broader views about the current implementation of digital solutions in healthcare and the potential for future developments. The following questions will be explored:

1. Is technology seen in this Vanguard as a bolt-on to current arrangements or a completely new way of doing business?

2. Is technology under pressure to demonstrate a return on investment in terms of cost-savings? What are the issues here?

3. How important is culture? To what extent is there ‘organisational readiness’ to accept and apply technological solutions?
4. Does the programme focus largely on the NHS? In what ways does it join up with social care, the third sector and other potential partners?

5. What have been the experiences of engaging a range of professional colleagues in technological solutions? Are there any differences between different professions?

6. To what extent is it considered necessary to secure an active technology’s role from patients and service users? What are the key issues in addressing this issue?

7. Do you have an ideal vision for digital transformation? What would have to be in place for it to work?

**Conclusion**

1. Do you have any final comments? Are there any other issues not already covered which you think are relevant in the context of this study?

**Many thanks for your time**
Appendix B - Vanguard Sites

“All Together Better” Sunderland MCP Vanguard

Programme Overview

The aim of the Multispecialty Community providers (MCPs) Vanguard is to move care out of the hospital into the community. The ‘All Together Better’ Sunderland MCP Vanguard began in April 2015 although pre-vanguard elements began implementation from 2013. The overall aim of the programme is to implement an out of hospital model of care focusing on:

- people staying independent and well for as long as possible
- people living longer with a better quality of life with long term conditions
- people supported to recover from episodes of ill health and following injury
- resilient communities
- high levels of public satisfaction.

There are three Vanguard work streams:
1. Recovery at home
2. Community integrated teams
3. Intermediate care integration/ Enhanced Primary Care at Scale

Qualitative Approach

The aim of the qualitative study will be to identify the potential organisational and cultural facilitators and barriers shaping the implementation of ‘All Together Better’ Sunderland MCP Vanguard work streams (Theme 1). Moreover, it will aim to explore the role of technology and digital solutions in the delivery of the programme’s aims and objectives (Theme 2).
**Northumberland PACS Vanguard**

**Programme Overview**

The aim of the Primary and Acute Care Systems (PACS) is the development of a new variant of ‘vertically integrated’ care allowing single organisations to provide joined up GP, hospital, community and mental health services. The new model aims to reconfigure the relationship between primary and secondary care by removing organisational boundaries which have historically prevented transformation in care. The Northumberland PACS vanguard (began June 2015) is made up of five stages. The evaluation will focus on the first two stages: Urgent and Emergency Care (Northumbria Specialist Emergency Care Hospital (NSECH) in Cramlington) and Transforming Primary Care (Blyth Pilot). It is expected that Northumberland will be the first Accountable Care Organisation – effective from April 2017.

**Qualitative approach**

The aim of the qualitative study will be to identify the potential organisational and cultural facilitators and barriers shaping the implementation of the Northumberland PACS Vanguard. As part of evaluation the recent developments at Northumbria Specialist Emergency Care Hospital (NSECH) in Cramlington and the Transforming Primary Care pilot in Blyth will be explored together with Northumberland’s strategy and plans to become an Accountable Care Organisation. Moreover it will aim to explore the role of technology and digital solutions in the delivery of the programme’s aims and objectives (Theme 2).

**Northumbria Foundation Group ACC Vanguard**

**Programme Overview**

The aim of the Acute Care Collaboration Vanguard is to link local hospitals together to improve their clinical and financial viability, reducing variation in care and efficiency. The Northumbria Foundation Group ACC Vanguard was finalised January 2016. It aims to widen the support and services (i.e. commercial/contractual services, consultancy/advisory as well as a range of clinical and corporate services) the Trust can provide to other parts of the NHS through acquiring and/or merging with other hospital trusts.
There are four tiers of integration with the Foundation Trust:
Tier 1: Commercial Services
Tier 2: NHG accredited members
Tier 3: NHG Franchise
Tier 4: Full Members

In the Vanguard there are four planned work-streams each applicable with one or more of the levels of integration in the above tiers. So far the Vanguard has focused on implementing tiers 1 and 2 with tiers 3 and 4 due to be implemented in the future.

**Qualitative Approach**

The aim of the qualitative study will be to identify the potential facilitators and barriers shaping the implementation of the Northumbria Foundation Group ACC. As part of evaluation the recent partnership between Northumbria- Cumbria will be explored. Moreover, it will aim to explore the role of technology and digital solutions in the delivery of the ACC Vanguard aims and objectives.

*Newcastle Gateshead Enhanced Health in Care Homes Vanguard*

**Programme Overview**

The aim of the Enhanced Health in Care Homes Vanguard is to offer older people better, joined up health, care and rehabilitation services. The Newcastle Gateshead programme (One Bed, One Outcome) aims to develop a sustainable, high quality new care model for people in community beds and receiving home based care services across Newcastle Gateshead with a new outcome based contract and payment system that supports the development of the Provider Alliance Network (PAN) delivery vehicle. The Vanguard started March 2015 (although some features had been implemented pre-vanguard status).

Changes within this Vanguard have so far only been implemented in older person care homes (residential and nursing). There are three key features in this Vanguard to consider:
• GP practice link role
• Older Person Specialist Nurse
• Multi-discipline care team (MDT)

**Qualitative Approach**

The aim of the qualitative study will be to identify the potential organisational and cultural facilitators and barriers shaping the implementation of the Newcastle Gateshead Enhanced Health in Care Homes Vanguard. Moreover, it will aim to explore the role of technology and digital solutions in the delivery of the programme’s aims and objectives.

**North East Emergency Care Vanguard**

**Programme Overview**

The aim of the North East Emergency Care Vanguard is to improve the coordination of urgent and emergency care as a whole system, ensuring people can access the most appropriate service, first time. The Vanguard status was awarded in July 2015 and the programme has been fully operational since November 2016. Most initiatives are due to go live Dec 2016.

