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An Economic Analysis of the Recovery Package

Macmillan Cancer Support
February 2016

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London | Brussels | Los Angeles |New York | Washington, DC | Zurich

Table of Contents

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1. Key Messages

- Optimity Advisors was commissioned by Macmillan Cancer Support to (1) assess the feasibility of undertaking an economic evaluation of the Cancer Recovery Package and (2) subject to the outcome of the feasibility study, undertake an economic evaluation, according to the parameters agreed between Macmillan Cancer Support and Optimity Advisors.
- The feasibility report reviewed the data and information available and recommended that given these data, a formative, economic evaluation, based on a cost-consequence analysis, could be undertaken. A more definitive, summative economic evaluation, based on a cost-effectiveness or cost-benefit analysis, would not produce reliable results at this stage, due to variations in local practice, variations in data collection, incomplete data and the relatively early stage of the implementation of the Recovery Package (hence, the absence of health outcome data).
- A cost-consequence analysis presents the costs and consequences in a 'balance sheet' format, rather than producing a ratio of costs and impacts, or producing a net benefit calculation.
- The four components of the Recovery Package are:
    - Holistic Needs Assessment (HNA) and Electronic Holistic Needs Assessment (eHNA)
    - Treatment Summary (TS)
    - Cancer Care Review (CCR)
    - Health and Wellbeing Clinics (HWC)
- The economic evaluation identified a set of data that generated cost estimates for these different components. These, however, are subject to uncertainty, due to reliance on specific point data sources and the absence of primary data. In addition, some of these costs were available per patient, whereas others (due to lack of data) were only available at an institutional level (e.g. per NHS Trust). These costs should, therefore, be regarded as indicative of the magnitude of scale of the costs, rather than accurate figures drawn from an activity based costing exercise:
    - HNA: £13.70 per patient
    - eHNA: set up cost of £6,900 per site and £8,440 per NHS Trust per year
    - TS: £28 per patient
    - CCR: £41 per patient
    - HWC: Set up costs of £4,040 (taken from an average of different set up options); running costs of £11,490 (taken from an average of different running options) (assuming no existing infrastructure in which the HWC can be based).
- The economic evaluation identified a range of impacts and benefits to patients, carers and healthcare professionals, as listed below:
    - Reduced patients' anxiety and increased reassurance
    - Improved patients' confidence
    - Benefits to care planning process, through better information and improved communication between patients, carers and professionals about the diagnosis and treatment
    - Reported confidence in decision making by healthcare professionals
    - Increased awareness among patients of availability of local services
    - Potential reduction in utilisation of acute care services
- Definitive conclusions about the cost-effectiveness of the individual components or the Package as a whole are not possible, due to the absence of complete data, variations in local implementation

and the absence of a control group. Individual discretion is advised when assessing the relative importance of the different costs and impacts identified in the cost consequence analysis (CCA), but the high level findings were:

- For what appear to be relatively low implementation costs, the different components appeared to generate positive outcomes for patients, carers and healthcare professionals.
- The outcomes identified are, by definition, short-term health outcomes and process benefits (i.e. longer term benefits were not included).
- However, there were also concerns about missing cost data, especially in relation to upfront investment and set up costs, which would also suggest the costs are under-represented.

2. Executive Summary

2.1. Introduction

2.1.1. Background

Macmillan Cancer Support commissioned this project with the objective of undertaking an economic evaluation of the Recovery Package. It was to support both the ongoing development of the Recovery Package, and to influence future commissioning and planning decisions in the area of health and social care support for patients who have been diagnosed with and treated for cancer.

The Recovery Package is a combination of four interventions, and has been developed and tested by the National Cancer Survivorship Initiative (NCSI) to achieve better outcomes for people living with a diagnosis of cancer, and to assist them when returning to as near a normal lifestyle as possible.

The evaluation set out to examine the evidence as to whether the Recovery Package is delivering value for money and is resulting in improved patient outcomes. Its purpose was to identify the costs and benefits associated with the Recovery Package, as well as to provide evidence to demonstrate connections between investment in the Recovery Package and better patient outcomes.

Building on an initial feasibility study, this evaluation is a formative type of economic evaluation, which is designed to be used by Macmillan Cancer Support and local delivery teams in developing and implementing part or all of the Recovery Package.

2.1.1.1. Recovery Package

The Recovery Package is a combination of interventions which, when delivered together, is expected to greatly improve the outcomes and coordination of care for people living with and beyond cancer. It is expected that as a consequence of the intervention(s), people living with cancer are empowered and can self-manage their health. The interventions include:

- A Holistic Needs Assessment (HNA), paper or electronic, at key points of the care pathway. The HNA highlights the holistic needs of the patient and contributes to the development of the care plan;
- A Treatment Summary (TS) completed at the end of each acute treatment phase, sent to the patient and their GP. The TS improves communication between healthcare professionals;
- A Cancer Care Review (CCR) completed by the GP or practice nurse to discuss the person's needs and inform the person living with cancer about the services and support available to them; and
- A patient education and support event, such as a Health and Wellbeing Clinic (HWC), to prepare them for the transition to supported self-management, which will include advice on a healthy lifestyle and physical activity.

2.1.2. Aims

The aim of this study was to undertake, as far as available data and evidence permitted, an economic evaluation of the Recovery Package. Given the uncertainty around the data, the first stage was to produce a feasibility study based on a review of the available literature, data and evidence around the costs and effectiveness of the components of the Recovery Package. This feasibility study was produced collaboratively between Optimity Advisors and Macmillan Cancer Support, and set out the objectives for the second stage, which defined the expected parameters and scope of the economic evaluation itself.

The economic evaluation was undertaken, with the aim of producing this final report, which is designed to identify, as far as is possible, the benefits generated by the investment in the Recovery Package, and to what extent the Recovery Package demonstrates value for money.

2.2. Methods and findings

2.2.1. Literature review

Qualitative and quantitative evidence was gathered from data and information available to calculate the costs and outcomes and conduct the economic evaluation. A data validation sheet was then developed, summarising the findings from the document review (including gaps in the data), to validate the data gathered in the literature, such as costs, time required to complete the intervention, intervention outcomes, etc.

2.2.1.1. Findings

The overall conclusion of the evidence review was that while cost information was available, data collection on outcomes has been inconsistent, and to some extent complicated by local variations in the implementation of the Recovery Package.

2.2.2. Interviews

Semi-structured, in-depth telephone interviews were undertaken with national-level and local-level stakeholders. They focused on five topic areas: design and conceptualisation of the Recovery Package; implementation of the Recovery Package (at a national and/or local level); funding allocations and budget reporting; data collection and availability and areas for improvement. Additionally, shorter interviews/email exchanges were undertaken with local stakeholders with a more direct role in implementation, focusing specifically on data availability in the five topic areas mentioned above.

2.2.2.1. Findings

Long interviews:

The interviews found that there was clarity around the vision on improving the outcomes of patients at the end of treatment and the need for the Recovery Package. The decision to allow local sites to test out elements of the Recovery Package has provided good evidence about what works locally, but has also decentralised some of the design elements and fragmented the Recovery Package components reducing its efficacy as an entire, integrated form of care and support.

The interviews showed that there is a significant amount of local variation in the implementation of the Recovery Package. Clear objectives and targets appeared to have been set for the implementation of some elements (e.g. eHNA) of the Recovery Package by the National Cancer Survivor Initiative, which has led to a wider understanding of site objectives and progress to meet these objectives. However, the lack of a nationally standardised data collection process across the Recovery Package made it difficult to evaluate its impact as a whole. In addition, stakeholders identified that it was important to have early and concerted engagement with commissioners at a local level for the Recovery Package to be as effective as possible.

Short interviews:
It was highlighted through the short interviews that upfront time and resources are necessary to train the staff to conduct the HNA, but that as healthcare professionals become more experienced with implementation, less time is required to complete it. Furthermore, the TS may enable early discharges from hospital, but it was suggested that healthcare professionals could be reluctant to move patients to the primary care setting, and administering the TS at discharge. Again, it was noted that the time taken to implement the TS reduces as it becomes more routine.

2.3. Feasibility report

The feasibility report was published in July 2015 and is included as an annex to this final report. Its conclusions were that there was sufficient data to conduct a high-level cost-consequence analysis of the Recovery Package, given the availability of some programme level cost data and some, largely qualitative, data on outcomes. However, given the variation of local implementation and the lack of both detailed cost data and follow-up evaluation of outcomes, there was not sufficient data to enable the comprehensive costing and quantitative assessment of outcomes required for a more detailed analysis, such as a cost-effectiveness, cost-utility or cost-benefit analysis.

Nonetheless, a formative economic evaluation adds to the evidence base on the Recovery Package, helps inform future research priorities and provides a document which can be used to help inform commissioning decisions, long term strategy development and engage stakeholders. The feasibility exercise highlighted the need for more detailed information on patient and staff experience, patient health outcomes and quality of life and the impact on the treatment pathway. Ideally, this would be done in such a way as to be able to assign quantitative values to outcomes (such as by using a validated quality of life questionnaire over time and collecting data on health service usage). Such data means a more detailed cost-effectiveness analysis or cost-benefit analysis could be undertaken.

2.4. Logic model

The logic model approach is a technique used across evaluations that articulates the connections between resources, activities outputs and outcomes, and helps structure and organise the evaluation methodology. Optimity Advisors used this approach to structure the links between the costs and outcomes of the Recovery Package. The logic model enables the identification of the key stages in delivery and mapping the links between these stages – the expenditure on inputs, the inputs, the activities undertaken by these inputs, the outputs produced by these activities and ultimately the wider outcomes generated by these outputs.

A generic logic model is shown below:

In the context of this study, a logic model for each component of the Recovery Package was built, informed by the interviews and data collection process, and used to construct the Cost-Consequence Analysis.

2.5. Cost-consequence analysis

2.5.1. Introduction

CCA is one of several approaches to economic evaluation, but it does not calculate a 'single figure' result for benefits, such as quality-adjusted life years (QALYs) gained or a monetary valuation of health improvements. Instead, CCA reports a 'balance sheet' of benefits – quantifying these where possible, but also including qualitative, descriptive information explaining the likely impact where it has been identified but cannot be easily measured. As such, the results reported from a CCA are less definitive than with other forms of economic evaluation, but a CCA can, nonetheless, be extremely informative, especially for programmes and initiatives that are evolving through implementation. It can, therefore, be a valuable component of a formative economic evaluation.

In this report, in the absence of a definitive cost-effectiveness ratio, or a direct comparison of costs and benefits in a monetized format, the authors have drawn their conclusions regarding the cost-effectiveness/value for money of the components of the Recovery Package, based on their assessment of the available evidence. However, a more robust analysis based on more complete and consistent data would be needed to present such a definitive cost-effectiveness ratio.

2.5.2. Summary of the cost-consequence analysis

2.5.2.1. Paper-based and electronic Holistic Needs Assessment

For the HNA/eHNA component, the relatively low upfront costs in implementing such a scheme does lead to a service that improves the engagement and experience of patients recovering from cancer. The variation in implementation (in particular the level of nursing staff completing the assessment) needs to be monitored to ensure consistency in improved processes and outcomes. There was some reported evidence of difficulties in completing the assessment, but this might have been due to local issues. There was no evidence of systematic problems, and so local teams may wish to pay specific attention to this when implementing this component to ensure the scheme is as effective as possible.

2.5.2.2. Treatment Summary

Again, for a relatively low investment, this part of the Recovery Package could be considered a cost-effective intervention, and can complement the eHNA/HNA and provide support and information to patients as they begin their period of recovery. Specific benefits identified included positive outcomes for young people as they transition through to using adult services. The benefits of the Treatment Summary are to be viewed over a period of time, and to ensure the sustainability of these benefits, local teams may wish to devote time to ensure that these benefits are not lost over time. There was some evidence from the study concerning uncertainties around the optimal time to undertake a Treatment Summary, and also making time and resources available to complete the summary. Both potentially limited the benefits from the scheme.

2.5.2.3. Cancer Care Review

For the Cancer Care Review, the costs of implementation were again relatively low, and through the provision of information and support about the nature of treatment, evidence has shown that this process does generate benefits to patients. An interesting question, which unfortunately cannot be answered in this report due to variations in implementation, is whether aspects such as the Cancer Care Review are more effective when they are provided as part of a wider package, e.g. when complementing the eHNA/HNA and the Treatment Summary? This depends very much on whether the Recovery Package is being implemented as a whole or as separate components. Further evaluations might wish to focus on whether there are any process benefits associated with implementation of more than one component at the same time.

2.5.2.4. Health and Wellbeing Clinic

Health and Wellbeing Clinics are another form of information and support provision. HWCs can take a variety of formats and, as such, an evaluation of such a broad concept will be limited in its detail. The cost-effectiveness of such 'market stall' events will depend on being able to exploit economies of scale. Significant upfront costs will only be translated into positive outcomes and benefits for patients through the logic model if sufficient numbers are able to benefit from such events. A further issue associated with these events is that they are less 'personal' than the other components of the Recovery Package, and as such there is the risk that certain groups that require more personalised engagement (e.g. through language requirements) may benefit less than others. Local areas developing HWCs as part of the Recovery Package will need to be able to distinguish between financial affordability (i.e. ensuring sufficient resources to cover upfront costs) and value for money (generating outcomes for patients from the resources spent).

2.6. Next steps

For a successful evaluation of the Recovery Package, consideration should be given to ensuring that complete and consistent data across all elements of the Recovery Package are collected. For example, data on the upfront costs of training could be collected. Additionally, the impact of combining different components, e.g. combinations of the Treatment Summary with the Cancer Case Review or the Holistic Needs Assessment has not been evaluated, where it could save both time and money.

It is important to compare the impact of the intervention to the next best practice to establish the impact of the Recovery Package with the outcomes measured on formal evaluation: pre and post intervention. Long-term follow-up data for outcomes of the Recovery Package should be collected.

Using a best practice example could help sites at the early stages of the intervention implementation on up-front resources required for the successful implementation of the Recovery Package.

3. Introduction

3.1. Objectives

The primary aim of this project was to conduct an economic evaluation to support Macmillan Cancer Support in developing the Recovery Package, and supporting its deployment across the healthcare system. The Recovery Package is a combination of four interventions, and has been developed and tested by the National Cancer Survivorship Initiative (NCSI) to achieve better outcomes for people living with a diagnosis of cancer and to assist them when returning to as near a normal lifestyle as possible.[31]

The evaluation aims to present evidence that the Recovery Package is delivering value and is linked to better patient outcomes. Its purpose is to identify the costs and benefits associated with the Recovery Package, as well as to provide evidence to demonstrate links between investment in the Recovery Package and better patient outcomes.

Following on from an initial feasibility study, this economic evaluation is a formative evaluation designed to be used by Macmillan Cancer Support and local delivery teams in developing and implementing part or all of the Recovery Package. This evaluation is designed to help organisations understand the costs and outcomes of the Recovery Package, and whether specific attention needs to be paid, and in what areas, to ensure cost-effective delivery.

3.1.1. Economic evaluation

The economic analysis was undertaken using available evidence on the Recovery Package provided by Macmillan Cancer Support and evidence collected through literature reviews and interviews with stakeholders.

3.1.2. Output

This report presents the cost and consequences of the four elements of the Recovery Package. The findings of the cost-consequence analysis (CCA) are presented in Section 5. This is followed by a discussion outlining the next steps and recommendations for the implementation of the Recovery Package at national level.

3.2. Methodology

To assess the value for money of a programme, such as the Recovery Package, an economic evaluation is undertaken that compares data on the costs and the outcomes of the programme. More rigorous and complete datasets result in a more comprehensive economic analysis that can be developed into a summative economic evaluation, which provides definitive evidence around cost-effectiveness. In situations, however, where there is missing data, or variations in implementation, there can still be value in collating together high-level evidence to produce a formative evaluation, which provides guidance, support and information to help implementation. As such, in order to assess the economic value of the Recovery Package, Optimity Advisors gathered detailed information from available data sources which were essential for conducting an evaluation. This was done through a document review, stakeholder interviews and stakeholder validation.

The collected data, gathered from the desk research, interviews, both short and long, and validation documents, were extracted and then synthesised into a format that could be used for economic analysis. The methods for the analysis and findings of the feasibility study conducted for the economic analysis are discussed in this section.

Details on the methodology are presented in Annex 3 (section 8.3).

3.3. Feasibility study

The feasibility of conducting an economic evaluation, and its level of detail was assessed based on the breadth and depth of the available data. It was decided that while a full, detailed, summative economic analysis could not be conducted at this stage, a high-level, formative approach was feasible, which would give an indication of the size and nature of the outputs and outcomes relative to the investment, by combining the quantitative data that was available with qualitative assessment of the Recovery Package. Cost data (some top-down and some bottom-up) is available, as is some qualitative data on outcomes and a small amount of survey data. By combining all existing literature on the cost and impact of the Recovery Package with expert opinion and assessment by practitioners, this approach pulls together a high-level picture of the Recovery Package, demonstrating current knowledge about its effectiveness and cost-effectiveness, while also highlighting where more evidence is required for a more definitive evaluation. There is also the opportunity to provide a more in-depth look at local case studies, which are seen as representative or exemplary examples of the implementation of the Recovery Package, including patient case studies for a partial view of subsequent health and treatment outcomes. The feasibility report is presented in Annex 5 (section 8.5)

3.4. Overview of cost-consequence analysis

In this report, the cost-consequence analyses (CCAs) are summarised and the full analyses are presented as tables in the appendices. As described further in section 5.2.1, a CCA compares costs and consequences and reports a ‘balance sheet’ of benefits, quantifying where possible. It also includes qualitative, descriptive information without summarising outcomes in a single measure. A standalone CCA is developed for each element of the Recovery Package. In total, five CCAs (which includes both paper and electronic HNAs) have been developed. The structure of the CCA tables and data inputs within the CCA tables are explained in Annex 6 (section 8.6).

4. The Recovery Package

4.1. Overview of the Recovery Package

4.1.1. What is the recovery package and what it is trying to achieve?

The National Cancer Survivorship Initiative (NCSI) is a partnership between NHS England and Macmillan Cancer Support. The aim of the NCSI is "to ensure that all those living with and beyond cancer get the care and support they need to lead a life as healthy and active as possible, for as long as possible."[45] This is in view of the fact that cancer is increasingly an illness which might be cured or which might have the characteristics of a long term or chronic condition that people can live with for many years. This presents health and care services with the challenge of delivering sustainable healthcare to this group.

In 2010, the NCSI published a vision document,[13] which presented a range of evidence about the current picture of care and support for people living with and beyond cancer. The evidence suggested that the current arrangements are not meeting all needs of cancer patients. A survey carried out by the Picker Institute found that out of 2,000 cancer survivors, 43% would have liked more information and advice, 75% did not have or did not know if they had a care plan and 75% reported not knowing who to contact for advice outside of office hours.[64]

The NCSI identified the need for five shifts in the approach to the care and support for people living with and beyond cancer, including:

- A cultural shift in the approach to care and support for people affected by cancer – to a greater focus on recovery, health and well-being after cancer treatment;
- A shift towards assessment, information provision and personalised care planning. This is a shift from a one-size-fits-all approach to personalised care planning based on an assessment of individual risks, needs and preferences;
- A shift towards support for self-management. This is a shift from a clinically led approach to follow up care to supported self-management, based on individual needs and preferences and with the appropriate clinical assessment, support and treatment;
- A shift from a single model of clinical follow up to tailored support that enables early recognition of and preparation for the consequences of treatment as well as early recognition of signs and symptoms of other diseases; and
- A shift from an emphasis on measuring clinical activity to a new emphasis on measuring experiences and outcomes for cancer survivors through routine use of Patient Reported Outcome Metrics in after care services.[13]

Following this, possible models for providing that support were piloted throughout the duration of the initiative and the Recovery Package was developed by Macmillan Cancer Support as a direct result of the evaluation of these pilots.

4.1.2. Elements of the Recovery Package

The Recovery Package is a combination of interventions which, when delivered together, is expected to greatly improve the outcomes and coordination of care for people living with and beyond cancer. It is expected that as a consequence of the intervention, people living with cancer are empowered and can self-manage their health. The interventions include:

- **A Holistic Needs Assessment (HNA)**, paper or electronic, at key points of the care pathway. The HNA highlights the holistic needs of the patient and contributes to the development of the care plan;
- A **Treatment Summary (TS)** completed at the end of each acute treatment phase, sent to the patient and their GP. The TS improves communication between healthcare professionals;
- A **Cancer Care Review (CCR)** completed by the GP or practice nurse to discuss the person's needs and inform the person living with cancer about the services and support available for them; and
- A patient education and support event, such as a **Health and Wellbeing Clinic (HWC)**, to prepare them for the transition to supported self-management, which will include advice on a healthy lifestyle and physical activity.[39]

Table 1 lists these interventions according to which phase they are implemented.

Table 1: Recovery Package implementation stages

Element of Recovery Package	Timing
Holistic Needs Assessment	Key transition points in the care pathway
Treatment Summary	At the end of each acute treatment phase
Cancer Care Review	Within six months of the GP practice being notified that a person has a cancer diagnosis
Health and Wellbeing Clinics	Transition to supported self-management

These four interventions complement the use of stratified care pathways, the aim of which is to support self-management, with rapid access to the specialist team if required or face-to-face follow-up with health care professionals.