**Qualitative Approach**

The aim of the qualitative study will be to identify the potential organisational and cultural facilitators and barriers shaping the implementation of the regional emergency care network. In so doing, we aim to explore factors shaping inter-organisational relationship and partnership work including strategic leadership. Moreover we aim to explore the role of technology and digital solutions in the delivery of the regional network’s aims and objectives.
Appendix C – Site specific document analysis

UEC Vanguard

The logic model for the North East Urgent and Emergency Care (UEC) Vanguard makes the rationale for its programme very clear:

“Fragmented urgent care services with multiple points of entry result in patient contact duplication and patient confusion across the region, which is inefficient and does not promote positive patient experience. To ensure that patients receive the ‘Right Care, Right Place, First Time’ it is essential that we implement a single point of access, improved content and access within the Directory of Services and Clinical Specialists to provide patient and health care professional signposting and referral.”

This is perhaps the most complex and wide-ranging of the North East Vanguards, as it covers the entire region and has had to be implemented in a consistent way in eight different areas, each with its own delivery board. At the outset, the extant arrangements for urgent and emergency care services varied from place to place, which meant that implementation had to be tailored and supported differently according to local circumstances, while ensuring that the service offering could be consistent across the whole region.

This ambition is evident in the logic model, which assumes that wherever a patient may be in the North East, he or she will be able to access 111 and out-of-hours services, or be booked into in-hours services at an urgent care centre, in exactly the same way. The logic model also mandates that data can be shared between providers in the region, including care plans and patient notes, and that the Summary Care Record will be available to the Clinical Hubs which contain (physically and virtually) GPs and other healthcare professionals. In other words, the logic model is predicated on a single point of entry to fully integrated urgent care services.

The logic model cites the benefits of the new UEC model as:

- Improved patient experience & satisfaction
- Improved levels of self-care
- Increased use of local services
- Improve access
- Dispatch fewer ambulances
- Reduced demand on A&E and Primary Care
- Reduced number of appointments
- Shorter patient pathways & Speeds up patient journey
- Improve clinical outcomes for patient
- Patients seen at home
- Removes waste from pathways

The national, regional and local metrics associated with the Vanguard measure performance against each of the above bullet points.
The final design of the UEC programme was informed by a comprehensive behavioural insight report, commissioned from Kenyons and published in October 2016. This document sought to understand and report on view of the public, patients and staff in relation to the key issues concerning urgent and emergency care in the region. It further sought to understand the behaviours of the public and patients when accessing urgent and emergency care services. The conclusions of this report had a direct and important role in shaping the engagement and communications campaigns directed towards the public, patients and staff when changes were made to local urgent and emergency care services.

New conceptual understandings

The UEC Vanguard’s governance structure is complex. Headed by a region-level strategic network, it extends through three layers (or four, depending on interpretation), through transformation, operational and clinical reference boards to the eight locality delivery boards. In addition, the structure includes links to the CCG North Forum, NHS England, Northern NHS England, and three teams representing national, regional and local urgent and emergency care interests. There are also links to the region’s Clinical Senate and a range of clinical networks. This arrangement is not novel (something similar was in place when Strategic Health Authorities were in place) but, in the context of the change brought about by the 2012 Health & Social Care Act, it comprises a tacit recognition that planning at regional level is vital for some forms of service provision.

The final implementation of this Vanguard is highly reliant on a step-change in the use of technologies for communication and data sharing. Board documents from provider trusts indicate significant progress in advancing the implementation of the Great North Care Record, which will eventually allow sharing of patient information between hospitals, the ambulance service, mental health trusts, GPs, out-of-hours services and, later, in an appropriately secure way, with social care organisations and care homes. This will be enabled through adoption of the Medical Interoperability Gateway (MIG) system, mentioned in the logic model, which allows for communication between the many different IT systems in use in different parts of the health and social care systems.

One of the key messages from the behavioural insight report was that almost no one understood the difference between ‘urgent’ and ‘emergency’ care; even clinical staff had some difficulty in articulating the distinction. The conclusion reached was that the message to the public should be simplified, such that the 111 service and the urgent care centres would be presented as a ‘one-stop-shop’ for any enquiries that were not direct to the 999 service. The same report also concluded that negative messages to the public, such as ‘don’t use A&E for …’ were counter-productive and should not be used. This runs counter to communications campaigns which have taken place in the recent past, and represents a potentially helpful development in encouraging the public to make appropriate use of urgent and emergency care services.

New opportunities and challenges

Communication with, and education of, patients, public and staff is recognised throughout the UEC documentation as central to the success of the Vanguard – it may be the most important
element of all in terms of achieving successful implementation, given the evident embeddedness of ‘traditional’ forms of urgent and emergency care provision. However, it remains a significant challenge. The local implementations of the UEC services are relatively recent, and it will only be apparent after at least some months of operation whether the Vanguard’s ambitions have been realised. There is a risk that the public and patients will continue to regard A&E departments as the safest and most convenient option (as evidenced in the behavioural insight report) and will continue to attend in ever-increasing numbers.

Although the MIG is not exclusively the province of urgent and emergency care, its use in this area of healthcare provision represents a significant opportunity for the North East. The possibility of meaningful and comprehensive sharing of patient information may prove to be a major contributor to the goals of greater system efficiency and improved quality and safety of services for patients. Furthermore, it may prove to be a rich resource for clinical and service research projects.

Urgent and emergency care services will continue to be refined and reviewed as part of the STP consultation processes in the coming months. There is some risk that the controversial nature of the STPs may overtake the very extensive planning that has already been carried out on behalf of the UEC Vanguard, and prevent further benefits realisation.

**Sunderland All Together Better MCP Vanguard**

The overarching logic model for this Vanguard sets out the pre-existing pressures on the local healthcare system in familiar terms:

“Significant reduction in funding, increased pressures on A&E, five day working, gaps and duplication in workforce and limited focus on patient experience...”

The available documentation suggests that the Vanguard’s response to these challenges has been to focus on developing Community Integrated Teams (CITs) and a programme of intermediate care integration across five localities. The CITs, which span health and social care, are reported to comprise:

- District nurses
- Community matrons
- GPs
- Practice nurses
- Social care professionals
- Living well link workers
- Carers support workers

The CITs are co-located with the five areas within the Vanguard, and their multi-disciplinary nature is intended to benefit patients with the most complex conditions, who need to access multiple services on a regular basis. The intermediate care programme includes a ‘step-up, step-down’ service and a 24-hour, single point of access ‘recovery at home’ service.

The MCP Vanguard data scoping documentation identifies the key metrics as reductions in non-elective admissions, emergency admissions, admissions to residential and care homes,
delayed transfers of care, GP outpatient referrals in three priority areas, and care packages. These performance measure appear to be tightly linked to the services which can be offered by the CITs and the intermediate care programme.

**New conceptual understandings**

Evidence of commitment to new ways of working emerges from the suite of logic models which accompany the overarching MCP Vanguard/CIT logic models. These are: Digital Solutions, Enhanced Primary Care and Recovery at Home.

The Digital Solutions logic model characterises the benefits and impact of investment in digital technologies mainly in terms of information flow in relation to commissioning, decision-making, improved patient safety and portable access to patient records. This is not original, but the emphasis has clearly shifted from technical discussion about infrastructure and data protocols to the potential benefits for staff and patients. In similar fashion, the Enhanced Primary Care and Recovery at Home logic models include some familiar potential benefits, such as “… joined up infrastructure across health and social care enabling new ways of working” and “People staying independent….” but there is also an emphasis on higher order benefits, including “resilient communities”, “replicable and transferrable model of care” and “high levels of patient and carer satisfaction”.

All of the logic models contain references to work streams concerning MDT, care planning and coordination and patient self-care and independence; evidence that all are pulling in the same direction.

**New opportunities and challenges**

As with other Vanguard programmes, the Sunderland All Together Better MCP Vanguard commissioned market research into public perceptions relating to the proposed initiative, and a staff survey. The staff survey focused on attitudes to multi-disciplinary team working and the proposed approach to integration of health and social care.

The market research into public perceptions of the Vanguard’s aims presents a mixed picture. Awareness of the changes that have taken place as a result of All Together Better was shown to be patchy, with a significant number of respondents, whether service users or not, of the view that services are separate and do not work together, and an even larger number recording ‘don’t know’. Levels of satisfaction with health and social care services were also relatively low, almost equally so among those with a disability/condition or those who act as carers. These results suggest that the MCP Vanguard has a number of significant challenges ahead, which may require a long-term approach, if it is to improve the patient experience and ensure that the public have a good awareness of the changes to health and social care services.

The staff survey results present a more positive picture. The majority of respondents understood their role in All Together Better and felt that they received relevant information which allows them to carry out that role effectively. Respondents indicated that they Vanguard was helping to build trust and openness, and to improve information sharing. They
also felt that All Together Better was helping to improve care for patients and their families. One key challenge for All Together Better will be to translate the confidence of staff in the Vanguard work streams into similar understanding, trust and confidence among patients and the general public.

The October 2016 version of the Performance Handbook for this Vanguard provides some evidence that the programme is rooted in joint working between Sunderland CCG, GP practices, local care providers and public/patient representatives, and that these relationships are on-going. The handbook also provides much detail about the programme and project level measures which are in place to assess the progress and performance of the Vanguard’s activities. A number of these measures relate directly to the effectiveness of the MDT working in the CITs; for example, the number of MDTs, GP involvement in CIT clinical leadership, the number of data sharing agreements in place. These measures appear to be critical for the success of this Vanguard, even more so than the local and national data on admission and readmission rates, elective activity, etcetera, since they underpin the Vanguard’s rationale and ambitions.

Newcastle Gateshead Enhanced Care Homes PAN Vanguard

The documentation associated with the PAN Vanguard shows that the elderly population of the cities of Newcastle and Gateshead is experiencing significant growth, and many of the care home residents in both locations have multi-morbidities. Furthermore, as the PAN Vanguard’s logic model says, the current projection is that the “demand for Care Home beds [is] due to increase by 46% over the next 10 years”, and the health and social care systems which currently supply services to care home residents are under severe stress and are currently judged to be unsustainable. These factors are the key drivers behind the Enhanced Care Homes PAN Vanguard.

A presentation prepared for the AHSN sums up the change idea which underpins this Vanguard, thus:

“Develop a New Care Model for enhancing healthcare within community beds (including homebased services) with a new outcome-based contracting and payment system that supports the development of a Provider Alliance Network (PAN) delivery vehicle.”

The presentation further states that the new care model is “not about care homes (in isolation)” but rather about health and social care integration, in support of the frail elderly. The plan to achieve this is described in three phases, moving from healthcare alignment in phase 1, to health and public sector alignment in phase 2, and finally to health, public sector and private sector alignment in phase 3 to deliver care to approximately 17,000 people in long/short stay community beds, intermediate/reablement services and home-based services. The alliance of providers is therefore expected to grow and expand as the Vanguard progresses, but to maintain a central, consistent commitment to the new care model and the principles of integrated health and social care.

The metrics associated with the PAN Vanguard are wide-ranging, covering four different thematic areas. National core metrics include efficiency, care & quality and health & well-being. National enabler metrics include information governance, digital integration, organisational integration, workforce capacity and engagement. Local metrics are cited as
specific targets concerning ambulance calls, training, patient safety, care planning, medication, and reductions in A&E attendances, admissions, outpatient appointment and in-hospital deaths of the over-65s. There is also documentation which provides very specific targets and metrics for clinical outcomes, patient experience and patient safety. All of these metrics map on to a detailed delivery plan, which is regularly updated with progress reports.