Macmillan reports the results of existing research on the Recovery Package in its 2014 report.[40,41] A study by NCSI[46] stressed that people will have improved wellbeing and demand for services will be reduced if support is tailored to particular needs.

4.1.2.1. Holistic Needs Assessment

The Holistic Needs Assessment (HNA) is a set of questions completed by people living with cancer, and is usually reviewed by clinical nurse specialists. It allows patients to highlight their needs and concerns and informs the development of a subsequent care plan,[35] which is based on the diagnosis and holistic assessment of the patient.[66] The HNA can be undertaken through a discussion, can be paper-based or completed electronically on a device (e.g. tablet).[35]

A key element of the Recovery Package is to improve the holistic needs of people living with cancer and plan their care. One study identified that of 1,425 patients 30% reported more than five unmet needs at the end of treatment or six months later.[2] In 2014, only around 25% of cancer survivors receive an HNA and care plan.[66] Abrahamson reports that patient empowerment through the resolution of unmet needs can increase patient participation in care, and is especially important in terms of understanding the risks and benefits of treatment.[1] Findings of a study[29], which investigated the implementation of self-assessment and care planning processes in 11 test sites from the perspectives of staff and patients, found that professionals thought that self-assessment and care planning processes were beneficial for the organisation by, for example, making more appropriate use of time spent in appointments. Patients reported being better able to self-manage their condition, and having improved self-confidence and control over their situation.[67] An evaluation of the pilot of an Electronic Holistic Needs Assessment (eHNA) tool in four sites in England shows that the number of assessments completed electronically is greater than the number previously completed on paper over a similar time frame. This translates into a greater number of care plans being produced. Staff also reported a belief that they were carrying out more HNAs than they had done previously on paper, or would have done had they been using a paper format instead.[23]

4.1.2.2. Treatment Summary

The Treatment Summary (TS) is a document produced by secondary cancer care professionals at the end of treatment and sent to the patient's GP. It aims to inform GPs and other primary care professionals of any actions they need to take and who to contact with any questions or concerns. The patient also receives a copy to improve understanding of their condition.[50]

The TS was tested in 11 NHS sites across four tumour groups using a standard template.[65] Around 250 summaries were issued to GPs over a six-month period. Its use was evaluated by the NCSI through surveys, telephone interviews and face-to-face meetings with more than 50 clinicians. The TS was positively received in both primary and secondary care. Around 80% of GPs found the summary 'useful' or 'very useful', over 50% felt it would make a difference to the way they managed patients, and 90% wanted its use to continue. The majority of hospital clinicians recognised the value of recording what could be months of treatment and holistic care into a concise summary.[68]

4.1.2.3. Cancer Care Review

All GPs should carry out a Cancer Care Review (CCR) within six months of receiving confirmation that a patient has been diagnosed with cancer. A study, looking at 171 participants, found that, overall, GPs were very positive about the Macmillan CCR templates, with the most useful prompts being 'reviewing medication' and 'noting details of main carer'.[28] Patients surveyed were also very positive with over 71% being 'very satisfied'. Patients felt that the CCR gave them an opportunity to discuss their cancer and general state of health with their GP and appreciated the fact that their GP made the effort to contact them.

4.1.2.4. Health and Wellbeing Clinics

Health and Wellbeing Clinics (HWCs) are an opportunity to share information, and can be a traditional event comprising of presentations, market stalls and/or one to one sessions, or they can be solely market stalls or presentations, volunteer led or an assessment clinic. An evaluation by the Office for Public Management found that those participating in the clinics had increased knowledge of the signs and symptoms of cancer and how to re-engage with the health system if this was required.[56] In addition, patients' quality of life was improved, facilitating better management of emotional distress and participation in social activities. For breast cancer patients, it has been found that cancer survivors favour group events and many find them valuable, with meetings among peers assisting in the transition from patient to survivor.[4] There is also some evidence suggesting that among prostate cancer patients, group events can result in improved psychological wellbeing.[28]

Salisbury District Hospital established an end of treatment scheme for people finishing chemotherapy. It consisted of a support group, one to one gym sessions, supervised by trained gym staff, and a swimming pass to become the hospital's Health and Wellbeing Programme. The group was co-facilitated by a trained gym instructor and a clinical psychologist, with guest talks from specialists such as dieticians, aromatherapists, financial advisers and other professionals. The programme consisted of eight, two- hour sessions. According to the Recovery Package report, "the group resulted in a 70% reduction in the symptoms of depression, a 35% decrease in anxiety and a 54% reduction in how much cancer related fatigue gets in the way with people's daily lives." Around two-thirds (66%) of patients expressed their intention to continue using the hospital's gym facility.[60]

4.2. Logic model

4.2.1. What is a logic model?

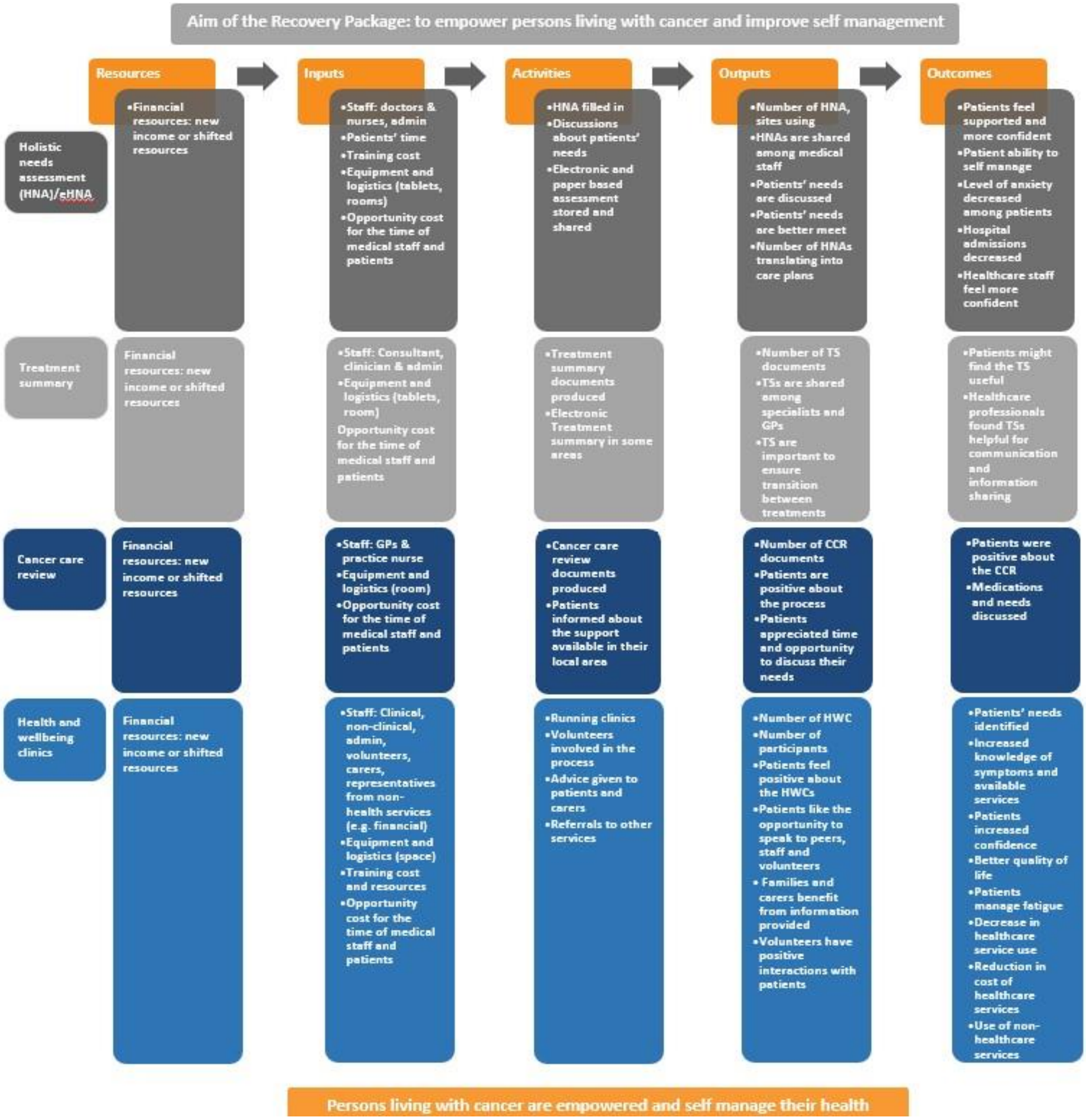
The logic model methodology is a well-established approach that articulates the connections between resources, activities outputs and outcomes, and helps structure and organise the evaluation methodology. As a part of the Recovery Package evaluation, Optimity Advisors have used this approach to structure the links between the costs and outcomes of the intervention. The logic model enabled the identification of the key stages in delivering and mapping the links between these stages – the expenditure on inputs, the inputs, the activities undertaken by these inputs, the outputs produced by these activities and ultimately the wider outcomes generated by these outputs. Such a model enables organisations and their stakeholders to see and understand the links between inputs, outputs and outcomes. It also forces an explicit demonstration of the evidence base of the links between the components, especially how outputs translate into real outcomes. Equally, if no such evidence is available, such an approach makes any key assumptions transparent, which can then be tested and amended if necessary.

From an economic perspective, mapping the logic model allows categorisation of the costs and benefits delivered by an intervention, in this case by the Recovery Package. Inputs relate to the costs of services incurred by the local sites, Macmillan or the stakeholders involved in the implementation processes, while outcomes represent the health benefits that result to patients, healthcare staff, healthcare services, volunteers, carers, as well as Macmillan and/or wider society. Activities and outputs do not carry a cost themselves; they show the process of how costs are turned into benefits, although further costs may result from activities and outputs. Outcomes are, by definition, the benefits, i.e. what the Recovery Package is trying to achieve and how it should be measured, the improvements in health outcomes of patients at the site and/or hospital relative to what would have happened in the absence of the Recovery Package, i.e. the counterfactual.

The logic model approach is presented below.

Figure 1: Logic model approach

4.2.2 The Recovery Package overarching logic model



Aim of the Recovery Package: to empower persons living with cancer and improve self management

	Resources	Inputs	Activities	Outputs	Outcomes
Holistic needs assessment (HNA)/eHNA	•Financial resources: new income or shifted resources	•Staff: doctors & nurses, admin •Patients' time •Training cost •Equipment and logistics (tablets, rooms) •Opportunity cost for the time of medical staff and patients	•HNA filled in •Discussions about patients' needs •Electronic and paper based assessment stored and shared	•Number of HNA, sites using •HNAs are shared among medical staff •Patients' needs are discussed •Patients' needs are better meet •Number of HNAs translating into care plans	•Patients feel supported and more confident •Patient ability to self manage •Level of anxiety decreased among patients •Hospital admissions decreased •Healthcare staff feel more confident
Treatment summary	Financial resources: new income or shifted resources	•Staff: Consultant, clinician & admin •Equipment and logistics (tablets, room) Opportunity cost for the time of medical staff and patients	•Treatment summary documents produced •Electronic Treatment summary in some areas	•Number of TS documents •TSs are shared among specialists and GPs •TS are important to ensure transition between treatments	•Patients might find the TS useful •Healthcare professionals found TSs helpful for communication and information sharing
Cancer care review	Financial resources: new income or shifted resources	•Staff: GPs & practice nurse •Equipment and logistics (room) •Opportunity cost for the time of medical staff and patients	•Cancer care review documents produced •Patients informed about the support available in their local area	•Number of CCR documents •Patients are positive about the process •Patients appreciated time and opportunity to discuss their needs	•Patients were positive about the CCR •Medications and needs discussed
Health and wellbeing clinics	Financial resources: new income or shifted resources	•Staff: Clinical, non-clinical, admin, volunteers, carers, representatives from non-health services (e.g. financial) •Equipment and logistics (space) •Training cost and resources •Opportunity cost for the time of medical staff and patients	•Running clinics •Volunteers involved in the process •Advice given to patients and carers •Referrals to other services	•Number of HWC •Number of participants •Patients feel positive about the HWCs •Patients like the opportunity to speak to peers, staff and volunteers • Families and carers benefit from information provided •Volunteers have positive interactions with patients	•Patients' needs identified •Increased knowledge of symptoms and available services •Patients increased confidence •Better quality of life •Patients manage fatigue •Decrease in healthcare service use •Reduction in cost of healthcare services •Use of non-healthcare services

Persons living with cancer are empowered and self manage their health

Figure 2: Recovery Package logic model

5. Economic Evaluation of the Recovery Package

5.1. Introduction

This chapter sets out the results of an economic evaluation of the Recovery Package, in the form of a cost-consequence analysis (CCA), undertaken in collaboration with Macmillan Cancer Support. This evaluation has been conducted based on the availability of data for each component of the Recovery Package, as set out in the initial feasibility report, which is presented in Annex 5.

The chapter begins with a brief description of the form of economic evaluation employed and why it has been used. A summary of the economic evaluation of each of the four components of the Recovery Package, consisting of a brief analysis of the resource implications and impacts of the different components, follows. Finally, a number of initial insights that emerge from the economic evaluation are set out.

5.2. Economic Methodology

5.2.1. Cost-consequence analysis (CCA)

Cost consequence analysis is one of several approaches to economic evaluation, (others include cost-effectiveness analysis (CEA), cost-utility analysis (CUA) and cost-benefit analysis (CBA)). Each approach sets out to compare the outcomes, or benefits of an intervention, in relation to a calculation of the costs of the intervention. However, CCA does not calculate a 'single figure' result for benefits, such as quality-adjusted life years (QALYs) gained or a monetary valuation of health improvements. Instead, CCA reports a 'balance sheet' of benefits – quantifying these where possible but also including qualitative, descriptive information explaining the likely impact where it has been identified but cannot be easily measured. CCA compares costs, such as the cost of implementing elements of the Recovery Package, with its consequences (financial, descriptive consequences etc.), such as health outcomes for people living with cancer, staff satisfaction and/or cost savings.

5.2.2. What is CCA useful for and why was it chosen?

CCA does not present a definitive cost-benefit ratio, indicating clearly whether a programme or intervention clearly demonstrates value for money (or not), unlike other forms of economic evaluation. However, CCA was used in this analysis for a number of reasons.

Firstly, calculating an *accurate* single figure result requires extensive high-quality evidence on cost and impact (for example from management information, or from a randomised controlled trial), which was not available for the Recovery Package at the time of analysis. Using the data that is available from the

Recovery Package could result in producing a misleading estimate of a cost-effectiveness or cost-benefit ratio.

Secondly, CCA does offer advantages of its own. Reporting results in a more descriptive way allows a separate assessment of different types of benefits, which is useful when a programme – like the Recovery Package – has multiple stakeholders interested in different aspects of its impact (clinicians delivering the programme, patients and their carers, commissioners, etc.).

Thirdly, CCA helps inform the development of a programme. Undertaken while a programme is still being shaped, it can help inform an ongoing discussion on the concept of value for money and provide evidence around what is working and – just as importantly – what is not during implementation. Such an analysis can be used effectively as part of a formative evaluation, which was the agreed course of action following the conclusion of the feasibility study.

5.3. Cost-consequence analysis of the Recovery Package

This section sets out the key findings from the cost-consequences analyses conducted for each element of the Recovery Package. The full details of the CCA for each element is presented in Annex 6.

The structure of the CCA tables is explained in Annex 6 (section 8.6). To structure the analysis, a scoring system was used to assess the strength of the qualitative and quantitative evidence identified through the evidence search and the interviews. In addition, a traffic light system was used to classify the outcomes (both qualitative and quantitative) of the elements of the Recovery Package. These methods are also explained in Annex 6 (section 8.6).

The aim of these economic evaluations is to increase the understanding of the costs and impacts of the different components of the Recovery Package.

5.3.1. Holistic Needs Assessment (paper-based)

This first economic evaluation focused on the paper-based HNA, which is usually completed by a clinical nurse specialist at key points of the care pathway of a person living with cancer. In terms of resource utilisation (and hence cost), it was found that in some instances, such as an assessment for someone diagnosed with breast cancer care, the HNA might take over an hour (105 minutes) to complete; in the case of prostate cancer the HNA administration might take anywhere between 5 and 30 minutes.[48] The approximate time required for HNA administration was found to be usually around 45 minutes. This calculation was based on a number of sources identified through the review and interview process, with outliers being excluded from the analysis. However, it should be noted that in some, more complex cases, such an HNA could require more intensive resources utilisation. The sources for the calculation are presented in Annex 6 (section 8.6.4).

The cost per patient per HNA based on a band seven midpoint of the clinical nurse specialist was estimated to be £13.70.[50] The cost of the HNA, however, depends on the level of the staff. Research found that, at some sites, the intervention was being administered by other staff, for example support staff rather than a clinical nurse specialist, which can reduce the cost of administering the HNA, but this might impact on the quality of the interaction with the patient although no evidence of this was found. However, one aspect of the administration that was highlighted was the need for a confidential space for the HNA to be undertaken.

In terms of impact and effectiveness, it was found that as a consequence of the HNA, levels of anxiety and concern were reduced among people living with cancer; the ability of a person living with cancer to self-manage improved and HNA was found to be helpful by healthcare staff to identify needs and concerns of the person living with cancer. As a result of this improvement, it was reported by some hospitals that a reduction of unplanned admissions was observed, although whether this can be directly attributable to the HNA will require a stronger evidence base, e.g. a control group or a quasi-experimental study.[52] Such a reduction of hospital use, though, could be translated into cost savings, or these resources could be reallocated to other services, e.g. to accommodate any projected increase in demand for other acute care services. A detailed CCA is presented in Annex 6 (section 8.6.4) and the summary findings are presented below.

Box 1: Summary of the outcomes of the HNA

At an estimated cost of £13.70 per patient per HNA, the following outcomes are observed:

- **For persons living with cancer:**
    - The level of anxiety and concerns were reduced;
    - Confidence levels improved;
    - Self-management improved;
    - Persons living with cancer appreciated the opportunity and time to discuss the needs they might have.
- **For healthcare professionals:**
    - HNA was found to be helpful by healthcare staff to identify needs and concerns of the person living with cancer;
    - Medical staff found the HNA generally useful;
    - Some medical staff felt confident to use HNAs and care plans;
    - GPs can access the HNA, which might help them to better understand patients' needs.
- **For the healthcare system:**
    - Some sites experienced reduction in hospital admissions.

The following should be considered:

- **For persons living with cancer:**

- There was mixed feedback about filling forms and questionnaires;
    - Some did not like some aspects of the HNA process.
- **For healthcare professionals:**
    - Consideration should be given to the fact that the time to complete the HNA varies and there will be a need for a confidential space for the process;
    - There might be concerns from the medical staff in terms of resources and training available;
    - Physical and practical needs of persons living with cancer might be easier to discuss and assess than sexual issues;
    - Some sites adapted the design of the HNA according to their preferences and needs.
- **For the healthcare system:**
    - Macmillan is involved in the process and contributes to the cancer care services;
    - Due to the potential reduction of the use of healthcare services, there is scope for contributing to efficiency savings.

5.3.2. Electronic Holistic Needs Assessment

In terms of resource use and cost, the average time to complete the electronic version of the HNA (eHNA) by the patient is around 30 minutes, with an additional 30 minutes required to complete the care plan by the Clinical Nurse Specialist.[27] The eHNA questionnaire is completed on a touch screen device and then emailed to the clinician. This process then feeds into the process of care and support planning. [30] Research highlighted that some eHNAs were converted into care plans.[10, 11, 27, 60]

As with the HNA, the eHNA was found to improve mental wellbeing of the person living with cancer. People living with cancer found the eHNA process helpful and reported that the eHNA helped to identify their needs. It also helped the healthcare professionals in signposting and is reported to have increased productivity and confidence. The healthcare professionals reported that the eHNA allows a structured approach to cancer care, however, it was also reported that some staff are not fully conversant with the eHNA/HNA pilots.[27, 31] As can be expected, occasional issues with capacity and lack of appropriate space, poor internet connections, general IT issues, lack of printers or devices were also reported.[27] Such consequences can impact on the overall effectiveness, and/or impact on patient and carer experience measures.

In terms of costs associated with the eHNA, the largest cost driver was associated with the set-up, licensing and hosting of the software. The cost per site set-up accounts for 25% of the total cost of the eHNA implementation. The rest of the cost is spent on site maintenance and service development.[27] The evidence review found that the set-up cost approximates £6,900 per site[27] and £8,440 per trust[24] per year. There are also on-going maintenance costs with the average maintenance cost per site per quarter estimated at £2,100.[27] Another paper found the maintenance cost of the eHNA per trust per quarter at £6,100[25]. A detailed analysis of the costs and consequences of the eHNA is presented in section 8.6.5.

Box 2: Summary of the outcomes of the eHNA

At a cost of £6,900 per site and £8,440 per trust per year for set-up of eHNA, the following outcomes were observed:

- **For persons living with cancer:**
  - eHNA found to improve mental wellbeing;
  - Some found that eHNA focused on their needs and found eHNA helpful;
  - Following the completion of the eHNA actions were taken;
  - Patients have positive experiences post eHNA;
  - eHNA can be completed along the care pathway.
- **For healthcare professionals:**
  - Healthcare professionals experienced increased productivity and confidence;
  - eHNA is useful for signposting among the healthcare professionals;
  - Some of the healthcare professionals stated that in parts they found the eHNA and care plans difficult to carry out;
  - Some healthcare professionals find eHNAs helpful but feel that they are not conversant with the eHNA/HNA pilots;
  - eHNAs are shared among healthcare professionals.
- **For the healthcare system:**
  - Persons living with cancer are more aware of Macmillan services;
  - More engagement by healthcare professionals with Macmillan services;
  - Persons living with cancer who complete the eHNA are familiar with the Macmillan services and might use its services.

The following should be considered:

- **For persons living with cancer:**
  - Some individuals living with cancer declined or were unable to complete the eHNA, but age does not seem to have an impact on their ability.
- **For healthcare professionals:**
  - Healthcare professionals identified a number of issues and challenges to implement the eHNA.
- **For the healthcare system:**
  - There are various expenses associated with the implementation of the eHNA; there are set-up and on-going maintenance costs;
  - Time to establish the eHNA programme can vary between six weeks to six months;
  - Cost of the eHNA will decrease when the number of eHNAs increase.
- **eHNA vs. HNA:**
  - There are mixed results on time required to complete eHNA compared to HNA;
  - There are mixed responses on how easy it is to complete the eHNA compared to the paper-based HNA;
  - Time spent by healthcare professionals on eHNA support and discussions is different from time spent on the paper-based HNAs.

5.3.3. Treatment Summary

The next component evaluated from an economic perspective was the Treatment Summary. As described earlier, this includes a summary of information about the cancer diagnosis, any cancer side effects, management plan, etc. produced by the hospital at the end of the treatment or at subsequent trigger points, and given to a patient and their GP.

The Treatment Summary is completed at the end of each acute treatment phase and can be updated at any event during the care pathway.[51] It is usually completed by the clinician, who spends around ten minutes filling in the document, although it can also be completed by the consultant. An additional period (around five minutes) of secretarial time is required to finalise the TS. In terms of costs of implementation, based on the time required to complete the TS, the cost per TS was calculated at approximately £28 per patient. A detailed calculation of the cost per TS is presented in Annex 6 (section 8.6.6).

In terms of the impact of the Treatment Summary on the quality of the care provider, the majority of healthcare professionals found the TS document helpful and liked using the document along the care pathway. It was found to be a helpful tool in communicating with patients. In addition, the summaries are sometimes combined with the cancer care plan as a single document.

A further finding reported is that the TS is helpful for young people transitioning into adulthood services and accessing adult services.

A summary of the cost and consequences is presented below. The full CCA is in Annex 6 (section 8.6.6).

Box 3: Summary of the outcomes of the TS

At a cost of £28 per TS per patient, the following outcomes are observed:

- **For healthcare professionals:**
    - TS was found useful by the primary care and secondary care staff;
    - Healthcare professionals appreciated the value of the TS and would want to use the TS along the care pathway;
    - TS was found to be useful for communication and information sharing between the medical teams;
    - TS can be useful to help young people living with cancer in transitioning into adult services.

The following should be considered:

- **For healthcare professionals:**
    - Some healthcare professionals found the TS easy to complete, although this was not a

unanimous view;
  - TS is sometimes combined with a care plan as a single document;
  - One potential barrier around the implementation of the TS was a lack of time on the part of the medical staff;
  - There is an uncertainty around when to use the TS;
  - It was thought that the TS form should be tailored to a specific tumour group.

5.3.4. Cancer Care Review

The Cancer Care Review, which contains the information and support available to the person living with cancer, is carried out within six months of diagnosis. The CCR process helps the person affected to understand what information and support is available in the local area, and can be completed by the GP or the practice nurse[36]. It is assumed that the CCR will be carried out during a general GP appointment and not a separate specific appointment and is calculated at a cost of £41 (i.e. the cost of a normal GP appointment).[21] The CCR can, however, be completed over the phone. It is found that patients feel positive about the CCR and the process enables them to discuss their needs. A detailed CCA of the CCR is presented in Annex 6 (section 8.6.7). The summary of the outcome of the CCR is presented below.

Box 4: Summary of the outcomes of the CCR

At a cost of £41 per CCR per patient, the following outcomes are observed:

- **For persons living with cancer:**
  - Persons living with cancer were positive about the CCR;
  - Persons living with cancer have discussed their medication and health care needs or thought it would have been useful to discuss.
- **For healthcare professionals:**
  - GPs found the CCR easy to use.

The following should be considered:

- **For the healthcare system:**
  - CCR can be used as prompt, not as a tick box exercise;
  - CCR can be conducted face-to-face or over the phone;
  - CCR can be conducted at a specific appointment or during another appointment;
  - CCR can be conducted by GP or practice nurse.

5.3.5. Health and Wellbeing Clinics

The HWCs are an information resource, where people affected by cancer can get the information and support available to improve their quality of life. HWCs are supported by healthcare professionals, peers and volunteers. They can be traditional (presentation, one to one sessions), market stalls, presentation only, volunteer led self-management and/or assessment clinics.

HWCs are aimed at helping the person living with cancer to transition to supported self-management and to improve their quality of life. The HWCs can be arranged in a clinical or a non-clinical setting and the individuals involved can be clinical or non-clinical staff. These can include, but are not limited to, surgeons, oncologists, therapists, psychologists, nurses, dieticians, as well as benefits advisors, peers, volunteers and carers.

Depending on the HWC design, the cost varies. Optimity found that the set-up cost of a traditional clinic with presentations and market stalls was estimated at £5,000 and to run such a clinic would cost £2,500 per annum[23, 37]. The cost of setting up a market stall clinic was estimated at £2,500 and the running costs (during the pilot phase) were £7,000 per annum[23, 37]. The set-up costs of the volunteer led clinic were estimated at £4,650 and running costs at *c.* £25,000 per annum[23, 37]. **These costs could vary significantly at a local level, as the set-up and running costs would not be wholly incurred if, for example, an existing forum were used to host the HWC/other clinics.** Estimates show that these costs are reflective of the resources needed to run the HWCs, whether this is new funding or reallocated resources will depend upon local circumstances. The average cost of a clinic was calculated from the estimates of the three types of clinic, equalling £4,040 for set up and £11,490 in annual running costs. As with each of the individual estimates, this assumes there is no existing infrastructure/materials that can be used for the clinics at no cost.

In terms of impacts, all those involved in the process, patients, their carers and healthcare professionals reported positive views about the events. It was found that HWCs helped people living with cancer to gain and increase in confidence and self-management skills. Some patients saw an improved quality of life and increased knowledge of the symptoms of cancer and some were able to manage health issues and cancer-related fatigue. Families and carers and volunteers also benefited from the process, however training is required for volunteers.

A summary of the outcomes associated with HWCs is presented below. A detailed CCA of the HWCs is presented in Annex 6 (section 8.6.8). It is worth noting that the average set-up and running cost figures presented in Box 5 were obtained by averaging the costs of running and setting up clinics with presentations and market stalls, individual market stalls, and volunteer-led initiatives.

Box 5: Summary of the outcomes of the HWC

At an average set-up cost of £4,040 and an average running cost of £11,490 the HWCs (based on setting up a new event with no existing infrastructure), the following outcomes are observed:

- **For persons living with cancer:**
    - Persons living with cancer feel positive about the HWCs;
    - There were mixed results on the impact of the HWCs on social functioning;
    - Persons living with cancer reported increased knowledge of the symptoms of the disease;
    - Following the HWC events anxiety and symptoms of depression decreased among people living with cancer;
    - The HWCs helped persons living with cancer to enhance their quality of life;
    - Persons living with cancer reported increased confidence in managing their health;

  - Persons living with cancer were able to manage health issues and cancer-related fatigue;
  - Persons living with cancer found HWC events re-assuring and helpful to meet peers;
  - Some ethnic groups might be less positive about the events;
  - Some patients want to disassociate themselves from the disease.
- **For families and carers:**
  - Families and carers of people living with cancer also benefited from HWCs.
- **For healthcare professionals:**
  - Staff have felt positive about the HWC pilots.
- **For the healthcare system:**
  - HWC can help to improve productivity of the services;
  - Reduction or no change in use of some services was observed;
  - Number of admissions, bed days or length of stay has decreased in areas where HWCs were introduced;
  - Financial benefits of the HWCs were established in a number of sites.

The following should be considered:

- **For persons living with cancer:**
  - The effectiveness of the HWC depends on the type of the HWC implemented;
  - Patients preferred HWC events to happen at an earlier stage of their treatment.
- **For the healthcare system:**
  - Success of the HWC depends on services it provides;
  - The HWCs can be tailored to certain communities and cancer types, however, the cost should be taken into account;
  - Patients were aware or became aware of Macmillan services and found the activities useful;
  - Market stalls are found to provide useful information and were well attended, however, they are found be costly.
  - Volunteering was a big part of the HWCs and their work was found to be helpful;
  - Volunteers can enhance the productivity of the HWCs and promote the Big Society Agenda.

5.4. Insights from the economic evaluation

The economic evaluation undertaken here has attempted to present an assessment, as far as the data allows, of the value for money of the Recovery Programme, both as a joined up package and of its four components.

The first issue to note is that some of the aims of the Recovery Package are about improving experience, patients’ confidence and self-management skills. As a result, these process-related outcomes are likely to be as important, if not more so, than health related outcomes, when considering the value for money of the Recovery Programme.

A second insight is that there is clearly a large trade-off from Macmillan Cancer Support’s perspective between how much responsibility (or indeed having responsibility in the first place) is delegated to local areas for how they design and implement aspects of the Recovery Package to meet local needs, and having a single nationally unified programme to be evaluated. Throughout this economic evaluation, the differences in the way that schemes have been implemented has presented repeated challenges. As a result, this evaluation is effectively considering the Recovery Package as a high level concept, with the details being decided at an operational level. Subject to issues of scale and sustainability, a more fruitful course of action in the future might be for locally implemented schemes to be evaluated in detail.

However, following the completion of the feasibility stage, the project has become a formative economic evaluation. Such an evaluation can be used by Macmillan Cancer Support and local delivery teams to help inform the ongoing deployment and implementation of the Recovery Package, and inform any ongoing consideration of its value for money status.

In terms of specific messages from the formative economic evaluation, the following main insights can be drawn:

For the HNA/eHNA component, the relatively low upfront costs in implementing such a scheme does lead to a service that improves the engagement and experience of patients recovering from cancer. The variation in implementation (in particular the level of nursing staff completing the assessment) needs to be monitored to ensure consistency in improved processes and outcomes. There was some reported evidence of difficulties in completing the assessment, but this might have been due to local issues. There was no evidence of systematic problems, and so local teams may wish to pay specific attention to this when implementing this component to ensure the scheme is as effective as possible.

For the Treatment Summary component, again, for a relatively low investment, this part of the Recovery Package can be viewed as a cost-effective intervention, and can complement the eHNA/HNA and provide support and information to patients starting their period of recovery. Specific benefits identified included positive outcomes for young people, as they transition through to using adult services. The benefits, therefore, of the Treatment Summary are to be viewed over time, and to ensure their sustainability, local teams may wish to devote time ensuring that these benefits are not lost over time. There was some evidence from the study that uncertainties around the optimal time to undertake a Treatment Summary, and also making time and resources available to complete the summary both potentially limited the benefits from the scheme.

For the Cancer Care Review, the costs of implementation were again relatively low, and through the provision of information and support about the nature of treatment, evidence has shown that this process does generate benefits to patients. An interesting question, which unfortunately cannot be answered in this report due to variations in implementation, is whether aspects such as the Cancer Care Review are more effective when they are provided as part of a wider package, e.g. when complementing the eHNA/HNA and the Treatment Summary. This depends very much on whether the Recovery Package is being implemented locally as a whole, or as separate components. Further evaluations might wish to focus on whether there are any process benefits associated with implementation of more than one component at the same time.

Finally, the Health and Wellbeing Clinics are a different form of information and support provision. These HWCs can take a variety of formats, and as such an evaluation of such a broad concept will be limited in its detail. A further insight is that the cost-effectiveness of such 'market stall' events will depend on being able to exploit economies of scale. Significant upfront costs will only be translated into positive outcomes and benefits for patients through the logic model if sufficient numbers are able to benefit from such events. However, as has been noted, this particular component of the Recovery Package can be incorporated into existing public education/engagement settings. If this is achieved, then the set-up and ongoing costs that have been identified might not need additional financial resources, but could instead use existing resources. A further issue associated with these events is that they are less 'personal' than the other components of the Recovery Package, and as such there is the risk that certain groups that require more personalised engagement (e.g. through language requirements) may benefit less than others. Local areas developing HWCs as part of the Recovery Package will need to be able to distinguish between financial affordability (i.e. ensuring sufficient resources to cover upfront costs) and value for money (generating outcomes for patients from the resources spent).

Key findings from the economic evaluation, and these initial insights are drawn together in the next chapter with a wider set of conclusions around the relationships between investment and outcomes associated with the Recovery Package.

6. Conclusion

6.1. Introduction

Key findings from the economic evaluation and their interpretation are set out here to enable Macmillan Cancer Support and other interested stakeholders in further implementation and evaluation of the Recovery Package. Given that this evaluation has been formative in its nature, some of the key findings and conclusions will be useful in helping to define a more definitive, summative evaluation in the future.

This section begins with a summary of the findings generated from the evidence review, and the key learning messages generated. This is followed by a wider discussion of the conclusions and insights drawn from the cost- consequence analyses, as summarised in the previous section and in detail in the annexes, with a focus of informing a wider rollout of the Recovery Package. Finally, an examination of how the information generated in this formative economic evaluation - informed by a cost-consequence analysis - can be used when considering a more definitive analysis (using techniques such as cost-effectiveness or cost-benefit analysis) is presented.

6.2. Summary findings

The key findings and issues identified through the evidence review process are summarised here. Qualitative and quantitative data were collected through the literature search and interviews held with the stakeholders. A process was developed to validate the data gathered in the literature, such as implementation costs, time required to complete the intervention and intervention outcomes.

From the evidence review process, it was found that there is a substantial amount of data and information available on the costs of implementing and running the different components of the Recovery Package. A number of sources were assessed, from grey literature through to data gathered from interviews. However, the evidence review showed that there was significant variation in how data was collected at the local level and reported across the literature, with differences reflecting different base units (e.g. cost per patient, per site or per NHS Trust), as well as variations in terms of timescales. As such consistency, or necessary assumptions, would be needed to develop a more definitive economic evaluation. The CCA in this economic evaluation aimed, therefore, to present the various costs that were collected and allow the reader to assess the evidence, rather than impose assumptions that were not backed by evidence, which could result in an inaccurate estimate of a cost-effectiveness ratio.

Looking at the cost information available for the separate components it was possible to calculate the average cost per patient for the Holistic Needs Assessment (i.e. cost per site for eHNA), Cancer Care Review and the Treatment Summary, in that the level of staff involved and the time required for the intervention was available. It was more difficult to establish the cost per patient for the Health and Wellbeing Clinics, as the information on the resources used in setting-up or running the clinic varies across sites and the details, such as time spent to prepare the event, were not recorded. Combining this factor with the issue about whether set-up costs would be incurred (if an HWC was set up using an existing public engagement event) means that the actual resource costs associated with the HWC are the most uncertain within this economic evaluation.

In terms of the data on the impact of the Recovery Package, there was substantial information available on the impact of the Recovery Package on people living with cancer, their carers, healthcare staff, healthcare services and Macmillan Cancer Support itself. The outcomes of the intervention are, however, mostly qualitative (for example, people living with cancer received supportive information and had networking opportunities following the HWC events). The qualitative information is valuable in understanding the nature of the benefits generated by the Recovery Package. It does not, however, provide information for a cost-benefit analysis.

Quantitative information, such as the number of people living with cancer who benefit from discussing their health and social care needs[32] is also included in the CCA. This provides valuable information for the effectiveness of the intervention, although it might not be possible to translate these findings in a CBA accurately without making a number of assumptions that might undermine the accuracy of the analysis. Where possible, data on factors such as hospital bed days avoided as a consequence of the intervention can be translated in the CBA, although such data is unlikely to be particularly robust, as the issue of attribution of the outcome to the intervention cannot be established without some assessment of the counterfactual. Given the timescales involved, the majority of the impact data collected was focused on the short term, with longer term intervention effects not being recorded or indeed available.

6.3. Discussion

This section highlights and discusses the key emerging points from the economic evaluation.

6.3.1. Overall economic evaluation

The original aim of this study was to undertake an economic evaluation of the cancer Recovery Package. The first part of the project was a review of available cost and impact data to produce a feasibility study that would (1) decide whether a second stage to undertake such an evaluation was achievable, and (2) what format that second stage should take. This feasibility study is included in Annex 5. The conclusion from this initial stage was that an economic evaluation was feasible, but it would need to be limited in its ambition, as the level of consistency, detail and completeness of the costs and effectiveness data of the Package across the various sites would make a definitive, summative economic evaluation difficult, and potentially misleading. It was agreed with Macmillan Cancer Support to proceed on the basis of a formative economic evaluation, informed by a Cost-consequence analysis, to inform the debate and future implementation plans of the cancer Recovery Package.

While a definitive estimate of the relationship between the costs and impacts is not feasible, evidence is available that shows that positive impacts have been achieved on patient experiences and short term health outcomes for the investment made in the Recovery Package. Benefits that have been observed include increased patient engagement and satisfaction and greater awareness of the condition, side effects, etc.

Given the nature of the data collected, precise estimates of the costs and impacts are not possible, and the local variation in implementation also contributed to the range of uncertainty about the overall impact and resource implications. Furthermore, the Health and Wellbeing Clinics were associated with the greatest level of uncertainty in terms of data, both in terms of a need for a 'critical mass' to ensure sufficient numbers to deliver benefits of a high enough value relative to the high set up costs, and also in the fact that set up costs could be minimised if an existing event or forum could be used to host the HWC. These two factors work in contrasting directions, meaning that, given the data available, it is impossible to tell either whether a local initiative demonstrates value for money from a national evaluation, or whether the national initiative, in general, is cost-effective, due to significant local variations. However, it can be said that in conditions where there is an existing forum for running an HWC **and** sufficient numbers of attendees is likely, it is also quite likely than an HWC in such circumstances will demonstrate value for money.

The relatively low implementation costs associated with the HNA/eHNA suggest that, even in the absence of robust impact data, the likely 'break-even' level of benefits is likely to be quite low. That is, that even though we are unable to produce a robust cost-effectiveness ratio for the HNA/eHNA, we would expect the level of patient-centred benefits required to offset the implementation costs to be quite low, and would argue that the HNA/eHNA is also likely to demonstrate value for money.

In terms of the Treatment Summary, the issue around cost-effectiveness is likely to be that of sustainability of impacts. As this is completed at the end of each acute treatment phase and can be updated at any event during the care pathway, the benefits are likely to occur post-completion as the TS is used during the treatment and recovery stages. Ensuring that benefits are maintained over this period is likely to be the key issue facing local implementation teams wanting to ensure that this component demonstrates value for money.

Finally, for the Cancer Care Review, the main benefits resulting from this component were process benefits, i.e. that patients felt happier to be more informed about their diagnosis, treatment and prognosis as a result of the CCR, rather than a direct impact on their care. The issue associated with cost-effectiveness in this instance is concerned with potential variations in local practice, e.g. the means and methods of communication with patients. Again, the implementation costs were relatively low, so the corresponding break-even point for impacts is also likely to be relatively low, but addressing issues around disseminating and implementing best practice are likely to be crucial.

Therefore, in summary, this economic evaluation of the Cancer Recovery Package suggests that, although sufficiently robust cost and impact data isn't available to provide precise estimates of cost-effectiveness ratios for the different components, there is strong reason to believe that the different components can demonstrate strong value for money under fairly regular conditions. The main issues involve variation in implementation practice, understanding and deploying best practice, ensuring sustainability of benefits and ensuring consistency in practice in terms of data collection, monitoring and evaluation. These issues are discussed in the next section.

6.3.2. Multiple data sources

As the guidance on the implementation of the Recovery Package is not prescriptive and allows for some flexibility in the design of initiatives at a local level, there is some variation in the way data has been collected and used in local evaluations, for example in the way that outcomes are measured. Variations in the sources of the evidence meant that in undertaking this economic evaluation, it is not always straightforward to identify the best source of information. For example, different methods for cost calculation or evaluating different stages of the programme development with different timeframes were used. As a specific example, as seen in the evaluation of the HWCs ,[37] the costs were presented for the pilot phase, but it was not clear how these costs may have changed over time, beyond the pilot phase. It is possible that a pilot phase can be more expensive than 'normal running', as more resources are needed to establish the programme. On the other hand, the pilot phase can be cheaper compared to a full rollout as some important aspects for implementation have not been considered during a pilot.

There are challenges in comparing costs across different studies due to various costing methodologies. Firstly, it is not always clear which costs have been included in the calculation, such as staffing time, venue cost, cost of the IT systems, overheads. Secondly, the timeframes can be different; for example, sometimes the costs are presented per year or per quarter[25, 27]. Thirdly, the costs were at times presented on a per patient basis, a per year basis, a per site basis and a per trust basis. Finally, in some cases it was clear that the costs being reported were average costs,[25] whereas in other cases, the precise definition was not 100% clear.