**New conceptual understandings**

The new care pathway associated with the PAN Vanguard’s plan is shown as having a number of key work streams:

- Enhanced primary care (MDT), including provision for care home ward rounds, a ‘virtual ward’ and clinical audits of care homes and residential care units.
- Dementia care, including a bespoke pathway for diagnosis, measures to remove stigma around dementia and a programme to enhance and streamline the process of moving to permanent care.
- Nutrition & hydration, with a dedicated dietetics team for care homes.
- End of life, including use of MacMillan nurses in each care home, planning for discussions about end of life care and a primary care audit of palliative care practice.

While none of the above work streams is, in itself, novel, bringing them altogether in the service of an overarching plan for better, more effective and more efficient care of the frail elderly in residential care environments, in intermediate care settings and at home, is an ambitious task. We know from previous attempts at integration that the health and social care professionals who work in these areas may have very different cultures and assumptions about how the system should operate. For this Vanguard to succeed, it will have to ensure that the benefits to patients are seen quickly by staff and their respective organisations, and that resources are allocated fairly. From the documentation available, it seems that the PAN will be governed through contractual relationships, rather than through a separate and independent governance structure.

**New opportunities and challenges**

There is some evidence that progress with the Vanguard has varied across the Newcastle and Gateshead jurisdictions. A data scoping document (2016) suggests that the MDT approach had its origins in Gateshead, and that it remains the case that the work streams there are more embedded and mature. For example, the document states that, while a large number of care homes are already linked with GP practices in Gateshead, this was still in a developmental phase in Newcastle. Furthermore, MDT meetings, involving consultants, GPs, specialist nurses and a psychiatrist were well-established in Gateshead, but yet to begin in Newcastle.

The sense that changes in practice are being transferred from Gateshead to Newcastle is reinforced by the PAN delivery plan and the commissioner tracker document, which mention replication in Newcastle of audits already carried out in Gateshead and proof of concept activities taking place in Newcastle. This is potentially a risk to the Vanguard, due to the
well-known ‘not invented here’ syndrome prevalent in the NHS and in social care organisations.

However, the Vanguard leaders and managers have clearly put in place a number of actions and work streams to mitigate this risk, particularly in the area of workforce development. The delivery plan contains information on production of a joint Newcastle Gateshead film to illustrate the principles of the Vanguard, showcasing the work of clinicians but also including patient stories from both cities. A local learning forum has been established for staff who work within the new pathway, which is open to nurses from Newcastle and Gateshead. There is evidence of joint working with both local authorities, to ensure a consistent and joined up approach in both places. There is also considerable potential for the Technology Enabled Care Solutions (TECS), which feature prominently in the delivery plan, to be the glue which binds together staff in both locales, as they will be able to use the same apps, access the same range of information, and share the same performance data.

**Northumbria ACC Vanguard**

The documents associated with this Vanguard show that it differs considerably in scope and intent from others which have been in development across the North East. The essence of the Vanguard is summed up in five aims contained within the Logic Model:

- Develop membership model for hospital group.
- Design portfolio of services tailored to individual trusts.
- Develop sharing of expertise/best practice through clinical networks.
- Develop SOM\(^{59}\) and implement.
- Create a collaborative regional bank to reduce the reliance on Agency staff.

The intent has been to create standardised processes – clinical, operational and administrative – which can be shared within the various organisations that constitute the Northumbria Foundation Group, but can also be offered to other NHS organisations through membership of the Acute Care Collaboration, or through a consultancy arrangement. Sharing and spreading best practice (including integration of services), and providing the potential to rapidly scale up successful innovation, is therefore already built in to this Vanguard’s central ambitions. This contrasts with some other Vanguards in the region and nationally, which have focused on improvements to efficiency, clinical quality and patient safety, through various forms of integration, with the question of how success can be replicated elsewhere regarded as an important but not necessarily fundamental element in their programmes.

The ACC Vanguard offers a matrix approach, with four different levels of involvement (described as “tiers of integration” in the data scoping document) and four work streams which are applicable to one or more of the tiers. The four tiers are commercial services, Northumbria Hospital Group (NHG) accredited members, NHG Franchise and NHG Full Members. The work streams comprise contracted services, hospital group/service offering, enabling technology and group governance. The data scoping document offers some illustrations of how programmes within each work stream can be accessed by ACC customers.

\(^{59}\) SOM: Standard Operating Model

31/05/2017
or members. For example, if an organisation wanted to improve its patient experience measures, it could access the survey tools which have been tried and tested by the ACC, under the ‘hospital group/service offering’ work stream.

**New conceptual understandings**

In recent years NHS England and NHS Improvement have mandated a variety of performance dashboard tools which may prove effective in driving boards to pay more attention to the successes and failures of their organisations. However, this is a relatively new trend, and reflective self-evaluation has not traditionally been a strength for NHS organisations. This is particularly true of service innovation, where improvements can struggle to be shared within individual organisations, let alone with other NHS providers or elsewhere in the public sector.

In the case of this Vanguard, however, there is good evidence that self-evaluation was designed in to the programme at an early stage, and viewed as an important feedback mechanism. An Evaluation Model produced in 2016 demonstrates at least a strong intent to measure the impact of the ACC model in three, themed areas: ‘Customer’, ‘Patient’ and ‘Efficiency’.

Customers are the organisations which make use of NHG services, and evaluation is anticipated to focus on the impact of outsourcing a service area (for example, payroll, procurement or estate management) and public and staff perception of such a change. From the patient perspective, the potential areas for evaluation include national performance data, standards of the patient experience and patient outcomes. Efficiency evaluation may include financial and clinical sustainability measures, quality improvement across a service and the cause and effect mechanisms that allowed a change to succeed or fail.

Attention to evaluation as an improvement tool is not strictly a new conceptual understanding, but in placing this at the centre of the model the Vanguard is setting an important example to others.