Ensuring consistency, and developing a full database of costs across the implementation sites of the Recovery Package would be helpful in informing a full economic evaluation.

Staffing levels: uniformity across the sources with regard to staffing levels involved in the intervention
Generally, there is uniformity across the sources about staffing levels involved in the administration of the intervention. Most of the studies have reported similar data on the staff involved. However, as the Recovery Package allows for some flexibility in the design of the element, HWCs might involve different staff, such as clinical or non-clinical, as well as peers, carers and volunteers. Specific attention will need to be paid to local variations in staff utilisation.

Data availability: time required for the intervention set up and administration is not always available
The time required to administer the intervention was, at times, not easy to identify and collect. As seen from the HNA example, there were a number of sources presenting different costs. In that case, the median figure was calculated. For the CCR and HWCs it was not possible to establish how much time is needed for the intervention set-up and implementation, and again local circumstances could have an impact.

6.3.3. Requirements for implementation

This section makes some suggestions and recommendations regarding the implementation of the Recovery Package, based on the learning generated through the economic evaluation.

Operational needs: for certain aspects of the Package, there is a requirement for training, availability of a confidential venue and effective IT solutions
There were some comments made through the interviews, which highlighted concern among healthcare professionals regarding the need for training to help with the implementation and administration of the Recovery Package. In particular, some issues around the clarity of instructions on how to carry out the interventions and how to best meet patients' needs when delivering aspects of the Recovery Package. Upfront training costs are potentially a substantial part of the overall costs of the Recovery Package and they are potentially not fully captured at the moment. The current instructions do not impact the flexibility of the element design, but will assist the healthcare professionals during the early stages of implementation to identify best practice.

In addition, the need to have a confidential venue available to discuss the needs of the patient was highlighted by both patients and healthcare professionals – such an input could be essential for ensuring that certain benefits are achieved, especially those benefits related to process and patient experience.

Generalisability of findings across the Recovery Package
One aspect not addressed as part of this study is to what extent are there spill over effects between the components of the Recovery Package. There was little or no data about potential savings from implementing different components together. Furthermore, the wider impact of the Recovery Package on the healthcare system was not fully assessed, which could also generate a larger set of benefits over time. There was some observation of a reduction of healthcare service utilisation in some areas[49]. However, it is not possible to generalise the findings for this across all of the sites. If such savings are possible, then this could be translated into cost financial savings or reallocated to other healthcare services. In addition, some cancer types require different (more intensive or less intensive) care and utilise different levels of healthcare services. For example, patients with lung cancer are unlikely to use less healthcare services, regardless of whether aspects of the Recovery Package were available or not.

In addition, local areas and individual studies have, at times, used different metrics to measure similar outcomes. Local areas have sometimes not consistently used the same formal measurement scales to assess improvements in quality of life, wellbeing, staff productivity (e.g. life satisfaction scale, Mood: Profile of Mood States (POMS), subscales such as tension, anger, fatigue, carers test, etc.). As a result, comparability of findings across sites was not possible, and disseminating best practice would, therefore, be challenging. In terms of facilitating a wider rollout, a further consideration of best practice in terms of implementation of different components of the Recovery Package might be valuable, but it is recognised that this might only be achieved at the cost of flexibility and responsiveness to local conditions.

6.4. Next steps for further economic analysis

A final area for consideration is how this formative economic evaluation can, informed by a cost-consequence analysis, be developed further into a summative evaluation that is able to report a more definitive assessment of the value for money of the Recovery Package, informed by a cost-effectiveness or cost-benefit analysis. Based on the process of undertaking the economic evaluation presented in this report, to produce a successful summative evaluation of the Recovery Package, consideration could be given to the following:

Establishing best practice guidance

The Recovery Package allows for flexibility in design and implementation, and does not restrict local sites to a specified framework. While such flexibility enables the creativity and innovation at a local level, it makes comparisons between sites difficult, and the ability to report on the cost-effectiveness of the Recovery Package as a whole extremely complex. If such a question does need answering, greater consistency in implementation based on best practice might need to be considered.

A better understanding of upfront costs, e.g. training costs

Costing data for most elements of the Recovery Package were identified as part of this study. Importantly, however, the upfront costs of training were difficult to identify. For example, the cost of the HNA calculation used was based on the level of staff involved and the time spent on the intervention, but does not account for any upfront training costs. In a definitive, summative economic evaluation, it will be necessary to ensure that all resource implications, including any upfront investment costs (including training, IT, estates etc.) are fully captured.

Analysis of how different elements of the Recovery Package interact with each other

The evidence review showed that some sites have combined the Treatment Summary with the Cancer Care Review or the Holistic Needs Assessment.[7, 67] However, given the issues with comparison against a counterfactual, it was not possible to understand the combined effect in this study, or to separate out individual effects. It is a perfectly reasonable hypothesis that combining the Treatment Summary with the HNA or the CCR could reduce costs through shared overheads, and potentially increase effectiveness through greater patient satisfaction. However, this study was not able to consider these interaction effects.

Understanding of the counterfactual

Building on from the last point, understanding what is alternative practice, i.e. the counterfactual, is vital in any evaluation. In this study, it was assumed that the Recovery Package was additional to any support, but any reductions in downstream interventions were captured where there was evidence to support this. However, in a full cost-effectiveness analysis, a full identification of the counterfactual would be necessary. This, of course, would establish the impact of the Recovery Package and allow commissioners to assess the true value that they, patients, carers and healthcare professionals will get from their investment.

Need for consistent impact measurement scales

To assess the impact of the elements of the Recovery Package and to enable a comparison of the intervention to the counterfactual, a common set of outcome metrics should be agreed and established, with a baseline level of outcomes measured either before implementation, or within a controlled/quasi-experimental environment. This would further strengthen any summative economic evaluation based on a cost-effectiveness analysis.

Need for follow-up data to track longer-term costs and benefits

To complete a full economic evaluation, especially where benefits are likely to occur beyond the actual intervention, there is a need to follow-up and collect longer-term costs and benefits. Due to the relatively recent introduction of the Recovery Package and variations in local implementation, data recording and evaluation methodologies, there was not a consistent and available set of medium to long-term outcomes associated with the Recovery Package components. Again, if Macmillan Cancer Support were interested in developing a more definitive assessment of the value for money of the individual components, or for the Recovery Package as a whole, then a consistent and comprehensive approach to following up longer term outcomes (along with an investment in an evaluative study that tracks such outcomes) is required.

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8. Appendices

8.1. Annex 1: Abbreviations

AHP	Allied Health Professional
CBA	Cost-benefit analysis
CCA	Cost-consequence analysis
CCR	Cancer Care Review
CEA	Cost-effectiveness analysis
CNS	Clinical nurse specialist
CUA	Cost-utility analysis
eHNA	Electronic Holistic Needs Assessment
GP	General Practitioner
HNA	Holistic Needs Assessment
HWC	Health and Wellbeing Clinic `
IT	Information technology
NCSI	National Cancer Survivorship Initiative
NHS	National Health Service
NHSE	National Health Service England
ONS	Office for National Statistics
PC	Personal computer
POMS	Profile of Mood States
PREMs	Patient Reported Experience Measures
QALYs	Quality-Adjusted Life Years
QOF	Quality and Outcomes Framework
RCT	Randomised controlled trial
SC	Secondary care
TCFU	Transforming Cancer Follow-Up
TS	Treatment Summary

8.2. Annex 2: Glossary of terms

Allied Health Professions	Allied Health Professions (AHPs) are health care professions distinct from nursing, medicine and pharmacy, e.g. physiotherapy, radiography.
Care pathway	A care pathway is the 'route' a patient takes through healthcare services when receiving treatment. It can be defined in terms of services and treatments received, health care professionals seen. There is significant interest across health care systems about developing integrated pathways, to ensure the best clinical experience for patients.
Clinician	A healthcare professional who provides patient care. For example, a doctor, nurse or physiotherapist.
Comparator	The standard intervention against which an alternative intervention is compared in a study. The comparator can be no intervention (for example, best supportive care).
Cost-effectiveness analysis	In health economics, cost-effectiveness analysis is a form of economic evaluation that compares the cost of an intervention with its outcomes, which are measured in the natural health care outcome metric, such as symptom-free days, heart attacks avoided, deaths avoided or life years gained. It is used when there is one main measure of outcome, and assessing this in terms of financial values (as in cost-benefit analysis) is difficult.
Cost-utility analysis	In health economics, cost-utility analysis is a form of economic evaluation that compares the cost of an intervention with its outcomes, which are measured in a utility-based measure, usually the Quality-Adjusted Life Year (QALY). It is a specific form of cost-effectiveness analysis, and should be used when the issue of quality of life is an important outcome associated with the intervention, and if QALYs can be generated (usually by using a health outcome measurement tool, such as EQ-5D).
Cost-benefit analysis	Cost-benefit analysis is a widely used form of economic evaluation, and compares both costs and outcomes using a monetary valuation. If all outcomes (individual and societal) are captured, it is the most complete form of economic evaluation. It is often applied in large, investment decisions.
Cost-consequence analysis	In health economics, cost-consequence analysis is a form of economic evaluation that instead of presenting a single figure of the cost-effectiveness of an intervention, lists the costs and outcomes in a balance sheet format. Such an approach is useful in formative economic

	evaluations, where the services being evaluated are still in development. In addition, such an approach also allows qualitative evidence to be brought into the economic evaluation. Such an approach is less precise than other forms of economic evaluation, but this can be an advantage in circumstances where concerns with data quality, robustness and completeness are potential problems. A CCA also allows the reader to value the different costs and benefits according to their own priorities, allowing the reader to come to their own views as to the value for money of an intervention.
Life satisfaction scale	A scale measuring level of satisfaction.
National Cancer Survivorship Initiative	A partnership between NHS England and Macmillan Cancer Support designed to ensure that those living with and beyond cancer get the care and support they need to lead as healthy and active a life as possible, for as long as possible.
Opportunity Cost	The opportunity cost of any choice is the value of the net benefits of the foregone alternative. This is different from the direct financial cost. For example, the opportunity cost of investing in the Recovery Programme is foregone health gains that could have been generated in investing money in, for example, Cardiovascular services.
Primary care	Primary care is typically provided in the community for people making an initial approach to a medical practitioner or clinic for advice or treatment. It can include a range of services provided by GPs, nurses, health visitors, midwives and other healthcare professionals. It can act as an entry point to the secondary care system.
Profile of Mood States	Profile of Mood States is a rating scale that is used to assess the mood of individuals under consideration.
Patient Reported Experience Measures	Patient Reported Experience Measures (PREMs) are tools designed to measure the patients' experiences when receiving health care services, through a care pathway.
Quality and Outcomes Framework	A national incentive scheme for all GP practices in the UK, which rewards them financially for how well they care for patients. Under the scheme, GP practices score points according to their level of achievement against a series of indicators, such as the percentage of patients with a new diagnosis of a disease who are referred for certain tests.
Quality-Adjusted Life Years	A measure of the state of health of a person or group in terms of length of life, adjusted to reflect the quality of life. One QALY is equal to 1 year

	of life in perfect health.
Secondary care	Secondary care is healthcare provided in hospitals. It includes accident and emergency departments, outpatient departments, antenatal services, genitourinary medicine and sexual health clinics.
Tariff	Within the NHS, under the Payment by Results reimbursement scheme, the tariff is the prices for a unit of healthcare activity, published by Monitor. It reflects the prices that commissioners (CCGs) pay to providers for a unit of healthcare activity.

8.3. Annex 3: Methodology

8.3.1. Evidence review

Conducting an economic evaluation requires data that can be used to calculate costs and outcomes. The more rigorous and complete this is, the more comprehensive the analysis, although there is still value in collating together high-level evidence when data gaps exist. As such, in order to assess the economic value of the Recovery Package, the Optimity Advisors' team gathered in-depth information from data and information available that could be used for conducting an evaluation. This was done through a document review, stakeholder interviews, and stakeholder validation:

- 118 documents were reviewed including those provided by Macmillan Cancer Support and those found through online searches, citation chasing, links on the Macmillan website, and by obtaining full reports from summary documents;
- 24 in-depth telephone interviews were undertaken with 14 national-level and 10 local-level stakeholders (stakeholders were selected according to criteria described in Table 2). The interviews focused on five topic areas: design and conceptualisation of the Recovery Package; implementation of the Recovery Package (at national and/or local level); funding allocations and budget reporting; data collection and availability, and areas for improvement;
- An additional seven shorter interviews/email exchanges were undertaken with local stakeholders with a more direct role in implementation, focusing specifically on data availability in those areas;
- A data validation sheet (a template is presented in the appendix), summarising findings from the document review (including gaps in the data), was sent to 19 stakeholders and used to guide the shorter interviews above. Stakeholders who were thought to have collected or be aware of any qualitative and quantitative data at their site were sent the data validation sheet. Recipients were asked to validate the figures for accuracy, according to their experience, and add in any additional data they thought relevant. Seven completed data validation sheets were received (while some were also used to guide the shorter interviews as mentioned).

The collected data, gathered from the desk research, interviews, both short and long, and validation documents, was extracted and then synthesised into a format that could be used for economic analysis. The methods for the analysis and findings of the feasibility study conducted for the economic analysis are discussed in this section.

Table 2: Stakeholder selection criteria

National programme and partners (e.g. NHSE and NHS)	Local sites
• Stakeholders involved in the design/conceptualisation of the Recovery Package and outcomes; • Stakeholders involved in the	• Stakeholders involved in managing the implementation of the Recovery Package locally (a mixture of those who have implemented the Recovery Package vs.

National programme and partners (e.g. NHSE and NHS)	Local sites
implementation at local level; • Stakeholders involved in allocating/budgeting/monitoring funding and other programme resources (i.e. equipment, training, staff time, etc.); • Stakeholders involved in developing and monitoring outcomes (care experience, PROMS, population, health systems).	different elements of the Recovery Package); • Stakeholders involved in delivering the Recovery Package locally (a mixture of those who have implemented the full Recovery Package vs. different elements of the Recovery Package); • Stakeholders involved in allocating/budgeting/monitoring funding and other programme resources (i.e. equipment, training, staff time, etc.); • Stakeholders involved in developing, measuring and monitoring outcomes locally (care experience, PROMS, population, health systems).

8.3.2. Data validation

What is the data validation sheet and how is it used?

A data validation sheet was developed by Optimity Advisors to validate the data collected through the literature review process and to identify any additional information collected by or known of by the stakeholders. This enabled data gaps for the economic analysis to be filled in.

The data validation sheet consisted of an introduction briefly describing the project to the stakeholders. The data collected through the literature review process was grouped per element of the Recovery Package. Within the elements, the data was grouped to capture the details of the intervention administration (such as time to complete, staff level required); outcomes (such as patient satisfaction, staff satisfaction), effectiveness of the intervention (such as patient knowledge increase, quality of life, decrease in anxiety, reduction on service use).

The following colour coding system was used to guide the stakeholders through the required actions:

- **Green** – Quantitative information data to validate;
- **Orange** – Qualitative information data to validate and to indicate if there was any supporting or additional quantitative information such as numbers of patients, hours of resource used etc.
- **Red** – Indicates if there is any existing qualitative or quantitative information to fill the information gap.
- An example from the data validation template is presented below.

Table 3: Data validation template – HNA

	Information	Validation	Comments
Time to complete	45 minutes	Yes/No	
Patients	Four patients are seen in three-hour session	Yes/No	
Staff level	Band 7	Yes/No	
Total cost	Total cost p.a. = £2,850 for 208 patients in 52 weeks (£13.7 per patient); plus on costs and cover for annual leave	Yes/No	

In total 15 data validation templates were sent out to the stakeholders who were thought to be aware of the local data and/or had collected data. Seven completed sheets were returned.

Holistic Needs Assessment

The HNA was the most well established element of the Recovery Package. All stakeholders either validated or provided additional information on the HNA implementation, such as time spent and the staff level involved. Outcomes of the HNA, such as patient and staff satisfaction, have been validated or information has been provided by the stakeholders. The majority of the stakeholders (five out of seven) did not provide any additional information or validate the information on effectiveness of the HNA.

Treatment Summary

There was some information provided on the administration of the TS by patients and staff concerning satisfaction with the process. No data on effectiveness was provided.

Cancer Care Review

No information was provided by the stakeholders on the CCR element.

Health and Wellbeing Clinics

Some information was provided on the implementation of the HWCs and patient/staff satisfaction and some stakeholders also provided information on their effectiveness.

The data derived from these validation documents were included in the CCA. The full data validation template is presented below.

8.3.2.1. Data validation sheet template

Instructions

Optimity has been asked to undertake an economic evaluation of the Recovery Package, which involves the collection of national, as well as local-level information on the resources required to implement the programme and the outcome experienced by patients engaged in the programme. In order to undertake an economic evaluation, it has compiled available data by reviewing relevant documentation and desk-based research. Assistance is needed to validate the information collected and identify any additional information that has been collected and, if possible, help to fill these gaps or get information on where to find the missing data.

In the tables below, the following colour coding system is used as a guide:

- Green – Quantitative information data to be validated;
- Orange – Qualitative information data to be validated and any supporting or additional quantitative information such as numbers of patients, hours of resource used etc.;
- Red – Indicates if there is any existing qualitative or quantitative information to fill the information gap.

In order to validate the information provided, please select Yes or No in the 'Validation' column and provide any additional comments or information on the data available.

Running the Holistic Needs Assessment

Resources

What is the cost of running the Holistic Needs Assessment?

The table below presents a breakdown of the costs gathered. Please indicate your agreement with the findings presented below and provide any additional detail that you have on: 1) other staff (e.g. admin) or volunteers involved in the assessment and 2) location of the assessment.

	Information	Validation	Comments
Time to complete	45 minutes	Yes/No	
Patients	Four patients are seen in three-hour session	Yes/No	
Staff level	Band 7	Yes/No	
Total cost	Total cost p.a. = £2,850 for 208 patients in 52 weeks (£13.7 per patient); plus on costs and cover for annual leave	Yes/No	

Outcomes

Patient and staff satisfaction

Following the Holistic Needs Assessment (HNA), patients and staff have reported positive experience and improved self-confidence. Please provide any detail on the metrics used to measure these outcomes, such as Patient Reported Experience Measures (PREMs) or patient satisfaction measures (i.e. % of patients satisfied with the service).

	Information	Validation	Comments
Patient satisfaction	Following the HNA, patients have reported positive experiences and improved self-confidence.	Yes/No	
Staff satisfaction	Professionals reported that the process allowed them to gain a greater understanding of their patients, which helped to identify and address specific problems and introduce different follow-up clinics.	Yes/No	

Effectiveness

The Transforming Cancer Follow-Up (TCFU) in Northern Ireland, which is based on the Recovery Package identified a number of effectiveness measures such as: 1) better educated patients, 2) empowering patients to self-manage, 3) less travel for patients and less time spent waiting at clinics, 4) reduced anxiety due to the provision of HNA and care plan. Is this something you have observed using the HNA in your site? Is there data to support this finding?

Information	Validation	Comments
The data shows that there is an 80% conversion rate of electronic assessments into care plans.	Yes/No	
TCFU programme identified better educated patients, positive feedback from health and wellbeing events, empowering patients to self-manage, less travel for patients and less time spent waiting at clinics, reduced anxiety.	Yes/No	

Additional outcomes

Please provide any additional information or evidence that the HNA has, or is having, (positive or negative) on other outcomes listed below (e.g. Patient Reported Outcomes Measures (PROMs)).

	Information	Comments
Quality of life	Is there any evidence that this element has an impact on quality of life? – either positive or negative	

	Information	Comments
Depression/Anxiety	**Is there any evidence that this element has an impact on social needs? – either positive or negative**	
Social care needs	Is there any evidence that this element has an impact on social needs? – either positive or negative	
Unemployment	Is there any evidence that this element has an impact on employment? – either positive or negative	
Lifestyle	Is there any evidence that this element has an impact on lifestyle? – either positive or negative	
Other	Any other effects observed?	

Running the Treatment Summary

Resources

What is the cost of running the treatment summary?
Is the treatment summary carried out at the same time as HNA?
Where is the treatment summary carried out i.e. which setting?

The table below presents the information found on resources. Do you agree with these findings? Are there any other staff or volunteers involved in the assessment?

	Information	Validation	Comments
Time to complete	Clinician 10 min and secretarial five min / patient	Yes/No	
Patients	How many patients does each staff member see?		
Staff level	Could you provide the information about staff band involved in this process?		
Total cost	Total cost available?		

Outcomes

Patient and staff satisfaction

The implementation of the Treatment Summary is found to be useful, but time consuming by medical staff.

Are there any measures of patient satisfaction such as PREMs or satisfaction percentages?

	Information	Validation	Comments
Patient satisfaction	Is there any information available?		
Staff satisfaction	80% of GPs found the summary 'useful' or 'very useful'. Over 50% felt it would make a difference to the way they managed patients, and 90% wanted its use to continue	Yes/No	
Staff satisfaction	There are those in secondary care who say they are 'too busy' to complete the Treatment Summary and some uncertainty has been expressed as to whether it is instead of, or additional to, the traditional clinic letter	Yes/No	

Additional outcomes

Please provide any additional information or evidence that the Treatment Summary has, or is having, (positive or negative) on other outcomes listed below (e.g. PROMs).