The presentation provided to the NEVE research team highlighted another area in which the Vanguard has struck out in a different direction. The operational, clinical and financial pressures on the NHS have recently resulted in a number of attempts at merger or acquisition, with the intent to drive improvements by enabling high performing organisations to share their best practice with others which are struggling, and perhaps also to benefit from economies of scale. These have not always proved successful, or indeed even feasible, usually due to overestimates of the savings which can be achieved, or because of deep-seated differences in the culture of the organisations.

The ACC Vanguard offers a different approach to the same problem, summed up by these bullet points, wherein the Vanguard self-describes its offer as:

- **Practical**
- **Scalable at pace**
- **Driven by extensive experience across the NHS and.....**
- **Extensive experience working with private sector complex group structures (national and multi-national organisations).**
• **Not reliant on expensive and potentially risky mergers/acquisitions**

In other words, new clients for, or members of, the NHG are offered the benefits of back office rationalisation and tested SOPs without the risks associated with full integration with the culture of another organisation. This is reflected in layers 1 and 2 of the Vanguard’s pyramid of service offering, as shown in Figure below. The option of becoming a more fully integrated member of the NHG is kept open through layers 3 and 4 (NHG Franchise and Full Member, respectively).

The benefits of this structured approach to accessing the expertise, best practice and commercial intelligence of the NHG were described in the NEVE presentation as follows:

- **Not aggressive nor intimating**
- **Options for wider NHS organisations not just a few**
- **Benefits realised quickly**
- **No need for cultures to collide**
- **Not reliant on difficult and complex decision making**
- **Local accountability maintained**
- **Immediate spreading and sharing of best practice**
- **Not restricted legally**
New opportunities and challenges

The reported use of system-wide evaluation and tailored, scalable access to the NHG’s expertise potentially constitute new opportunities for organisation learning and for forging new relationships between NHS organisations and others such as local authorities. These aspects of the Vanguard, alongside the evident emphasis on process standardisation, use of enabling technologies and greater flexibility in use of the workforce, are reported (within the logic model document) potentially to contribute to significant improvements in financial sustainability, demand management and care standards.

There was little in the available documentation to enable an analysis of the challenges faced by this Vanguard. However, as with most large-scale change in the NHS, and as reported nationally, the Vanguard programmes generally will require continued investment to deliver the full range of benefits which were predicted at the outset, and to enable other organisations to share their improved practices. The ACC Vanguard has a commercial focus at its heart, through offering a membership or client relationship to other organisations, which could provide some or all of the funding necessary to continue with its programme. Whether this is the case can only be assessed over a medium-term timeframe.

Northumberland PACS Vanguard

The Northumberland PACS Vanguard is highly ambitious in terms of its scope, its potential impact on the way that health and social care services are provided and the projected improvements to population health. This is reflected in the PACS Vanguard Logic Model document which, unlike some of the other North East Vanguard logic models, runs to several pages.

The rationale for the PACS Vanguard is set out on the first page of the logic model, thus:

“*The current system provides a range of excellent services, but has high overall costs due to an over-reliance on hospitals with resulting duplication, high use of A&E, high levels of hospital admissions and lengths of stay. There are a number of areas and population groups at greater risk of premature morbidity and mortality, resulting in health inequalities across parts of Northumberland. The system will focus on ‘What matters to you?’.*”

To address the issues of high costs, over-reliance on hospital services and premature morbidity and mortality, the Vanguard is predicated on the phased introduction of four major work programmes: 7/7 integrated primary care hubs, seven-day urgent & emergency care, a population health & prevention model, and creation of an Accountable Care Organisation (ACO). Each of these programmes is further described in its own, dedicated logic model, each with its own distinct set of inputs, activities, outputs, outcomes and impacts. The cross-cutting elements in each of these are: staff engagement with the new models of care, a patient-centred approach to service redesign, improved efficiency and clinical/financial sustainability, and better outcomes.

It is notable that, considered together, the logic models reflect a strategic drive towards operation as an ACO; each of the three preceding phases is presented as a logical stepping stone to a fully integrated organisation which spans every aspect of previously separate elements in complex health and social care pathways.
In support of the PAC plans, which involve significant relocation and reconfiguration of services, the Vanguard’s architects commissioned surveys of the public and patients, and staff.

The survey of the public and patients was conducted via an online tool, with 2,775 respondents, of whom around 45% had a long term condition. This was significant, as the health profile of the local population within this Vanguard area includes a large proportion of people with multi-morbidities and chronic illnesses. The survey was designed to elicit views on a broad range of themes, including: access to services, perceptions of the effectiveness of care coordination, patient involvement in care planning, ease of organising visits to GPs, priorities when seeing GPs and travel options when attending GP appointments.

The staff survey appears to be comprehensive and tightly focused on attitudes to integrated care. The challenges facing the Vanguard, at the time of the staff survey, were reported as:

- General practice: workload, available resources, ageing population, financial uncertainty
- District nursing: low morale and overwork
- Social care: high expectations of patients and the difficulty of the geography in the region
- Consultants: A&E and emergency medicine
- Hospital nurses: increased demands and problems with recruitment
- Mental health: workload pressures and lack of resources

These challenges are mostly reflected in the metrics chosen to measure the Vanguard’s performance, which include emergency admissions and length of stay in hospital, rates of readmission and A&E activity, data concerning primary and advanced care, health outcomes, life expectancy and data on pharmacy use and access. The document which describes the PAC 2016/17 deliverables has a similar focus on the major challenges in the health and social care environment, including: financial savings and reduced lengths of stay associated with urgent care; enhanced access to primary care; reductions in pressures on primary and emergency care through improved access to community services; delivery of an integrated health record; overcoming the final barriers to achieving ACO status.