	Information	Comments
Hospital readmissions	Is there any evidence that this element has an impact on hospital readmissions? – either positive or negative	
Quality of life	Is there any evidence that this element has an impact on quality of life? – either positive or negative	
Depression/Anxiety	Is there any evidence that this element has an impact on social needs? – either positive or negative	
Social care needs	Is there any evidence that this element has an impact on social needs? – either positive or negative	

	Information	Comments
Unemployment	Is there any evidence that this element has an impact on employment? – either positive or negative	
Lifestyle	Is there any evidence that this element has an impact on lifestyle? – either positive or negative	
Other	Any other effects observed?	

Running the Cancer Care Review

Resources

What is the cost of running the Cancer Care review (CCR)?

Where is the CCR carried out i.e. which setting?

The table below presents the information found in resources. Do you agree with these findings? Is there any other staff or volunteers involved in the CCR (e.g. admin)?

	Information	Validation	Comments
Time to complete	How long does the Cancer Care Review take to complete?		
Patients	How many patients does each staff member see?		
Staff level	62% of the patients had a dedicated, set aside appointment for their Cancer Care Review, while 38% were reviewed when visiting their GP practice regarding another problem/appointment. Also 68% of CCRs were with the GP, while 12% were with the practice nurse.	Yes/No	
Total cost	Is there a total cost available?		

Outcomes

Patient and staff satisfaction

The implementation of the CCR is found to be useful and easy to understand by both patient and staff. Are there any measures of patient satisfaction such as PREMs or satisfaction percentages?

	Information	Validation	Comments
Patient satisfaction	Overall impression of quality of follow up care – 85% say it easy to understand	Yes/No	
Patient satisfaction	All patient responses about the CCR were very positive, with 71% of patients declaring themselves ‘very satisfied’ with the process.	Yes/No	
Staff satisfaction	81% of GPs surveyed found the CCR template user friendly and 71% of patients found the process very satisfactory	Yes/No	
Staff satisfaction	88% of GPs found it useful to have easy access to Macmillan resources	Yes/No	
Staff satisfaction	78% of GPs conducted CCRs face to-face and 16% over the phone.	Yes/No	

Additional outcomes

Please provide any additional information or evidence that the CCR has, or is having, (positive or negative) on other outcomes listed below (e.g. PROMs).

Information		Comments
Effectiveness	Is there any evidence that this element is effective?	
Hospital readmissions	Is there any evidence that this element has an impact on hospital readmissions? – either positive or negative	
Quality of life	Is there any evidence that this element has an impact on quality of life? – either positive or negative	
Depression/Anxiety	Is there any evidence that this element has an impact on social needs? – either positive or negative	
Social care needs	Is there any evidence that this element has an impact on social needs? – either positive or negative	
Unemployment	Is there any evidence that this element has an impact on employment? – either positive or negative	
Lifestyle	Is there any evidence that this element has an impact on lifestyle? – either positive or negative	
Other	Any other effects observed?	

Running the Health and Wellbeing Clinics

Resources

Which clinic type has been implemented i.e. traditional or market stalls or volunteer-led?

The table below presents the breakdown costs found. Do you agree with these findings?

	Information	Validation	Comments
Time	Event lasts half a day	Yes/No	
Patients	Optimum number of participants: around 20–25.	Yes/No	
Staff	Clinical: members of MDT e.g. surgeon/ oncologist; CNS; AHP; psychologist. Non-clinical: benefits/return to work advisors (complementary therapists; counsellors); Volunteers: should be experienced or trained so they understand the needs of cancer patients and their families; Administrator: the administrator or co-ordinator role may be part of an existing role, or a function of key worker roles. May be an unpaid role.	Yes/No	
Costs	Traditional model with presentations and market stalls: set up cost £5,000, running cost £2,523 Market stall model: set up cost £2,499, running cost £7,034 Volunteer-led model: set up cost £4,625, running cost £24,913 (Estimates assume no existing infrastructure available to use)	Yes/No	
Total Costs	The major expense in delivering the clinics is staff time, which varies according to the model adopted. Estimated costs per session range from £1,000 to £3,000 in staffing/venue/materials/refreshment	Yes/No	

Outcomes

Patient and staff satisfaction

Following the Health and Wellbeing Clinics, patients have reported positive experience.

Are there any measures of patient satisfaction such as PREMs or satisfaction percentages?

	Information	Validation	Comments
Patient satisfaction	An evaluation found that those that had attended the clinics had increased knowledge of the signs and symptoms of recurrence of cancer and how to re-enter the system if they need to do so.	Yes/No	
Patient satisfaction	Feedback from patients: info provided by breast cancer nurses was very useful and all staff were well informed. Speakers and topics were relevant and informative.	Yes/No	

	Information	Validation	Comments
Patient satisfaction	A large number of patients felt these events would have been more beneficial earlier in their treatment pathway.	Yes/No	
Patient satisfaction	Market stalls provided further advice, with the stalls on support and info and diet and nutrition most well attended.	Yes/No	
Patient satisfaction	Attendees found it reassuring to meet others with the same experience and hearing other's stories was reported as invaluable.	Yes/No	
Staff satisfaction			

Effectiveness

Information	Validation	Comments
Clinics are more effective if they are tailored to the needs and concerns of patients with particular forms of cancers (e.g. breast cancer or prostate cancer specific advice).	Yes/No	

Quality of life

The evaluation of HWCs carried out in 2011 found that patients experienced improvements in their quality of life, enabling them to better manage emotional distress and take part in social activities. Is there any data supporting this statement?

Information	Validation	Comments
Patients experienced improvements in their quality of life, enabling them to better manage emotional distress and take part in social activities.	Yes/No	

Depression

Is there data available to support this information?

Information	Validation	Comments
Overall findings saw a 70% decrease in symptoms of depression; a 35% decrease in anxiety and 54% reduction in how much cancer related fatigue gets in the way of people's lives	Yes/No	
Meeting with their peers assists in the transition from patient to survivor and improved their psychological wellbeing.	Yes/No	

Healthcare setting

Some pilot sites have recorded reductions in unplanned admissions, average level of stay and occupied beds and shifts from secondary care to primary care use. Is there any evidence of similar shifts or changes (e.g. reduction or increase) in the following care services?

Information	Comments
Secondary care e.g. hospital admissions or specialist care?	
Primary care e.g. GP or district nurse visits?	
Social care services	
Self-care or self-management?	
Other service use	

Additional outcomes

Please provide any additional information or evidence that the health and wellbeing clinics have, or are having, a positive or negative impact on other outcomes listed below (e.g. PROMs).

	Information	Validation	Comments
Social care needs	Is there any evidence that this element has an impact on social needs? – either positive or negative		
Unemployment			
Lifestyle	Overall findings found that 66% of patients intended to continue to use the gym facility at the hospital	Yes/No	
Other			

8.3.3. Strength of the evidence

Following data collection, the evidence identified from the literature was assessed for its strength by an assessment tool developed by Optimity Advisors. The methods used to assess the strength of the evidence is discussed in section 8.6.1.

8.3.4. Interviews

A number of semi-structured interviews were undertaken with national-level and local-level stakeholders. The interviews focused on five topic areas. These were:

1) design and conceptualisation of the Recovery Package;
2) implementation of the Recovery Package (at national and/or local level);
3) funding allocations and budget reporting;
4) data collection and availability; and
5) areas for improvement.

Twenty-three interviews were conducted; 14 with the stakeholders at national-level and nine with stakeholders at local level. In addition, nine stakeholders were interviewed for additional information required for the economic analysis.

The findings from the qualitative part of the project are presented below.

8.4. Annex 4: Findings from the evidence review

8.4.1. Findings from the literature review

This report specifically focuses on findings related to data availability, in order to inform any ongoing consideration of value for money of the Recovery Package.

The overall conclusion is that while cost information was available, data collection on outcomes has been inconsistent, and to some extent complicated by local variations in the implementation of the Recovery Package. Specifically,

- Some elements of the Recovery Package, such as the Treatment Summary, have not been implemented as widely as others. There is, therefore, limited evidence on these components when compared to the HNA/eHNA and HWCs;
- Across the country the costs of each intervention vary for all elements of the Recovery Package, due to variations in implementation practice. For example, the cost of the element depends on the staff level involved (HNA) and on the type of HWCs used;
- Programme costs can be established, although only at a high level.
  - Costing based on resources and activities, which requires granular cost data, is feasible for the HNA/eHNA, based on time taken and NHS pay bands;
  - However, for other aspects, such as the HWCs, costing is only possible using high level budget data, reflecting the total cost of the intervention;
  - Some high-level data on time taken for HNAs, CCRs and TSs can enable a basic costing;
  - Some whole pathway costing has been done for the TS;
  - Local variations mean differing costs and data does not cover implementation in all localities;
  - Difficult to find data on the upfront costs such as training staff;
  - Estimates from practitioners and local case studies can be used to supplement costing data;
  - National level top-down costs (i.e. an aggregate of funding allocation for local implementations) are difficult to establish, due to variation in local resourcing and funding, and because the Recovery Package is often embedded within other programmes;
- There is a relative lack of quantifiable outcomes data, aside from some limited short-term data on health outcomes;
- Survey data has been collected, including reports of increased patient and staff satisfaction, e.g. 80% of GPs found the Treatment Summary useful or very useful. While such information is useful contextual information, its value in an economic evaluation is limited.
- Follow-up evaluations have not (yet) taken place to allow the collection of data on the impact of the Recovery Package on health benefits or quality of life (in part due to relatively recent implementation);
- There are ongoing evaluations being conducted and evaluation frameworks currently being worked out where more recent implementation has taken place, which will add to the body of research (although the extent of patient follow-up is unclear or to be determined);

- There is some difficulty establishing the impact of the Recovery Package itself given it may be delivered in combination with other or related programmes or packages of care.

8.4.2. Findings from the long interviews

The findings are summarised below.

Design and conceptualisation of the Recovery Package

The interviews found that there is clarity around the vision on improving the outcomes of patients at the end of treatment and the need for the Recovery Package across stakeholders at both local and national level. The objectives of the Recovery Package, as identified by stakeholders, centre on coordinated, patient-centred care, focused on assessing as well as providing for individual recovery needs.

The decision to allow local sites to test out elements of the Recovery Package has provided good evidence about what works locally, but has also decentralised some of the design of the elements and the Recovery Package as an entire form of care and support. More strategic thinking is required during the design and conceptualisation stage in terms of the outcomes to evidence its impact. The loss of the NCSI seems to have resulted in a loss of strategic focus and attention. There are differing ideas about the level of formalisation of the design, outcomes and objectives of the Recovery Package, which have been viewed as having a negative impact on moving from the design to the programme implementation stage.

Implementation of the Recovery Package

Interviewers found a great deal of variability in the local implementation of the Recovery Package. It was noted that the implementing part or all of the Recovery Package was less of a challenge for flagship sites due to the funding and support provided. This was seen as providing the sites with a ‘head start’. Allowing local variation in which elements of the Recovery Package are implemented has meant that there is no consistent approach to assessing overall impact. A number of challenges in implementing the Recovery Package were also noted by stakeholders, including information governance and health information technology capabilities. It was suggested that the inability to share patient information at the time of clinical decision-making impacts on the ability to provide coordinated, patient-centred care in a timely manner. This has been cited as particular issue in relation to the eHNA.

Clear objectives and targets appear to have been set for the implementation of some elements (e.g. eHNA) of the Recovery Package by the NCSI, which has led to a wider understanding of site progress. However, objectives and targets do not appear to have been set for other elements. It was thought that some elements of the Recovery Package were more difficult to implement (i.e. Treatment Summary) as they require a system-wide response. Organisational memory and a dedicated organisational lead for the implementation of the Recovery Package is crucial to implementation success. Resistance to change impacted on implementation locally and a cultural shift is required to implement new ways of working.

Funding allocations and budget reporting

While there are a number of Macmillan funded support posts, the largest portion of the operational funding is allocated locally, which appears to have an impact on the pace and the scale at which the Recovery Package can be implemented.

There is a perceived lack of clarity at national level about the level of local funding allocations received by sites for the Recovery Package under the survivorship agenda. There is also difficulty identifying the spending specifically on the Recovery Package, as it is often embedded within other programmes. The level of funding received from the NCSI is variable although it appears that there is national funding available at a local level, but uptake and awareness of these sources also varies. Funding of the Recovery Package is not linked to performance, which is seen as a potential danger to the sustainability of service within local health economies. In many cases there do not appear to be the systems in place to measure the performance of particular elements of the Recovery Package (in particular, the Treatment Summary), which was thought to make it difficult to ‘sell’ the Recovery Package to CCGs.

Data collection and availability

The interviewers found that there is a lack of nationally standardised data collection across the Recovery Package, making it difficult to evaluate its impact as a whole. There are individual elements of the Recovery Package that appear to be well evaluated (i.e. the eHNA) but data collection is process-driven. Some outcome data, however, collected with regard to the HWC events, which seem to be well evaluated, show evidence of the impact of these events on the patients’ ability and competency to self- manage. It is difficult to collect resource and process data on some elements of the Recovery Package as they are delivered as part of other programmes/packages of care, which makes it difficult to separate data and difficult to attribute any observed impact or change. Generally, there is a need to shift data collection priorities from activity-led to an outcomes-based culture over time, as outcomes data becomes available, in order to drive sustainability.

Areas of improvement

Stakeholders identified that it is important to have earlier and more concerted engagement with commissioners locally to ensure that the Recovery Package is scalable and ‘sellable’ to commissioners. In the interviews, stakeholders identified that there is a need for a more centralised approach to the development and evaluation of the Recovery Package as a whole and more long-term thinking in terms of sustainability and financing. Providing more opportunities for shared learning across the sites and better local data and information capabilities, which include a greater level of inter-operability between local information systems, were highlighted, too.

A more centralised delivery of HWC events would make them more cost-effective locally and more strategic/senior level engagement is required to develop and implement the Recovery Package locally commented stakeholders. This engagement should happen sooner rather than later. The importance of changing clinical attitudes and the culture of providing care, particularly in relation to self-management of the patient, was also discussed.

8.4.3. Findings from the short interviews

Nine stakeholders were invited for shorter semi-structured interviews to identify the information required for the economic evaluation. For the most part, short interviews provided data sources while some additional information was also uncovered.

In total, six interviews were held with two stakeholders interviewed together. The six following questions were used as a guide for the discussion with the interviewees:

- What components of the Recovery Package have been implemented? Holistic Needs Assessment, Treatment Summary, Cancer Care Review, Health and Wellbeing Clinics. If clinics, which type: market stall, volunteer-led?
- What are your experiences of local implementation?
    a. For which tumour group is the Recovery Package currently implemented?
- Do you know how many patients have been seen and over what period of time?
- What is the cost of running the different components of the Recovery Package? Or, if the cost is not known: How much funding was allocated for the component of the Recovery Package?
- Outcomes: Is any data being collected locally on the impact of the Recovery Package on outcomes?
    a. Staff satisfaction;
    b. Patient satisfaction;
    c. Quality of life;
    d. Depression/anxiety;
    e. Social care needs;
    f. Unemployment;
    g. Lifestyle;
    h. Hospital readmissions;
    i. Others.
- How many patients have achieved the outcome? And, if there is a scale of the outcome, to what extent?

Findings from the short interview process are grouped to reflect these six key questions.

It was highlighted through the short interviews that upfront time and resources are necessary to train the staff to conduct the HNA, but also that as healthcare professionals become more experienced with it, less time is taken to complete it. (One example of this was implementation in North Trent, where for colorectal cancer the time taken to undertake an HNA has been reduced from one hour to 30 minutes.)

The TS may enable early discharge from hospital but healthcare professionals can be reluctant to move patients to primary care, and tend to administer the TS at discharge. The issue could be that some patients might miss important services in primary care, however, patients might have more regular secondary care follow-up. Completing an earlier TS (at the end of initial treatment) may help address treatment needs that could otherwise become costlier if left until later. Again, it was noted that the time taken to implement the TS comes down as it becomes more routine.

Some sites (Sheffield Hospital) generate TSs through its existing IT system, and the additional funding was used to fund a post for data input into the system. It was found that implementation of the TS requires resources and is not easy to “sell”.

In some sites the HNA has lapsed, however, some are now bringing it back. Some sites found that there was no data on costs or impacts of the Recovery Package. Their programme was not about implementing the Recovery Package but it was initiated while the sites were in the middle of programme implementation.

For the Cancer Care Review, it was highlighted that implementation frees up follow up time, but that the value can be difficult to establish without detailed data, given that some costs are moved from secondary to primary care.

In addition, many interviewees provided access and context to additional published and unpublished evidence discussed elsewhere in this report.

8.5. Annex 5: Feasibility report

8.5.1. Data availability

Following data gathering, the feasibility of conducting an economic evaluation of the Recovery Package was assessed given the availability of data discussed in the above sections.

8.5.2. The feasibility decision

The overall feasibility decision was that while a full, detailed, quantitative economic analysis cannot be conducted at this stage, a high-level approach was feasible, which gave an indication of the size and nature of the outputs and outcomes relative to the investment, by combining the quantitative data that was available with qualitative assessment of the Recovery Package.

This approach remains useful in providing an overall picture of the Recovery Package at present, drawing on cost and outcomes where data does exist and highlighting what data are required to provide a more rigorous assessment. It can be defined as a cost-consequence analysis, as opposed to other types of similar economic analysis, namely cost-benefit analysis, cost-effectiveness analysis and cost- utility analysis.

Each of these types of economic evaluation measures a given intervention or programme's impact against its costs, versus what would have happened without the programme (the counterfactual). Conducting an economic evaluation allows an assessment of value for money and helps determine whether something is a worthwhile investment given limited budgets. Cost here refers not only to financial cost but also to opportunity cost, such as staff time (i.e. staff time could have been spent on something else). The key difference between the approaches named above is in how they measure outcomes:

- **Cost-benefit analysis (CBA)** measures all outcomes in monetary units, allowing the calculation of a cost-benefit ratio (e.g. £1.34 in benefits for every £1 spent);
- **Cost-effectiveness analysis (CEA)** measures outcomes in specific natural units and compares this to cost. This would allow calculation of, for example, the cost per additional successful organ transplantation (for a new intervention to improve the success of organ transplantation);
- **Cost-utility analysis (CUA)** is a form of cost-effectiveness analysis specific to healthcare, which uses utility values as the outcome measure. Utility values refer to quality of life, and calculated over time allow assessment of Quality-Adjusted Life Years (QALYs). Cost-utility analysis specifies results as the cost per QALY gained;
- **Cost-consequence analysis (CCA)** provides a more descriptive 'balance sheet' of benefits, using quantified raw units and qualitative data to explain outcomes where it is not possible to aggregate them into a single figure.

For example, if a new healthcare programme was shown to lead to fewer heart attacks in patients, a cost-effectiveness analysis could describe the cost per heart attack; a cost-utility analysis would express the benefit of a heart attack avoided in terms of QALYs (thus enabling comparison with other healthcare programmes with different outcomes) and a cost-benefit analysis would express the value of a heart attack avoided in monetary terms, based on methodologies such as the general population's 'willingness to pay' to avoid a heart attack (thus enabling comparison with any other investment). Each of these requires – at the very least – evidence linking the programme to the number of heart attacks experienced.

The evaluation itself can range from a simple calculation to complex statistical modelling, depending on the complexity of the intervention and the data available. The most rigorous form of economic evaluation in healthcare is the type required by NICE for its assessment of pharmaceuticals, which is based on high quality clinical evidence from randomised controlled trials (RCTs). NICE chooses to use cost-utility analysis for this, as it is interested only in health outcomes and cost savings.

Although RCT evidence is not essential, this approach is only feasible when detailed data is available on the cost of the intervention, its impact on the treatment pathway in terms of subsequent costs or cost savings and the impact on the health of the patient. Outcomes must be measured in such a way as to be quantifiable, and ideally costs are measured using a bottom-up approach (i.e. costing each individual element of a programme and building this up to the overall cost, as opposed to a top-down approach which assesses cost in terms of the proportion of overall budget allocated to a programme). This would be required for a more rigorous evaluation. Other impacts, such as staff satisfaction and patient experience, may also be included depending on the perspective of the study. It should be mentioned that it might also be possible for the evaluation team or Macmillan to have some input into the design of evaluations that have not yet been carried out, to measure some of these aspects.

If these data did not exist or are only partially available, a cost-consequence analysis could potentially still be conducted. For example, if there were data on self-reported patient health and experience of the new programme, case study evidence that a pool of patients seemed to have better cardiac health, and perhaps physician testimony, this could be described and presented as a CCA. While it would require more subjective interpretation, it would give an indication of cost-effectiveness and serve to highlight the gaps in available data.

Broadly speaking, cost-benefit, cost-effectiveness and cost-utility analysis can be considered more detailed economic evaluations, and cost-consequence analysis as more high-level. The table below indicates the extent of data required to conduct each, as well as data availability from feasibility assessment.

Table 4: Data requirements & availability for economic evaluation

Data required	Data requirements for each option			Data availability for each Recovery Package component			
	No go	High level	Detailed	HNA/ eHNA	TS	CCR	HWCs
Top-down or high level costing data vs. the counterfactual	X	✓		✓	✓	✓	✓
Bottom-up or detailed costing data vs. the counterfactual	X		✓	✓	X	X	X
Qualitative, mixed or partial indication of outcomes resulting from the intervention vs. the counterfactual	X	✓		✓	✓	✓	✓
Quantitative, near complete data on outcomes resulting from the intervention vs. the counterfactual	X		✓	X	X	X	X

Note that the table above provides a simplification. More detailed information can still add to a high level summary and similarly although top-down costing is possible for each of the four Recovery Package components it is not likely to be complete (upfront costs of training may be missing, for example), and as mentioned will be subject to local variation, meaning it may not be true for all locations unless local data is available.

The data collection exercise thus forms the basis for the decision to conduct a high level economic assessment rather than a more formal, detailed analysis. Cost data, (some top-down and some bottom-up) is available, as is some qualitative data on outcomes and a small amount of survey data. By combining all existing literature on the cost and impact of the Recovery Package with expert opinion and assessment by practitioners, this approach pulls together a high level picture of the Recovery Package thus far, demonstrating current knowledge about its effectiveness and cost-effectiveness, while also highlighting where more evidence is required for a more formal evaluation. There is also the opportunity to provide a more in-depth look at local case studies, which are seen as representative or exemplary examples of the implementation of the Recovery Package, including patient case studies for a partial view of subsequent health and treatment outcomes.

It is important to note that even a high level economic evaluation must have a counterfactual, in order to see the benefits of the Recovery Package itself, and to separate out those not caused by it. In this case, the assumption is that without the Recovery Package there would not be a similar programme to replace it, and so the counterfactual is 'no Recovery Package'. The impact, therefore, can be measured against what happened before implementation of the Recovery Package, or (if possible) local areas without the Recovery Package.

Naturally, the limitations of a high level assessment are that it does not provide a complete picture, nor does it allow a quantitative assessment from which strong conclusions on cost-effectiveness can be drawn, and allow comparisons with other forms of healthcare intervention. However, the benefits to Macmillan are that it establishes the current state of play, and can also inform further evaluation. This study can highlight gaps in the data as much as it reports on current findings, identifying areas where data collection efforts are needed to provide a more comprehensive and detailed assessment of outcomes.

For a more comprehensive analysis to take place, more data is required on the impact on patients: how did the Recovery Package change their health service usage, morbidity and mortality? It would also be useful to have an understanding of patient quality of life. More comprehensive bottom up costing, not just on the Recovery Package components in action but also on the upfront training required would also be needed.

8.5.3. Conclusion

The feasibility assessment described above indicated that there was sufficient data to conduct a high level cost-consequence analysis of the Recovery Package, given the availability of top-down cost data and some, largely qualitative, data on outcomes. However, given the variation of local implementation and the lack of both detailed cost data and follow up evaluation on outcomes, there was not sufficient data to enable the comprehensive costing and quantitative assessment of outcomes required for a more detailed analysis, such as cost-utility or cost-benefit analysis.

A high level economic analysis adds to the evidence base on the Recovery Package, helps inform future research priorities, and provides a document which can be used to help inform commissioning decisions, long term strategy development and with which to engage stakeholders. Along with this feasibility exercise, it highlights the need for more detailed information on patient and staff experience, patient health outcomes and quality of life, and the impact on the treatment pathway. Ideally, this would be done in such a way as to be able to assign quantitative values to outcomes (such as by using a validated quality of life questionnaire over time and collecting data on health service usage).

8.6. Annex 6: Detailed CCA

8.6.1. Strength of evidence

Optimity Advisors has developed a scoring system to assess the strength of the qualitative and quantitative evidence identified through the evidence search and the interviews. The following scoring system was used in the CCA:

- Strong evidence, such as peer-reviewed literature or statistical data (ONS National statistics, NHS reference cost, Personal and Social Services Research Unit (PSSRU) unit costs of health and social care) – four points;
- Moderately strong evidence, such as non-peer reviewed evidence (reports and grey literature) – three points;
- Moderate evidence, such as data identified on websites (e.g. Macmillan) without the indicated source, data provided via emails, data validation documents, expert opinions – two points;
- Weak evidence, such as opinions (not expert) typically collected via interviews –one point;

8.6.2. Traffic light system

In addition, a traffic light system was used to classify the outcome of the elements of the Recovery Package. The outcomes are both qualitative and quantitative.

For this purpose, the green colour presents frequent, consistent and/or sustained positive changes and benefits due to the implementation of the Recovery Package. The positive changes are a reduction in anxiety levels among people living with cancer, better knowledge of services available to them, and also benefits to healthcare professionals, such as a greater understanding of their patients which helped them to identify and address patients' problems. The green colour was also employed when, for example, it was reported that 56% of patients felt less worried as a result of using the eHNA or 51% brought concerns they would not otherwise bring, which suggests that the components of the Recovery Package offer a positive environment for patients to raise concerns.[27] Another example is that **only** 2% (which is a very low number) of the GPs and Macmillan GPs found the CCR not very user friendly.[32]

The amber-green colour is used to highlight any envisaged positive changes. The cell is amber and the text is presented in green. An example of anticipated positive change was when 78% of patients felt that they **could** discuss their future needs following the Assessment and Care Planning.[67] Another is when **it was thought** HNA will help inform the way GPs do their care reviews and support the patient.[9] For instance, overall the HWCs seemed to have a positive impact on social functioning, but received mixed results across the sites, and was considered as amber green.[56]

The amber-red colour was used when the outcome is mainly negative but not completely established. The cell is amber and the text is presented in red. An example includes the evidence that some patients found that the assessment process focused more on the past rather than preparing for the future.[67] This colour was also used for fairly negative quantitative outcomes such that only 28% of the healthcare professionals found eHNA and care plans easy to carry out or 14% of the individuals offered the eHNA have declined or not been able to complete the eHNA.[27]

The red colour is used to highlight negative changes. For example, in instances where it was suggested that healthcare professionals found the intervention difficult to carry out or did not find the intervention helpful.

The cell was left uncoloured when it was not possible to establish if the outcome was positive or negative but rather a statement. For example, the statement regarding the need for a confidential space to carry out the HNA,[48] as well as healthcare professionals reporting poor WiFi and/or general IT issues.[27] The cell was left uncoloured when the outcome was mixed, for example when results were reported on the use of complementary services; some sites have seen an increase in the use of the services, while some have seen a reduction.[56] It was also left uncoloured when there was no change established. An example of this was when it was not possible to establish whether Macmillan was able to influence national and regionally cancer care services.[27] Another example is the statement that some trusts combine the TS with the care plan and it is completed at the end of the treatment.[67]

Note that the colour coding was only applied to the outcomes of the Recovery Package. Intervention administration details such as timing, cost, staff levels, descriptions, recommendations were not colour-coded.

HNA can be paper-based or electronic (eHNA). The literature search identified evidence for both types and the CCA is presented separately for each of them.

8.6.3. CCA table structure

The CCA starts with a description of the Recovery Package component i.e. the intervention, which explains the aims of the intervention and its role in improving the wellbeing of people living with cancer. An outcome summary of each Recovery Package element is followed by details of the intervention administration: time required conducting the intervention, staff level involved and/or cost of the intervention. In some cases, multiple values for one item are presented as a result of a number of sources being identified during the evidence review. The differences in values can be explained by the calculation methodology used. For example, the cost of the HNA will depend on the band level of the clinical nurse specialist (CNS) who conducted the intervention. The lower the band level of the CNS the cheaper the HNA cost. In some instances, interventions might be carried out by other healthcare professionals (GP, nurse, specialist etc.) and where such information was available all values have been presented. The values can also be different if the elements differ across sites. For example, HWCs can take a number of forms such as market stalls, presentation only or can be more individualised. The set- up and running costs for the various types will vary.

The presentation of the findings in this way enables the reader to assess the options available for the implementation of each element of the Recovery Package and the resources needed to carry out the intervention.

Following the summary statements, the consequences of the Recovery Package element are grouped by outcome: health and wellbeing, financial etc. Each outcome, with supported evidence, is presented for the recipients of the benefits – such as those living with cancer, healthcare professionals, healthcare system, Macmillan, volunteers and carers.

Where possible, the median figure and presented outliers, such as for the time required to conduct the HNA, have been calculated.

Understanding of the CCA table

The evidence was classified by outcomes and recipients of the interventions' outcomes. In the health and wellbeing outcomes group, the impact on people living with cancer and the impact of the intervention on levels of anxiety, stress, depression, concerns, confidence and fears were included. Cancer care experiences for patients, their carers and family members; the issues that people living with cancer face and the ability of the intervention to identify and address these; the outcomes of the intervention on the ability to self-manage, control over one's situation, discussion of holistic needs, changes in quality of life, reductions in fatigue, re-assurance and increased knowledge of symptoms were also included as were attitudes towards the intervention processes.

Health and wellbeing outcomes for healthcare professionals included benefits of the intervention such as the enhancement of the understanding of patients' needs, improvement in communication between healthcare professionals and patients, assisting healthcare professionals by focusing and facilitating the discussion, increasing confidence and productivity among staff were all included.

Healthcare service outcomes for the healthcare system are also reported. These included the reduction in unplanned admission, reduction in bed days, cancelled appointments, reduction in non-elective emergencies, and implementation of care plans as a consequence of the intervention. Avoided healthcare costs due to the reduced use of healthcare services are translated into financial outcomes, which are included in the CCA.

Operational outcomes cover people living with cancer, healthcare services, Macmillan and other recipients. In this group, important points for the implementation of the elements were identified such as the need for privacy and confidentiality. In addition, this section highlighted the need for a confidential space, the need for training of healthcare professionals to implement the intervention and ensuring the time required to establish the Recovery Package processes was in place. Issues with the design and the advantages of the element, such as how easy it is to share experiences were also included. Engagement with Macmillan's services, both for patients and healthcare staff, was included under this group.

At the end of the CCAs recommendations and key points for the discussion are summarised.

All groups of outcomes include positive, negative or no changes, and notably, include both qualitative and quantitative outcomes.

8.6.4. Holistic Needs Assessment (HNA)

Table 5: Median time required for the HNA administration

Time required	Source #	Strength of evidence
45 minutes (30-60 minutes)	50	3
Average six minutes for the patient to complete the eHNA. Average 45 minutes to do a care planning consultation	6	2
The average time to complete is 20-25 minutes, which includes 2.5 minutes for the patient to complete the HNA and 20 minutes for the CNS to complete the Care Plan, but could be five-45 minutes	12	2
Often takes an hour/60 minutes per assessment	7	2
	10	2
In practice a little bit shorter than 45 minutes	9	2
Typical time required to complete the HNA is 45 minutes	**Calculation**	**N/A**

Table 6: CCA of the HNA

Input	Description/value	Source	Strength of the evidence
Component of the Recovery Package	Paper-based Holistic Needs Assessment (HNA)		
Description of the component	"An HNA is a simple questionnaire that is completed by the person affected by cancer. It allows them to highlight the most important issues to them at that time, and this can inform the development of a care and support plan with their nurse or key worker. The questionnaire can be completed on paper, or electronically." HNA can be paper-based or electronic (eHNA).	35	2

Summary of the outcomes of the HNA	• Levels of anxiety and concerns were reduced among person living with cancer; • Confidence levels improved; • Self-management has improved; • HNA was found to be helpful by the healthcare staff to identify needs and concerns of the person living with cancer; • Medical staff found the HNA generally useful; • Some medical staff felt confident to use HNAs and care plans; • GPs can access the HNA which might help them to better understand patients' needs; • Some sites experienced reduction in hospital admissions; • Persons living with cancer appreciate the opportunity and time to discuss the needs they might have; • Mixed feedback about filling forms and questionnaires; • Some persons living with cancer did not like some aspects of the HNA process; • Consideration should be given to the fact that the time to complete the HNA varies and there will be a need for a confidential space for the process; • There might be concerns from the medical staff in terms of resources and training available; • Physical and practical needs of persons living with cancer might be easier to discuss and assess than sexual issues; • Some sites adapted the design of the HNA according to their preferences and needs; • Macmillan is involved in the process and contributes to the cancer care services; • Due to reduced medical service use there will be monetary savings.				
Intervention administration	**Time required**	**Typical**	45 minutes	Calculation	NA
		Maximum (breast cancer)	105 minutes	48	3
		Time required can be reduced over time		22	1
	Staff level	**Usual practice (clinical nurse specialist)**	Band 6 or 7	50	3
				12	2
				8	2
				10	2
		Other	Band 4-6	6	2
	Per patient per HNA based on Band 7 midpoint		£13.70	50	3
				10	2
	A tariff (defined as a set price) per HNA and treatment summary combined		£100	7	2
				19	2

Health and wellbeing outcomes	**Person living with cancer**		
	Level of anxiety and concerns were reduced among persons living with cancer		
	There was reduced anxiety among patients due to the provision of HNA and care plan.	57	3
	There was a 90% reduction in the level of concerns in pre and post intervention.	11	2
	Patients report reduction in stress and anxiety. Patients felt more informed. There is a higher attendance at support services such as exercise and diet programmes, enhanced support for carers.	10	2
	A small audit for prostate cancer patients found that patients were discussing personal issues more than they would do without HNA (e.g. psychosexual).	9	2
	Assessment and Care Planning, for which the HNA is a tool, gave patients confidence in the system, helped them to think about life after cancer and prepare to get back to life.	67[1]	3
	Assessment and Care Planning helped patients to discuss their fears of the disease reoccurring and helped to relieve the anxiety.		
	Some patients appreciated the opportunity and time to discuss their needs.		
	Confidence levels have improved		
	Patients have reported positive experiences and improved self-confidence following the assessment.	31	2
	Patients reported that through the process they had been able to identify issues that were important to them and valued the opportunity to discuss specific practical problems, such as financial issues.		
	Assessment and Care Planning could help patients to return to their normal lifestyle. Note: Assessment and Care Planning is a predecessor of the Recovery Package. Assessment and Care Planning is assumed to have the same impact as the HNA.	67	3
	78% of patients felt that they could discuss their future needs following the Assessment and Care Planning.	67	3
	57% patients were more confident in planning the future (Assessment and Care Planning).		

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[1] This report refers to Assessment and Care Planning for which the HNA is a tool. Assessment and Care Planning is assumed to have the same impact as the HNA.

	People who remember receiving HNAs were likely to report that they received the care from the right people in the right settings compared to those who do not remember completing HNAs. “Holistic needs seem to be better met for those who have completed an HNA compared to those who did not. There are, though, some differences in the profiles of these groups – people who have completed HNAs have been recently diagnosed so the HNA was done in more appropriate time.”	25	3
	Self-management has improved		
	Patients felt that they were cared for and reported being better able to self-manage their condition and improve self-confidence.	31	2
	Patients reported that they felt they had more control over their situation.		
	Healthcare professionals		
	HNA was found to be helpful by the healthcare staff in identifying needs and concerns of persons living with cancer		
	HNA helped staff to identify what is required first.	9	2
	HNA enables patients to identify issues and concerns they might have, and often this is the first time that they have been able to. HNA can highlight issues in relationships, finance, mental health as well as unmet physical needs, which have not been expressed before. “The completion of HNAs on a regular basis can potentially reduce other long term illnesses.”	11	2
	The HNA process allowed medical staff to gain a greater understanding of their patient. Increased understanding helped to identify and address patients’ problems.	35	2
	Nurses appreciated time spent with patients at the end of treatment. Nurses found the experience positive and reported that HNAs gave a clearer picture of the patients’ needs.	67	3
	Medical staff found the HNA useful		
	Staff found that HNA was useful for monitoring, screening and troubleshooting.	67	3
	Staff found the HNA useful in facilitating the discussion. It was not “…a tick box exercise”.		
	The process is found to improve multidisciplinary team working and communications especially when HNA was combined with the treatment summary.		

	Telephone assessment received both positive and negative feedback from staff. Some found telephone assessments quick and easy. It enabled them to refer to the guide notes while on the phone.		
	Some felt that completion of the self-assessment questionnaire prior to the consultation helped to focus the discussion of the patients' needs. This resulted in more productive consultation sessions.		
	Some medical staff felt confident to use HNAs and care plans		
	It was found that 84% of staff were confident to use HNAs and 61% were confident to use care plans.	24	3
	When GPs can access the HNA that might help them to better understand patients' needs		
	GPs were keen to have access to HNAs. It was thought HNAs would help inform the way GPs do their care reviews and support the patient.	9	2
	GPs said that a detailed care plan enables them to better understand patients' needs and concerns and it has made consultations more effective.	24	3
Healthcare service outcomes	**Healthcare system**		
	Some sites experienced reduction in hospital admissions		
	Some sites recorded 6%-8% reductions in unplanned admissions (lung cancer). In Hull, there were 34 fewer admissions over eight months in 2011 compared to 2010 (lung cancer). However, in the absence of trial data, it cannot be said whether this was wholly attributable to the HNA.	52	3
	A 25% reduction in bed days for lung cancer was recorded in Brighton.		
	Around 20%-25% of clinic appointments were cancelled and rescheduled as a result of the pre-clinic telephone calls In Brighton (lung cancer) while 8% of appointments were arranged at a patient or professional request avoiding an emergency admission.		
	Non-elective emergencies were reduced compared to data in previous years in Brighton and Sussex.	48	3

Operational outcomes	Person living with cancer		
	Persons living with cancer appreciate the opportunity and time to discuss the needs they might have		
	Patients were pleased that the HNA was completed by a familiar clinician and appreciated a private and confidential location for this.	67	3
	Both patients and medical staff found the Distress Thermometer useful. However, "…it was how the tools are used and communicated that made it relevant and useful to people."		
	Some patients appreciated the opportunity and time to discuss their needs.		
	Mixed feedback about filling forms and questionnaires		
	Some patients did not like completing forms.	67	3
	Some patients did not like telephone assessment and preferred a face-to-face discussion with the healthcare professional (HCP). Most HCPs also preferred this approach.	9	2
	Some patients did not like completing the form at home and preferred to complete in the clinical setting where HCPs were more immediately available to discuss and support. Some preferred to have some opportunity and time to discuss their concerns with their family first. However, if completion at home is a rare occurrence, then this is unlikely to be a major issue in terms of the HNA being effective.	67	3
	Some did not like some aspects of the HNA process		
	Some patients found that the assessment process focused more on the past rather than preparing for the future.	67	3
	Some found the process too long especially where there were only a couple of issues raised where support was required.		
	"Some patients found that the prompts within the self-assessment made them consider and in some cases worry about issues not previously thought about."		
	Due to timing of the Assessment and Care Planning, it meant that the patient had to wait to see the cancer nurse specialist (CNS) after the consultation with the doctor was complete (i.e. the hospital visit was longer) or an additional appointment was needed.		

	Healthcare system		
	A consideration should be given to the fact that the time to complete the HNA varies and there will be a need for a confidential space for the process		
	It is important to consider the need for appropriate venue (confidential space).	48	3
	Due to a lack of resources (inadequate space to speak with patients in privacy) and lack of computer support meant that patients often experienced delays in receiving their care plan.	67	3
	“HNA clinics have proved challenging to implement though this is expected to ease as follow up attendances reduce.”		
	Healthcare professionals		
	There might be concerns from the medical staff in terms of resources and training available		
	There was concern among nurse specialists in terms of time and resources needed to conduct the HNA and that nurses did not have skills to conduct the intervention.	25	3
	Implementation of Assessment and Care Planning significantly increases the workload of CNS. In some cases, this meant that HNA was only possible with a limited number of patients. Some Trusts reviewed CNS job plans and have set up dedicated clinics to undertake these discussions.	67	3
	“To comply with Peer Review the CNS is required to be present in the clinic for ‘breaking bad news’ discussions with patients. For this reason, CNS resources are targeted at those in treatment rather than those who have completed treatment and are entering a follow up period.”		
	Training on conducting an Assessment and Care Planning was limited for some staff, especially the less experienced, therefore, Assessment and Care Planning were less productive than they could have been.		
	A need for training was also highlighted during the interview process with the stakeholders.	22	1
	Physical and practical needs of a person living with cancer might be easier to discuss and assess than sexual issues		

	Staff found that addressing physical and practical needs was relatively straightforward compared to issues such as family relationships, spiritual matters, anxiety. Some staff, especially the less experienced, found these issues difficult to manage.	67	3
	Professionals reported that they avoided areas of assessments that were thought to be difficult topics (sexual issues for example).	52	3
	Some sites adapted the design of the HNA according to their preferences and needs		
	Some sites spent time selecting and changing the assessment tools with less time spent on developing a care plan.	67	3
	The term 'distress' incorporated in the title of the Distress Thermometer was changed at the end of treatment where the focus was on recovery and wellbeing.		
	Macmillan		
	Macmillan is involved in and contribute to cancer care services		
	The process enables Macmillan to influence the cancer care process regionally and nationally through increased professional engagement.	10	2
	Patients report more frequent and more personalised relationships and interactions with Macmillan staff.	24	3
	Macmillan can help to raise confidence among medical staff and enhance ability to administer HNAs and care plans through training.		3

Financial outcomes	Healthcare services		
	Due to reduced medical service use there will be monetary savings		
	It was found that **unplanned admissions** have decreased for lung cancer in Hull. There were 34 fewer admissions over an eight-month period.[52] The reduction in admissions would result in some cost avoidance. As there was no indication of the type of admission in the report, a number of scenarios were analysed assuming different types of admissions. It was assumed that the admissions were non-elective inpatient. Non-elective inpatient admission is defined as "…where the patient has an unplanned admission. This includes emergency admissions and admissions for maternity, births, and nonemergency patient transfers from another hospital."[15] The unit cost of a non-elective inpatient admission, short stay is £603.[54] The cost averted due to 34 avoided admissions, therefore, would be £20,502 (2014 prices). The unit cost of a **non-elective inpatient admission, long stay** is £2,837.[54] The cost averted due to avoided admissions, therefore, could be around £96,458 (2014 prices). The unit cost of a **non-elective inpatient admission, excess bed days** is £275.[54] In this case the cost averted could be around £9,350 (2014 prices). The average cost of the **non-elective inpatient admission for short stay, long stay and excess bed days,** would be £1,720 (calculation, 2014 prices).[54] The cost averted due to avoided admissions, therefore, could be around £58,480. Note that the calculation of costs avoided due to reduced hospital admissions does not take into account the cost of the intervention.	Calculation	NA
	There was a 25% reduction in bed days in Brighton.[52] The cost of each bed day is £275 (2014 prices).[15]	52	3
		15	4
	Around 20%-25% of clinic appointments were cancelled and rescheduled as a result of the pre clinic telephone calls.[52] The average cost of the outpatient attendance is £111 (2014 prices).	52	3
		15	4
Recommendations	See the recommendations presented in the main body of the report.		