New conceptual understandings

The documents associated with this Vanguard show that it aims to be a whole system programme, encompassing many more elements of health and social care than has generally been the case with previous attempts at integration in the NHS in England. The Executive Summary of the PAC Value Proposition sets this out clearly in its opening paragraph, which cites the partnership between Northumbria Healthcare NHS Foundation Trust, Northumberland CCG and the local authority. The remainder of Value Proposition explains how each phase of the Vanguard programme – creating a specialist emergency hospital, setting up 7-day primary care services with same day access, and using complex care teams (involving the primary, secondary and social care workforce) to target the most vulnerable patients – is a precursor step to the proposed ACO. The Value Proposition also tackles one of the major barriers to integration – the flow of money through the health and social care
systems – by emphasising that as care needs are increasingly met, where appropriate, out of hospital, the financial system must adapt correspondingly:

“If this is to remain sustainable, it will be essential that the payment mechanism for such services matures / develops in line with the change in delivery of the clinical model.”
PAC Value Proposition, p. 4

The mismatch between the development of New Care Models, which emphasise collaboration and networking, and the extant payment mechanisms in the health and social care systems in England, which are largely based on a quasi-market premise, is well rehearsed. However, the development of the PAC Vanguard and associated ACO brings this issue into sharp relief and adds weight to the proposition that funding and payment mechanisms should be subject to urgent reform.

New opportunities and challenges

The ultimate aim of this Vanguard is to create a regional ACO, spanning the full range of health and social care services, which will be enabled and supported by digital innovation and by use of a variety of multi-disciplinary teams in primary, community and secondary care settings. As has been recently reported, some STPs with similar ambitions have been subject to criticism that they have not fully involved local authority partners, GP representatives and other actors with interests in the future health and social care landscape. There have also been criticisms that the governance structures of STPs lack accountability and leave the public unclear as to who is responsible for STP development.

The PAC Vanguard builds on long-standing relationships between the Northumbria Healthcare NHS Foundation Trust, the local clinical commissioning groups, local authorities (including public health), GP representatives, local Healthwatch and other provider organisations. There is clearly an intent to further embed these important relationships in the emerging plans to become an ACO, as illustrated in Figure 1.
Figure 1: PAC Vanguard governance structure

To the extent that a broad range of partners are included in each layer of the governance structure shown in Figure 1, this Vanguard appears to be taking a lead in ensuring that lines of accountability are clear, that multiple views are taken into account and that the ground is cleared for the governance structures necessary to implement an ACO model.

The initial challenges facing this Vanguard are acknowledged in the staff survey documentation, as reported above. In addition, the same documentation highlights a number of perceived potential barriers specifically associated with integration, namely:

- Equity and fairness in the pattern of reallocation of resources (who will be the ‘winners’ and ‘losers’?).
- Concerns over implementation of a ‘one size fits all’ IT system.
- Concern that the Vanguard might struggle to continue without continued investment.
- Some views that previous forms integration had been abandoned.
- Doubts among some professional groups as to the ability of multi-disciplinary teams to function as intended, due to ingrained differences in culture and behaviour.
- Doubts concerning the provision of adequate resources to community care.

The Vanguard documentation shows that the above concerns were reflected in the schedule of ‘deliverables’. For example, the deliverables include a number of pilot projects (such as embedding pharmacists in enhanced primary care teams, use of enhanced service payments to retrain practice administrative staff as care navigators for non-medical services) designed to mitigate problems that may arise, prior to more widespread rollout.
We did not have access to documentation which reviews the attitudes and perceptions of staff, patients and carers following the implementation of the first two phases of this Vanguard. It would be valuable to conduct such surveys and to compare the results with those carried out earlier in the process of developing and implementing the PAC Vanguard.

The PAC Vanguard clearly implies major shifts of service provision and location, and this will have a significant impact on how patients access and experience care services. In some areas of England, it has been reported that similar changes have not been well communicated or explained to the public. The PAC Vanguard appears to have anticipated this potential pitfall by producing a brochure, ‘Unlocking Integrated Care in Northumberland’, which comprehensively sets out the rationale for highly integrated care and the corresponding reasons for the proposed service changes. The brochure provides some detail on the investments that will be required to make the Vanguard a success (in digital technologies, workforce development, integrated primary care hubs, community services and a new urgent and emergency care model) and includes clear information on what patients can expect in the future. The latter information could be seen as an important element in building public trust in the proposed changes and in ensuring that lines of accountability are maintained.
# Appendix D: Documents consulted in the NEVE Sharepoint website