8.6.5. Electronic Holistic Needs Assessment (eHNA)

Table 7: CCA of the eHNA

Description of the component	"An HNA is a simple questionnaire that is completed by the person affected by cancer." It can be paper-based or electronic (eHNA).	35	2
	"The eHNA allows for the person affected by cancer to complete the HNA questionnaire on a touch screen tablet. This information is then sent to the clinician through a secure website to begin the process of care and support planning."	30	2
Summary of the outcomes of the eHNA	• eHNA was found to improve mental wellbeing among the persons living with cancer; • Some persons living with cancer found eHNA focused on their needs and found eHNA helpful; • Healthcare professionals experienced increased productivity and confidence; • eHNA is found useful for signposting among the healthcare professionals; • Majority of the healthcare professionals found eHNA and care plans difficult to carry out; • Following the completion of the eHNA actions were taken; • There are persons living with cancer who decline or are unable to complete the eHNA, but age does not seem to have an impact on this; • PWLC can complete the eHNA along their care pathway; • Patients have positive experiences post eHNA; • Some healthcare professionals find eHNAs helpful but feel that they are not fully conversant with the eHNA/HNA pilots; • Healthcare professionals identified a number of issues and challenges to implement the eHNA; • Time to establish the eHNA programme can vary between six weeks to six months • People living with cancer are aware of Macmillan services; • Unclear whether healthcare professionals engage with Macmillan services; • Cost of the eHNA will decrease when the number of eHNAs increase; • There are various expenses associated with the implementation of the eHNA; • There are mixed results on time required to complete eHNA compared to paper-based HNA; • There are mixed responses on how easy it is to complete the eHNA compared to the paper-based HNA; • More persons living with cancer found paper-based HNA more useful than eHNA; • More travelling and waiting time is spent on eHNA compared to the paper-based HNA; • Persons living with cancer who complete the eHNA are familiar with the Macmillan services and might use its services; • eHNAs are shared among healthcare professionals.		

Intervention administration	Time required	Time to completed the eHNA by patient (evidence from head and neck services)	30 minutes	27	3
		Time to complete care plan by the CNS (evidence from head and neck services)	30 minutes		
		Average time for the patient to complete the eHNA	6.2 minutes	6	2
		Average time to do a care planning consultation	45 minutes		
Cost	Set up cost of the eHNA per trust per year		£8,440	25	3
	Maintenance cost of the eHNA per trust per quarter		£6,100		
	Set up cost of the eHNA per site		£6,900	27	3
	Average maintenance cost per site per quarter		£2,100		
	Site maintenance accounts for		45% of the total cost		
	Site service development accounts for		31% of the total cost		
	Site set up account for		25% of the total cost		
	Average spent on eHNA per site including tablet cavers, locks, maintenance, WiFi and various other costs. There will be some one-off costs, but cost for WiFi and maintenance will be ongoing.		£5,123		
	Minimum spent per site (excludes tablet, covers and locks)		£122		
	Maximum spend per site (likely due to the size of the site)		£9,996		
	Average per year ongoing staffing cost per site		£16,380		
	Minimum ongoing staffing cost per site		£5,320		
	Maximum ongoing staffing cost per site (likely due to the size of the site)		£29,620		
	Average cost per eHNA including set up		£600	35	3
	Average cost per eHNA excluding set up		£320		

Health and wellbeing outcomes	**Person living with cancer**		
	eHNA found to improve mental wellbeing among the person living with cancer		
	56% feel less worried.	27	3
	51% bring concerns they would not otherwise bring.		
	37% gained confidence to discuss concerns they might otherwise have been embarrassed to discuss.		
	Some persons living with cancer find eHNA focused on their needs and found eHNA helpful		
	34% received help for their concerns and found discussions focused.	27	3
	Patients feel their holistic needs are being met. They experience better and more personalised support, and find the eHNA useful.	24	3
	It is found that eHNA gives a structured approach to the needs assessment. This is found valuable by patients and healthcare professionals.	26	3
	Healthcare professionals		
	Healthcare professionals experience increased productivity and confidence		
	There was an increased productivity among staff.	27	3
	Medical staff experience increased productivity as a result of the eHNA. It is found that they place greater recognition on the importance of assessments and they have greater confidence to deliver them.	24	3
	"The healthcare professionals interviewed could name a number of ways in which the eHNA project helped them be more productive – these were always in relation to activities outside of the direct administration of assessments and care plans."	27	3
	The healthcare professionals report greater confidence in administering eHNA and care plans. Levels of "very confident" have increased from 36% to 45% following the implementation of the eHNA. There was a slight reduction in rates of "Not at all confident" (from 3% to 2%).		
	There was 22% increase in confidence to deliver a care plan.		

	eHNA is found useful for signposting among the healthcare professionals		
	eHNA allows healthcare professionals to signpost persons living with cancer to relevant services that means that the needs of the persons living with cancer can be addressed.	27	3
	“The most prominent benefits specifically of the electronic assessment as opposed to paper or verbal alternatives are that it provides an audit trail (65% mention this); it is a paperless system (63%); avoids illegible handwriting (62%) and the care plan is automatically generated (58%).”		
	Majority of the healthcare professionals found eHNA and care plans difficult to carry out		
	28% of the healthcare professionals found eHNA and care plans easy to carry out.	27	3
	48% of the healthcare professionals found eHNA and care plans very or fairly difficult to carry out.		
Healthcare service outcomes	**Persons living with cancer**		
	Following the completion of the eHNA actions were taken		
	Actions are taken as a result of having a care plan.	24	3
	There was an 80% conversion rate of eHNA into care plans. (Some areas observe a 99% conversion rate. Some consider this number too high).	60	3
		10	2
		11	2
	Some report conversion rate of 72%.	27	3
Operational outcomes	**Persons living with cancer**		
	There are persons living with cancer who decline or are unable to complete the eHNA, but age does not seem to have an impact on their ability		
	14% of individuals offered the eHNA have declined or are not able to complete the eHNA.	27	3
	Age has an impact on the perception of how easy it is to complete the eHNA, but the differences are marginal.		
	88% of people below the age of 55 reported that the eHNA was very easy to complete and 15% reported it was fairly easy. In comparison, only 79% of the people above age 55 said that it was very easy to complete and 11% found the assessment fairly easy to complete. However, due to the small sample size, the results are not considered to be statistically significant.		

	Persons living with cancer can complete the eHNA along their care pathway		
	Patients can complete the eHNA in a setting of their choice along the care pathway. The eHNA cannot be completed at home.	24	3
	Patients can complete the eHNA in a private consulting room during the appointment or in a waiting room prior to the appointment.	27	3
	Patients have positive experiences post eHNA		
	People who complete the eHNA do not object to completing another eHNA.	27	3
	Patients can complete the eHNA in an environment of their choice, and with any service provider along the care pathway.	24	3
	eHNAs are thought to be easy to complete by both patients and medical staff.		
	Healthcare professionals		
	Some healthcare professionals find eHNAs helpful but feel that they are not fully conversant with the eHNA/HNA pilots		
	CNSs reported that HNA helped them to lead their conversations with patients and they liked the structured approach. However, there was still a lot of resistance from CNSs who are not yet fully conversant with the eHNA/HNA pilots.	31	2
	"The eHNA project appears to have little impact on the extent to which healthcare professionals think there is value in holistic needs assessment and care planning since these were already highly valued prior to the roll-out."	27	3
	Healthcare professionals identified a number of issues and challenges to implement the eHNA		
	"Heavy workloads, poor staff capacity and competing priorities all represent significant challenges to sites."	27	3
	Work overload, lack of suitable rooms, short appointment times, lack of IT facilities and time constraints are seen as the main challenges for implementation of the eHNAs and care plans. Other challenges included insufficient training, lack of confidence, etc.		

	Interestingly, before the implementation of the eHNA healthcare professionals were less likely to mention work overload (too many patients) and were less likely to talk about time constraints. They were also less likely to report inefficient training and lack of confidence.		
	44% of healthcare professionals report poor WiFi.		
	30% of healthcare professionals also report general IT issues.		
	26% of healthcare professionals report a lack of printers.		
	22% of healthcare professionals report a lack of tablets.		
	20% of healthcare professionals report a lack of desktop computers.		
	18% of the healthcare professionals report poorly functioning tablets.		
	Healthcare services		
	Time to establish the eHNA programme can vary between six weeks to six months		
	eHNA programme could be delayed because of the contract signing process. The process can take anywhere between six weeks and six months.	48	3
	Macmillan		
	Persons living with cancer are aware of Macmillan services		
	Patients have a greater number of interactions and more personalised relationship with Macmillan.	24	3
	Of the 71 people who knew the electronic assessment was affiliated to a particular charity, 93% knew that it was Macmillan	27	3
	Unclear whether healthcare professionals engage with Macmillan services		
	There are only anecdotal examples of healthcare professionals having greater engagement with Macmillan.	27	3
Financial outcomes	**Macmillan**		
	Cost of the eHNA will decrease when the number of eHNAs increase		
	The total cost of the eHNA to Macmillan by the end of quarter one in 2015 was £1,838,700 – 17,265 eHNAs were completed.	27	3
	The cost of each eHNA to Macmillan has been falling as the number of eHNAs goes up. The cost per eHNA and care plan was £173 and £284 respectively in 2012 (for Macmillan). These figures have fallen to £48 and £67 in 2014 for eHNAs and care plans respectively. No information is provided on why the costs have decreased.		

	Healthcare services		
	There are various expenses associated with the implementation of the eHNA, such as set-up and ongoing maintenance costs		
	The greatest expense is on the set-up, licensing, hosting and software development costs (accounting for 52% of the costs). The set-up cost includes capital expenditure on tablets and the initial development of the eHNA, site maintenance (software licensing and other support) and service development (Learn and Share events and marketing materials).	27	3
eHNA vs. HNA	**Persons living with cancer**		
	There are mixed results on time required to complete eHNA compared to HNA		
	Less time is required to complete the eHNA compared to paper-based HNA. Patients who completed eHNA also report less travelling time.	26	3
	On average, the eHNA takes 11.2 minutes to compete compared to 14.4 minutes for the paper-based HNA. Note that the sample size of the respondents completing the paper-based HNA is nearly four times smaller compared to the eHNA sample size.	27	3
	Both the time waiting for the appointment and response discussion with the doctor/nurse are longer compared to the paper-based HNA.	26	3
	There are mixed responses on how easy it is to complete the eHNA compared to the paper-based HNA		
	There was a preference of completing the eHNA rather than the paper-based HNA "…and [respondents] say that [the] tablet was easy to do."	25	3
	Both paper-based and eHNA can be completed at home. Among the 23 test sites, seven have been actively using the assessment at home functionality. Seventy-one assessments have been completed this way to date: 55% of the eHNAs are completed on a PC/laptop, 35% on tablet, and 10% on smartphones.	17	2
	32% of people living with cancer do not have a preference between electronic or paper-based HNA.	27	3
	56% of people living with cancer prefer completing eHNA on a tablet.		
	10% of persons living with cancer prefer paper-based HNA.		

	More persons living with cancer found paper-based HNA more useful than eHNA		
	37% of people living with cancer found the eHNA very useful (33% for the paper-based HNA).	27	3
	29% of people living with cancer found the eHNA fairly useful (42% for the paper-based HNA).		
	7% of people living with cancer found the eHNA not very useful (15% for the paper-based HNA).		
	23% of people living with cancer found the eHNA not at all useful (10% for the paper-based HNA).		
	4% of people living with cancer did not know whether they found eHNA useful or not (0% for the paper-based HNA).		
	Patients recall spending more time discussing their concerns following the assessment with the eHNA compared to the paper-based HNA (28.4 minutes vs. 24.6 minutes).		
	Patients who completed the eHNA are better able to recall benefits of the process compared to people who completed paper-based HNAs.	25	3
	More travelling and waiting time is spent on eHNA compared to the paper-based HNA		
	Waiting time to see the medical staff was 29.7 minutes for the eHNA and 29.4 minutes for the paper-based HNA. Note that the sample size for the paper-based HNA is nearly four times smaller compared to the eHNA sample size.	27	3
	Talking to the medical staff about the assessment was 28.4 minutes for the eHNA and 24.5 minutes for the paper-based HNA. Note that the sample size for the paper-based HNA is nearly three times smaller compared to the eHNA sample size.		
	Seven per cent of persons living with cancer who completed the eHNA attended the appointment solely for the eHNA compared to 18% of the persons living with cancer who completed the paper-based HNA, although the sample size was quite small.		

	Healthcare professionals		
	Time spent by healthcare professionals on eHNA support and discussions is different from time spent on paper-based HNAs		
	On average healthcare professionals spend 11.3 minutes supporting a person living with cancer to fill the paper-based HNA and 10.4 minutes to complete the eHNA.	27	3
	Healthcare professionals say that they spend on average 24.1 minutes discussing a patient’s concerns following an eHNA compared to 22 minutes following a paper-based HNA.		
	“Healthcare professionals are more likely to perceive the eHNA project as time-demanding if they are not used to conducting paper assessments before the eHNA project is introduced.”		
	Macmillan		
	Persons living with cancer who complete the eHNA are familiar with the Macmillan services and might use its services		
	Patients who completed the eHNA say that they would use Macmillan services for their holistic needs. However, these patients are likely to be already familiar with the Macmillan literature or have been seen by a Macmillan nurse.	25	3
	Whether Macmillan is able to influence national and regionally cancer care services is unclear.	27	3
	70% of people who remember filling in the eHNA, say that they would use Macmillan services, compared to 51% who remembered completing the paper-based HNA and 56% who do not remember filling in at all.		
	66% of people who remember filling in the eHNA report that they have read Macmillan literature, compared with 45% of people who completed paper-based HNA.		
	55% of people who remember filling in the eHNA report that they have seen a Macmillan nurse, compared with 46% of people who completed paper-based HNA.		
	Fifty-six per cent of people who remember filling in the eHNA report that they have either fundraised for or donated to Macmillan, compared with 25% of people who completed paper-based HNA.		

	Twenty-eight per cent of people who completed the paper-based HNA are more likely to have visited a Macmillan information centre compared to 14% who completed the eHNA.		
	People who completed the paper-based HNA are also more likely to have spoken to a Macmillan adviser compared to those who completed the eHNA (28% vs. 13%).		
	Healthcare system		
	eHNAs are shared among healthcare professionals		
	It was thought that for the healthcare professionals it would be easier to share eHNAs and care plans in comparison with paper-based HNAs.	24	3
	Around half of the eHNAs are shared among the professionals compared to 39% for the paper-based HNAs.	27	3
Recommendations	In general, there seems to be enough information on input data, such as costs and staff levels required to administer this intervention. However, there are a number of issues. Firstly, there are multiple data sources and it is not always easy to define one cost. It would be useful to look at medium and long term projections of the cost of HNA as it seems that the running cost of the HNA might decrease over time as less time is required for the intervention administration.[21] It could be beneficial for the local sites to know what the expected costs are over time. This will enable the sites to plan the required budget for the accommodation of needs of people living with cancer and the healthcare resources required. Time required to complete the HNA varies across the sites. The median time needed was calculated to carry out the HNA. There was no evidence suggesting that the time spent on the intervention affects the intervention outcome. It is important to look at the opportunity cost (“the opportunity cost of investing in a healthcare intervention is the other healthcare programmes that are displaced by its introduction. This may be best measured by the health benefits that could have been achieved had the money been spent on the next best alternative healthcare intervention”[47]) from both the healthcare and the patient side. • Use of formal measurement scales to assess improvements in quality of life, in wellbeing, in staff productivity (e.g. life satisfaction scale, Mood: Profile of Mood States (POMS), subscales such as tension, anger, fatigue, carers test, etc.…) will enable the measurement of changes post intervention more accurately. • In Hull and Brighton there were reductions in healthcare service use, however, the findings cannot be generalized at this stage due to insufficient cohort size and sample size.		

	• The impact of the element is often measured following the intervention and no follow up data is available. It is important to look at long-term consequences, too. • Comparing the intervention (the HNA) to the current practice (no HNA) would be useful to accurately measure the impact of the element.

8.6.6. Treatment Summary (TS)

Table 8: Cost of the TS

Input	Value	Source	Strength of evidence
Clinician time per patient	10 minutes	67	3
Secretarial time per patient	5 minutes	67	3
Unit cost of medical consultant per contact hour	£140	5	4
Unit cost of registrar group per hour	£60	5	4
Cost of clinician (consultant) per minute	Cost per hour £140/60 minutes = £2.3	Calculation	N/A
Cost of 10 minutes' clinician's time to do the TS	£2.3 (minute cost) *10 minutes (time required) = £23	Calculation	N/A
Cost of secretarial time per minute	Cost per hour £60/60 minutes = £1	Calculation	N/A
Cost of 10 minutes' secretarial time to do	£1 (minute cost) *5 minutes (time	Calculation	N/A
Cost of TS	**£23+£5= £28**	**Calculation**	**N/A**

Table 9: CCA of the TS

Input	**Description/value**	**Source**	**Strength of the evidence**
Component of the recovery package	Treatment Summary (TS)		
Description of the component	"The Treatment Summary is a document produced by the specialist team at the end of treatment for cancer and at other subsequent trigger points. It is developed for the patient, copied to their GP and provides information on diagnosis and treatment the patient has had, the short and longer-term side effects, and the signs and symptoms of recurrence. It also provides key contact details should there be any future worries or concerns." The TS "…can also help to improve the communication between specialist and primary care teams and to assist GPs to better support patients and carers in the community."	67	3
	"Treatment Summary and care plan is a living document to be updated at any event across the pathway." These two elements are seen as crucial "to getting transitions right".	51	3
	In some areas (Somerset) an electronic version of the TS is available through InfoFlex (an information system).	49	3
Summary of the outcomes of the TS	• TS was found useful by the primary care and secondary care staff; • Healthcare professionals appreciated the value of the TS and would want to use the TS along the care pathway; • TS can be useful to help young people living with cancer in transitioning into adult services; • Some healthcare professionals found TS easy to complete; • Some healthcare professionals did not find TS easy to complete; • TS was found to be useful for communication and information sharing between the medical teams; • TS is sometimes combined with care plan as a single document; • A lack of time among the medical staff can serve as a barrier in using the TS; • There is an uncertainty around when to use the TS; • There are a few points to consider when implementing TS (related to the form); • It was thought that the TS form should be tailored to a specific tumour group.		

Intervention administration	**Time required**	**Clinician time per patient**	10 minutes	67	3
		Clinician time per patient	15 minutes (plus secretarial)	12	2
		Secretarial time per patient	5 minutes	67	3
	Staff level		Consultant	67	3
				12	2
				8	2
				18	2
			Nurse specialist	6	3
				8	2
	Cost	**Consultant assuming 10 minutes spent per patient**	£23	Calculation from 22	4
		Secretarial assuming 5 minutes spent per patient	£5	Calculation from 22	4
		Total	**£28**	**Calculation**	**N/A**
		End of treatment review, including care planning	£72	53	3
		Incentives	£100 for the first TS received	18	2
Health and wellbeing outcomes	**Healthcare professionals**				
	TS was found useful by the primary care and secondary care staff				
	80% of the primary care staff said that TS was useful or very useful.			67	3
	90% of the primary care staff found components of the TS, such as ongoing management plan, diagnostic information and treatment intent useful.				
	70% of the primary care staff found components of the TS, such as toxicities/late effects, re-access arrangements and alert symptoms useful.				