## Sunderland MCP (All Together Better)

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
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<tbody>
<tr>
<td>All Together Sunderland MCP Vanguard data scoping working document</td>
<td>Overview of the programmes within the Vanguard and the composition of the Community Integrated Teams which aim to improve intermediate care in a number of locations. Sets out the metrics used to measure performance, including the expected outcomes and data sources.</td>
</tr>
<tr>
<td>All Together Better – Sunderland market research (Executive Summary, July 2016)</td>
<td>Report of the first phase of a market research project to map the public’s perceptions of the All Together Better programme. Includes results concerning understanding of care provision, the benefits of health and social care working more closely together and awareness of the ATB programme; with sub-topics in each of these areas.</td>
</tr>
<tr>
<td>Performance report September 2016</td>
<td>Powerpoint slides outlining performance against the metrics described in the data scoping document.</td>
</tr>
<tr>
<td>All Together Better – Communications and Engagement Report: staff survey. September 2016</td>
<td>A report on a staff survey and engagement with a range of stakeholders, which examines perceptions of the ATB programme; the level of understanding of, and agreement with, the aims of the ATB; views on the balance between cost savings and quality improvement; views on changes to collaborative working practices; information sharing; level of engagement with the ATB programme.</td>
</tr>
<tr>
<td>MCP Community Integrated Teams Logic Model</td>
<td>A single page description of the CIT approach, which covers the context and rationale, with detail around the inputs, activities &amp; outputs, short term outcomes, medium term outcomes and benefits / impact</td>
</tr>
<tr>
<td>MCP Digital Solutions Logic Model</td>
<td>A single page description of the digital solutions which are intended to be a key enabler of the ATB programme, in the standard logic model format.</td>
</tr>
<tr>
<td>MCP Enhanced Primary Care Logic Model</td>
<td>A single page description of the enhanced primary care approach, focusing on the need for better integrated care for patients with long term conditions.</td>
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<tr>
<td>MCP Metrics Overview</td>
<td>A detailed Excel file describing all metrics associated with the ATB Sunderland MCP, stratified by themes: efficiency, health and wellbeing, quality and safety, system.</td>
</tr>
<tr>
<td>Metrics to measure outcomes of Sunderland Vanguard Logic Models</td>
<td>A table of the metrics associated with the Logic Models, showing whether the data is national or local, whether the data is already available or to be developed, and assigning responsibility for data collation.</td>
</tr>
<tr>
<td>Sunderland Multispeciality Community Provider Logic Model</td>
<td>A single page summary of the MCP logic model, in the standard logic model format.</td>
</tr>
<tr>
<td>Sunderland Recovery at Home Logic Model</td>
<td>A single page summary of the Recovery at Home initiative, focusing on patients with high health and social care needs.</td>
</tr>
<tr>
<td>Performance Handbook V1.6</td>
<td>A key document for the Sunderland MCP Vanguard, which brings together the logic models, the programme level outcomes and the performance metrics for each element of the Vanguard programme. Includes a comprehensive terms of reference for the Vanguard Performance and Evaluation Group.</td>
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### Newcastle Gateshead Enhanced Care Homes PAN

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<tr>
<th>Document</th>
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<tbody>
<tr>
<td>AHSN Presentation Enhanced Care in Care Homes</td>
<td>Presentation on the new model for ‘community beds and home-based care’. Sets out the care gap, expected cost savings associated with the NCM and a three-year strategic delivery plan. Slides also cover the outcome-based nature of the PAN contracts, the high level shape of the care pathway, some detail on the enhanced primary care approach (including MDT) and use of new technologies. The presentation slides include some update information on progress against the chosen metrics, and the future priorities for embedding the changes.</td>
</tr>
<tr>
<td>PAN - Data Scoping Document – Newcastle Gateshead Enhanced Health in Care Homes (November 2016)</td>
<td>Description of the links between GPs, MDTs and care homes in this Vanguard</td>
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programme, plus high level outline of the metrics to be used.

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<tr>
<th>Document Type</th>
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<tr>
<td>PAN 2016 04 01 – Outcome Framework</td>
<td>An Excel file providing much detail on the outcomes which could be expected from the Vanguard programme. Outcomes are defined by domain, goal and indicator, with a further column which indicates how information on the outcomes will be gathered – through survey tools or data collection.</td>
</tr>
<tr>
<td>PAN 2016 10 – CT Mission Statement</td>
<td>A single slide statement of the Mission – success will stem from ‘behavioural and cultural change’.</td>
</tr>
<tr>
<td>PAN 2016 10 – Delivery Plan – Monitoring update</td>
<td>An Excel file containing information on each work stream in the PAN: enhanced primary care; Technology Enabled Care Solutions; Nutrition and Hydration; Rapid Response; Dementia; Medicines Management and Palliative &amp; End of Life Care. Columns detail the links to the STP programme, how progress is being measured, and the status of progress at intervals. Contains information on barriers and enablers, as they are encountered by the teams tasked with implementing the Vanguard.</td>
</tr>
<tr>
<td>PAN Baseline M5 metrics</td>
<td>Vanguard Metrics report for 2015/16 and 2016/17 (up to August 2016).</td>
</tr>
<tr>
<td>PAN Care Homes Logic Model</td>
<td>Inputs-outputs-outcomes described in graphical form, with colour coding to indicate where outcomes (short, medium and long) correspond to the funding and efficiency gap, care and quality, and the health and well-being gap. Also includes short summaries of what should be evaluated, which assumptions are being made, and the effects of external factors. Further pages give detail of metrics and each individual work stream.</td>
</tr>
<tr>
<td>PAN Care Homes metrics</td>
<td>Single page summary of four domains of metrics: national (core); enabler; nationally agreed local; Newcastle Gateshead specific.</td>
</tr>
<tr>
<td>PAN Commissioner Plan Tracker</td>
<td>Excel document with updates of Vanguard and Better Care Fund progress, detailing meetings, governance arrangements and inter-organisational communications.</td>
</tr>
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**PAN Outcomes and Metrics**

2-page summary of the PAN outcomes and metrics, divided into clinical, patient experience and patient safety.

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**North East Urgent and Emergency Care (UEC)**

<table>
<thead>
<tr>
<th>Publication</th>
<th>Description</th>
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<tbody>
<tr>
<td>AHSN Presentation. April 2016</td>
<td>A comprehensive, scene-setting presentation on the context, nationally and locally, for the UEC Vanguard, the potential enablers and barriers, and the Vanguard’s principles. Also contains material on ‘behavioural insight’, innovative means of communicating with staff and patients (video booths, rolling focus groups) and self-care initiatives.</td>
</tr>
<tr>
<td>Behavioural Insight into Urgent and Emergency Care Services. October 2016.</td>
<td>A comprehensive and thorough report on: public attitudes to the purpose and use of urgent and emergency care services; the reasons for shifts in the pattern of service use; the strengths and weaknesses of what was the ‘standard model’ for urgent and emergency care. The report includes eight ‘themes for action’ which have since become embedded in the UEC Vanguard.</td>
</tr>
<tr>
<td>North East Emergency Care Vanguard Data Scoping Working Document</td>
<td>A brief summary of the data to be used for measuring the impact of the Vanguard programme.</td>
</tr>
<tr>
<td>NUEUC Governance Framework</td>
<td>Diagram of the regional governance structure, covering the links between local, regional and national UEC teams, clinical, operational and transformation boards, and the eight local delivery boards.</td>
</tr>
<tr>
<td>Evaluation of the UEC Vanguard – Live Evaluation Framework. January 2017.</td>
<td>A report from Cordis Bright which sets out the proposed framework to be used to evaluate the UEC. Contains some initial views on the UEC’s progress from five initial interviews with key stakeholders.</td>
</tr>
<tr>
<td>UEC National Indicators</td>
<td>A set of three slides which show the clinical, staff satisfaction and patient experience indicators to be used to judge the progress and efficacy of the Vanguard.</td>
</tr>
<tr>
<td>UEC Vanguard Logic Model</td>
<td>Single page, standard logic model format, but includes details of the expected inter-organisational collaborative working, across a range of NHS providers.</td>
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### Northumberland PACS

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<th>Reference</th>
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<tr>
<td>CCG_20160420-UC-Agenda-Item-8-PACS-Vanguard-Progress-and-Risks</td>
<td>Northumberland CCG Governing Body paper. Covers the vision for the PACS Vanguard, the proposals to create primary care hubs, creation of enhanced care teams (acute and community) and looks ahead to the creation of an ACO.</td>
</tr>
<tr>
<td>Northumberland CCG Governing Body All-PDFs-December-2016</td>
<td>CCG governing body meeting report, covering developments in the STP and ACO.</td>
</tr>
<tr>
<td>Northumberland PACs Vanguard Data Scoping Working Document</td>
<td>A brief summary of the PACS programme, covering emergency/urgent care, ‘transforming primary care’ and the local metrics to be used in both cases.</td>
</tr>
<tr>
<td>PAC 2016 05 - Central locality survey results</td>
<td>A market survey of service users, including data on demographics, perceptions of access to services and the extent to which the public feel that care is coordinated.</td>
</tr>
<tr>
<td>PAC 2016 08 - Staff engagement final report</td>
<td>Market research report on the staff views of: the context in which the Vanguard is being developed; attitudes, priorities and barriers in relation to integrated care; preferred methods of engagement.</td>
</tr>
<tr>
<td>PAC 2016 09 - NCM Dashboard</td>
<td>SPC Excel document relating to the PACS metrics.</td>
</tr>
<tr>
<td>PAC 2016 10 - Vanguard Metrics – October</td>
<td>PowerPoint slides summarising time series data relating to emergency admissions and length of stay, readmissions and A&amp;E activity, primary and advanced care metrics, health outcomes.</td>
</tr>
<tr>
<td>PAC 2016 10 - Vanguard Metrics – October</td>
<td>An Excel document listing the key deliverables in relation to the Vanguard programme.</td>
</tr>
<tr>
<td>PAC Hypothesis tree</td>
<td>A single page summary of reasons to invest in the PAC/ACO business model.</td>
</tr>
<tr>
<td>---------------------</td>
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</tr>
<tr>
<td>PAC Logic Model</td>
<td>A single page summary of the inputs, activities, outputs and outcomes associated with the Vanguard. The activities are themed as 7/7 integrated care hubs, seven-day UEC, Population health &amp; prevention, ACO.</td>
</tr>
<tr>
<td>PAC Unlocking integrated care in Northumberland brochure FINAL</td>
<td>A public brochure, explaining in lay terms the ambitions which underpin the Vanguard, themed across care at home, care close to home and care in hospital.</td>
</tr>
<tr>
<td>PAC Value Proposition</td>
<td>This document sets out the rationale for the 3-phase PACS Vanguard, and explains the link between it and the ACO proposal.</td>
</tr>
<tr>
<td>PAC Vanguard Governance Diagram</td>
<td>This document explains the governance structure of the PAC Vanguard, with reference to the roles played by NHS provider organisations, LAs, Healthwatch, commissioners, Public Health England and NHS England.</td>
</tr>
<tr>
<td>PAC Vanguard Supporting Narrative</td>
<td>This contains a summary business case for a revised funding submission for the PAC, citing the potential return on investment and the risks associated with being unable to upscale the initial Vanguard work at scale and pace.</td>
</tr>
<tr>
<td>Vanguard_270815_LR</td>
<td>A 2-page flyer, explaining the ambitions and rationale for the ACO proposal.</td>
</tr>
</tbody>
</table>

**Northumbria ACC**

<table>
<thead>
<tr>
<th>ACC - DATA SCOPING DOCUMENT - Northumbria Foundation Group ACC Vanguard Data Scoping Working Document</th>
<th>Outlines the four work streams in this Vanguard: Contracted Services, Hospital Group/Service Offering, Enabling Technology, Group Governance.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC Evaluation Model November 2016</td>
<td>Presentation slides covering the method to be used for internal evaluation of the ACC model, grouped around Customer, Patient and Efficiency.</td>
</tr>
<tr>
<td>ACC Logic Model</td>
<td>Standard one-page logic model, with an emphasis on the potential benefits of the ACC model to other</td>
</tr>
<tr>
<td>Organisation/Document Title</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td>ACC NEVE Presentation November 2016</td>
<td>A presentation provided to the NEVE research team, outlining the main governance and operational features of the model.</td>
</tr>
<tr>
<td>ACC project structure chart</td>
<td>A single slide showing the relationships between the ACC project board and the four work streams: contracted services, hospital group/service offering, enabling technology, group governance.</td>
</tr>
<tr>
<td><a href="http://www.nhsconfed.org/blog/2016/08/achieving-collaboration-without-acquisition-the-northumbrian-way">http://www.nhsconfed.org/blog/2016/08/achieving-collaboration-without-acquisition-the-northumbrian-way</a></td>
<td>An article reflecting on how the ACC Vanguard enables ‘lifting and shifting’ of successful operating models, and encourages standardisation and adoption of best practice, within and between NHS organisations.</td>
</tr>
</tbody>
</table>