	Healthcare professionals appreciated the value of the TS and would want to use the TS along the care pathway		
	Secondary care (SC) staff appreciated the value and concept of the TS.	68	3
	90% of the primary care staff reported that they wanted TS to be used along the treatment pathway “in place of, or in addition to the clinic letter”.		
	70% of the primary care staff reported that they wanted a similar concept at diagnosis.		
	50% of the primary care staff reported that TS “…‘definitely’ or ‘yes to some extent’ make a difference to how they managed the patient with better use of time having the highest response”.		
	TS can be useful to help young people living with cancer in transitioning into adult services		
	TS can be useful for young people and help them to transition into adulthood and access the adult services.	50	3
	The small number of persons living with cancer who completed the questionnaire found the TS helpful and reassuring.	12	2
Operational outcomes	**Healthcare professionals**		
	Some healthcare professionals found TS easy to complete		
	SC staff found TS quick and easy to use.	68	3
	SC staff found TS as “an improvement in the way we do things”. It was said that in the past the summaries were poor and incorrectly filled in by junior staff.		
	Some healthcare professionals did not find TS easy to complete		
	SC staff reported that the TS form was “fiddly” to complete.	68	3
	TS was found to be useful for communication and information sharing between the medical teams		
	SC staff found the TS structure useful. It was thought to be useful for reporting to other medical teams: “A GP could not ask for anything more.”	68	3
	TS was thought to be useful to improve communication between primary care and SC staff and GPs.	50	3
	TS was found to be the key enabler for effective communication and collaboration between acute and PC.	58	3

	Medical staff reported that the TS process improved communication between the teams "…in particular where it was combined with the generation of the Treatment Record Summary for the GP".	67	3
	GPs found the TS useful in terms of enabling more efficient information sharing (breast programme)	58	3
	TS found useful as all the information is on one sheet. The information is collected from various documents issued during a number of appointments (breast programme, one respondent).		
	TS is sometimes combined with care plan as a single document		
	Some trusts combine the TS with the care plan and it is completed at the end of the treatment.	67	3
	In Ipswich, the TS and care plan were combined.	49	3
	In some sites, the TS and care plan were not combined due to the complex needs of the person living with cancer and it was thought that the TS should be completed by the consultant and not by the nurse specialist.		
	In Bristol, TS and care plans are in the form of a letter until the Client Relations Management System becomes live.		
	A lack of time among the medical staff can serve as a barrier in using the TS		
	Surgical cancer nurse specialists report a lack of time as a reason for not completing the TS themselves.	49	3
	SC staff report that they are "too busy" to complete the TS.	65	3
	Some sites reported a lack of resources and inadequate confidential spaces.	67	3
	Some sites reported a lack of access to IT and computers for the production of the TS and care plan. This can result in delays in receiving care plans to the person living with cancer.		
	SC staff said that it is not feasible to complete the TS in the clinic (no further information).	68	3
	SC staff said that they need time to think to complete the TS.		
	The TS was considered as additional work for the cancer nurse specialist.		
	There is an uncertainty around when to use the TS		
	In some cases, secondary care staff were not sure when to use the TS and whether the TS substitutes other forms or is an additional element in the care pathway.	65	3

	There are a few points to consider when implementing TS (related to the form)		
	Primary care staff reported that they had all the information already in the hospital letters.	68	3
	Primary care staff found the medication box too small.		
	The TS was found to be a busy form and not easy to read quickly.		
	The form was found to be too long and not concise.		
	Primary care staff would want to avoid abbreviations in the form.		
	Primary care staff would want to have the text in a larger font.		
	Primary care staff would want to have more white space.		
	It was thought that the TS form should be tailored to a specific tumour group		
	"[The] form needs to be tailored for tumour groups e.g. infection risk an issue for haematological cancers but not for others."	68	3
Recommendations	The evidence review showed that the TS could be combined with the care plan or the HNA. Conducting two elements in one appointment can be time and money saving. The evidence showed that the cost of combined HNA with the TS was set at £100.[8] This is higher than the cost of the HNA (£13.70)[67] and the cost of the TS (£28 [calculation]) combined (£41.70). Healthcare professionals highlighted the issue of lack of resources (time and adequate space) to carry out the TS. It is important to support these professionals to ensure a successful implementation of the Recovery Package.		

8.6.7. Cancer Care Review (CCR)

Table 10: CCA of the CCR

Input	Description/value	Source	Strength of the evidence
Component of the recovery package	Cancer Care Review (CCR)		
Description of the component	"The Cancer Care Review (CCR) is carried out by the GP practice within six months of a diagnosis of cancer. It helps the person affected by cancer to understand what information and support is available to them in their local area, and to enable supported self-management as part of the Recovery Package."	36	2

Summary of the outcomes of the TS	• People living with cancer were positive about the CCR; • People living with cancer have discussed their medication and health care needs or thought they would have been useful to discuss; • GPs found the CCR easy to use; • CCR can be used as prompt, not as a tick box; • CCR can be conducted face-to-face or over the phone; • CCR can be conducted at a separate appointment or during another appointment; • CCR can be conducted by GP or practice nurse.				
Intervention administration	**Time required**	**GP**	No data, but can be conducted at a separate appointment or during another appointment	NA	NA
		Practice nurse		NA	NA
	Staff level		GP	61	3
				32	3
				31	3
			Practice nurse	61	3
				32	3
				31	3
	Cost of CCR as part of normal GP appointment		£41	21	2
	Cost of stand-alone CCR		£80	20	2
Health and wellbeing outcomes	**People living with cancer**				
	People living with cancer were positive about the CCR				
	People living with cancer were positive about the CCR; 71% of the people living with cancer responded that they were “very satisfied” with the CCR process.			32	3
	People living with cancer appreciated the opportunity of the time with the GP.				
	People living with cancer have discussed their medication and health care needs or thought they would have been useful to discuss				

	75% of people living with cancer remember discussing their treatment during their GP appointment	32	3
	Of 25% people living with cancer who do not remember discussing their treatment, 66% said that discussing treatment would have been useful.		
	71% of people living with cancer remember discussing their medication during their GP appointment.		
	Of the rest 29%, 85% said that discussing medication would have been useful.		
	50% of people living with cancer remember discussing their needs.		
	Of the rest 50%, 41% said that discussing needs would have been useful.		
	60% of people living with cancer remember discussing their and their carer's support needs.		
	Of the rest 40%, 41% said that discussing this would have been useful.		
	Healthcare professionals		
	GPs found the CCR easy to use		
	79% of the GPs found the CCR template either 'fairly' or 'very' easy to use.	61	3
	81% of the GPs found the CCR template user friendly.	65	3
	58% of the GPs and Macmillan GPs found the CCR fairly user friendly.	32	3
	21% of the GPs and Macmillan GPs found the CCR very user friendly.		
	18% of the GPs and Macmillan GPs not sure whether the CCR was user friendly.		
	2% of the GPs and Macmillan GPs found the CCR never very user friendly.		
	1% of the GPs and Macmillan GPs found the CCR not at all user friendly.		
	GPs found components of the CCR, such as reviewing medication and the details of the carers useful.		
	88% of the GPs found it useful to have access to Macmillan resources.		
	20% of the GPs knew that signposting information was included in the CCR.		

Operational outcomes	**Healthcare professionals**		
	CCR can be used as prompt, not as a tick box		
	Data from April 2014 - March 2015 for the indicator ”The percentage of patients with cancer, diagnosed within the preceding 15 months, who have a patient review recorded as occurring within six months of the date of diagnosis” showed that 80% of patients receive a CCR in England.	15	4
	Users of the CCR said that the form should be “used as a prompt, rather than a tick box exercise”.	32	3
	People living with cancer		
	CCR can be conducted face-to-face or over the phone		
	A survey found that 78% of GPs conducted CCR face-to-face and 16% over the phone. Macmillan GPs conducted 85% face-to-face and 9% over the phone.	32	3
	Of people living with cancer who completed the survey, 92% had CCR face-to-face.		
	CCR can be conducted at a separate appointment or during another appointment		
	A survey found that 62% of people living with cancer had a separate appointment specifically for the CCR.	32	3
	A survey found that 38% of people living with cancer had CCR conducted during another appointment.		
	Healthcare system		
	CCR can be conducted by GP or practice nurse		
	A survey found that 68% of CCRs were conducted by the GP.	32	3
	A survey found that 12% of the CCRs were conducted by practice nurse.		
Recommendations	The CCR is a conversation between the GP and the patient acknowledging where the patient is, their treatment and management plan, as well as their holistic support needs. It is currently not clear what happens after the CCR is carried out and whether further actions are taken. However, this intervention is currently being redesigned to deliver exactly what is described as there is a range of practice. Ultimately, in line to current GP practice, a letter should be sent to invite patients for a CCR. It is important that acute care ensure that all end of treatment information is sent to GPs such as the TS and HNA. The evidence review showed the impact of the CCR is not yet well established and the main source of the information on benefits is coming from one paper. However, data from the Quality and Outcomes Framework showed that around 80% of patients receive a CCR in England.[16] This suggests that the consequences of the CCR are not yet measured or underreported.		

8.6.8. Health and Wellbeing Clinics (HWC)

Table 11: CCA of the HWCs

Input	Description/value	Source	Strength of the evidence
Component of the recovery package	Health and Wellbeing Clinics (HWC)		
Description of the component	"Health and Wellbeing Clinics are designed to help people get the support that they need to improve the quality of their lives, for as long as possible."	34	2
	"One-stop shop" where support from the health professionals, volunteers and peers is available.	56	3
	HWC can take a place as: • Traditional (presentation, market stalls, one-to-one sessions); • Market stalls; • Presentations only; • Volunteer led self-management; • Assessment clinic.		
	Patients can be selected for HWCs through: • Referral; • Referral and promotion; • Drop in; • Self-selecting; • Scheduled appointment time.		
	Setting: • Clinical; • Non-clinical.	56	3
		43	3
Summary of the outcomes of the TS	• People living with cancer feel positive about the HWCs; • There were mixed results on the impact of the HWCs on social functioning; • People living with cancer reported increased knowledge of the symptoms of the disease; • Following the HWC events, anxiety and symptoms of depression have decreased among people living with cancer; • The HWCs have helped people living with cancer to enhance their quality of life; • People living with cancer reported increased confidence in managing their health; • People living with cancer were able to manage health issues and cancer-related fatigue; • People living with cancer found HWC events re-assuring and helpful to meet peers;		

Input	Description/value	Source	Strength of the evidence
	• Staff have felt positive about the HWC pilots; • Families and carers of people living with cancer also benefited from HWCs; • HWCs can help to improve productivity of the services; • Reduction or no change in use of some services were observed; • Number of admissions, bed days or length of stay has decreased in areas where the HWCs were introduced; • Financial benefits of the HWCs were established in a number of sites; • Success of the HWC depends on the services it provides; • The HWCs can be tailored to certain communities and cancer types, however, the cost should be taken into account; • Some ethnic groups might be less positive about the events; • Some patients want to disassociate themselves from the disease; • The effectiveness of the HWC depends on the type implemented; • Patients preferred HWC events to happen at an earlier stage of their treatment; • Patients were aware or became aware of Macmillan services and found the activities useful; • Volunteering was a big part of the HWCs and their work was found to be helpful; • Volunteers can enhance the productivity of the HWCs and promote the Big Society Agenda; • The effectiveness of the HWC does not depend on the amount of resources used; • Market stalls are found to provide useful information and were well attended, however, they are found be costly.		

Intervention administration	Individuals involved	A different model can be used to reflect the needs and resources available	12	2
		Healthcare professionals: Clinical and non-clinical	37	3
			23	3
		Surgeon/oncologist	23	3
		Occupational therapist	37	3
		Complementary therapist		
		Trained nurse		
		Psychologist		
		Physiotherapists	37	3
			23	3
		Clinical Nurse Specialist (CNS)	37	3
			23	3
		Allied Health Professional (AHP)	23	3
		Therapy Radiographer	37	3
		Dietician		
		Carers' team		
		Benefits advisor		
		Admin support (administrator/co-administrator). This job can be a part of an existing role, unpaid or undertaken by volunteers	37	3
			23	3
		Citizens Advice Bureau advisor	37	3
		Macmillan Information and Support lead		
		Macmillan Information Facilitator		
		Peers	37	3
			23	3
		Volunteers	37	3
			23	3
	Staff time	No data available. However, the event usually runs for half a day	12	2
		The event can last the whole day	9	2
	No. of participants/clinic (depends on type of events)	20-25 (Market Stall)	51	3
		20 maximum (not specified)	13	2
		Some events have had up to 80 (not specified)	8	2
		Some events were attended by 70-90 people	9	2
		Some of the events have up to 50 patients attending	7	2
		Average attendance at HWC (type is not specified) is 14	43	3
		Some HWCs were attended by 70-84 people (type is not specified)		

	Cost	Traditional clinic with presentations and market stalls set up	£5,000	23	3
				37	3
		Traditional clinic with presentations and market stalls running	£2,523	23	3
				37	3
		Market stall set up	£2,499	23	3
				37	3
		Market stall running cost during the pilot phase	£7,034	23	3
				37	3
		Volunteer-led set up	£4,625	23	3
				37	3
		Volunteer-led running during the pilot phase	£24,913	23	3
				37	3
		Average of all three set up costs, used for overall cost reporting	£4,040 (average of £5,000; £2,499 and £4,625)	Calc	
		Average of all three running costs, used for overall cost reporting	£11,490 (average of £2,523; £7,034 and £24,913)	Calc	
		Per session (running)	£1,000-£3,000 (staffing/venue/ materials/refreshments)	51	3
		Cost per patient	£15-£67 depending on size of group	7	2
			Tariff agreed of £25 per patient attendance		
		Event	£500-£1,000	43	3
		Haematology weekly rehab, clinical setting in Nottingham (led by a nurse consultant, part of their job, supported by AHP and speaker. There were no venue costs; if venue was needed, the costs will be higher)	£15,000/year	20	2
		Monthly HWC	£7,500/year		
	Training	Volunteers undertake a three-hour course and optional cancer awareness training		56	3

		Two full days training for staff who take part	9	2
		An external course run by Macmillan; one-day follow-up (no further details)		

Health and wellbeing outcomes	People living with cancer		
	People living with cancer feel positive about the HWCs		
	People living with cancer felt positive about the HWCs.	56	3
	Patients liked the environment and the opportunity to speak to their peers, the staff and volunteers.		
	There were mixed results on the impact of the HWCs on social functioning		
	Overall the HWCs seemed to have a positive impact on social functioning. However, there were mixed results across the sites.	56	3
	People living with cancer reported increased knowledge of the symptoms of the disease		
	People living with cancer reported increased knowledge of the signs and symptoms of cancer. People living with cancer also became familiar with the system and could use again if they needed.	12	2
	The HWCs improved patient knowledge of symptoms, confidence and wellbeing. People living with cancer are better able to self-manage and identify the symptoms. These clinics give opportunity to seek appropriate services for their needs. Increased knowledge and confidence can potentially reduce use of healthcare services.	56	3
	Patients reported increased knowledge of symptoms and treatment options available.		
	Following the HWC events anxiety and symptoms of depression have decreased among people living with cancer		
	There was a 70% reduction in symptoms of depression and a 35% reduction in anxiety.	61	3
	Meeting with the peers helped people living with cancer "in the transition from patient to survivor" and helped to improve psychological wellbeing among people living with cancer.	33	2
	The HWCs have helped people living with cancer to enhance their quality of life		
	The HWCs can potentially increase quality of life among people living with cancer.	56	3

	People living with cancer experienced improvements in quality of life, which helped them to manage their emotional wellbeing and take part in social activities.		
		13	2
	From all the sites examined, people living with cancer in half of those sites reported improvements in quality of life (measured through emotional distress and social functioning). People living with cancer from the majority of the sites (eight out 12) reported enhanced emotional wellbeing. Reassurance seemed to be one of the strongest reasons.	56	3
	People living with cancer reported increased confidence in managing their health		
	Following the HWC events, patients reported increased confidence in self-managing their health.	56	3
	"As well as confidence to manage health concerns in terms of seeking support, using information and making decisions… patients also benefited, although to a lesser extent, from increased confidence to manage their physical health".		
	Patients reported increased ability to self-manage and improved emotional wellbeing.	37	3
	People living with cancer were able to manage health issues and cancer-related fatigue		
	"Overall findings saw a 54% reduction in how much cancer related fatigue gets in the way of people's daily lives".	61	3
	Initial results showed improvements in terms of managing fatigue.	56	3
	Ability of people living with cancer to cope with health issues increased.	56	3
	66% of people living with cancer said they would continue using the gym facility at the hospital.	61	3
	People living with cancer found HWC events re-assuring and helpful to the meet peers		
	Patients found the events and group activities (for example an exercise class) valuable in terms of sharing experience with peers and found the events re-assuring.	57	3
		11	2

	Following the HWC events, people living with cancer received supportive information and had networking opportunities.	56	3

	Healthcare professionals		
	Staff have felt positive about the HWC pilots		
	Feedback provided by staff was “very positive and constructive, both for their own learning and development. But also to see first-hand the impact on patients and their carers.”	12	2
	Carers and families		
	Families and carers of people living with cancer also benefited from HWCs		
	Carers and families of people living with cancer also benefited from attending HWCs. There was no formal assessment of the carers, however, patients themselves mentioned the value of the HWCs to their families.	56	3
	It was thought that carers and family members should be invited to the HWC events as they might find it helpful speaking to peers and have an opportunity to ask questions in a friendly environment.		
Healthcare service outcomes	**Healthcare services**		
	HWC can help to improve productivity of the services		
	“The pilot suggests that the HWC has the potential to enable effective delivery of services in terms of productivity”.	56	3
	Reduction or no change in use of some services were observed		
	A mixed result on the use of complementary services. Some sites have seen an increase in the use of the services, while some have seen a reduction.	56	3
	No increase in social services was observed.		
	The use of a GP and district nurse was either reduced or there was no observed change. A similar pattern was observed with community-based specialists’ services.		
	Number of admissions, bed days or length of stay has decreased in areas where the HWCs were introduced		
	Since the introduction of the HWCs in July 2011 unplanned admissions resulted in an 18% reduction over the same period in 2010. In Hull there were 34 fewer unplanned admissions with diagnosis of lung cancer over eight months compared to 2010 representing a 6% reduction overall. In	49	3

	Brighton in 2011, there was an 8% reduction in unplanned admissions with diagnosis of lung cancer compared to 2010.		
	The average length of stay has reduced from 11 to nine days between 2009 and 2011 in Brighton. The number of occupied bed days has fallen by 40% from 1,065 (2009) to 634 (2011). In an area where the changes (introduction of the HWCs) were not implemented, the number of patients admitted with a diagnosis of lung cancer length of stay or bed days have increased.		
	There were reductions in healthcare and social services (resource-intensive services) and a decrease in the use of financial advice services and counselling. These findings indicate that the HWCs provide the information needed and patients do not have seek additional information elsewhere.	56	3
	People living with cancer reported reduced use of healthcare services.		
Financial outcomes	**Healthcare system**		
	Financial benefits of the HWCs were established in a number of sites		
	An HWC with presentations and market stalls has resulted in a benefit of £2,418 to the healthcare system.	23	3
	Market stalls benefited the healthcare system by £5,317.	23	3
		37	3
	The volunteer-led HWC benefited the healthcare system by £1,678.	23	3
	There were £5,317 of monetizable savings through reduced service use (at cost of £9,533).	37	3
	The Bristol pathway saved £1,350 in follow up costs.		
	The major expense in delivering the clinics is staff time, which varies according to the model adopted.	51	3
Operational outcomes	**People living with cancer**		
	Success of the HWC depends on services it provides		
	The HWC events were found to be most successful when a referral was provided through a multidisciplinary team and a wide range of services was promoted.	56	3

	The HWCs can be tailored to certain communities and cancer types, however, the cost should be taken into account		
	The HWCs can be for all tumour types. However, to reflect certain types (such as lung cancer, that has poorer outcomes) the clinics can be tailored to meet the patients' needs better.	56	3

	Some sites can have a specific target group. For example, Leeds focuses on the African Caribbean community.	56	3
	Talks and topics can be tailored to a specific disease area.	7	2
	It is important to look at the cost of delivering site-specific events.	11	2
	Some ethnic groups might be less positive about the events		
	Some ethnic groups are less positive about the events. They express dissatisfaction with the communication used with them and the way they were treated by the staff (compared to white patients). Working with other voluntary organisations, however, might help to overcome the barrier, promote the clinics and achieve positive feedback.	56	3
	Some patients want to disassociate themselves from the disease		
	Some people living with cancer might not want to participate in the events as they wish to disassociate themselves from the disease.	56	3
	The effectiveness of the HWC depends on the type implemented		
	All types of HWCs seem to show positive changes. Apart from presentation only clinics, all clinics increased confidence by reducing the need to see a doctor. Traditional and presentation only HWCs showed a reduction in the use of health and social care services. Market stall HWCs showed an increase in service use (financial advice and employment services), counselling, and complementary therapies. Volunteer-led HWCs showed a reduction in the need for financial advice and employment services but an increase in counselling, and complementary services. Due to the nature of cancer type (lung), some sites have not seen reductions in hospital beds.	56	3
	Patients preferred HWC event to happen at earlier stage of their treatment		
	Speakers and topics at the HWC events were found relevant and informative.	57	3
		11	2

	However, many people living with cancer felt these events would have been more helpful at an earlier stage in their treatment pathway.	57	3
		11	2
	Macmillan		
	Patients were aware or became aware of Macmillan services and found the activities useful		
	There was increased awareness of Macmillan services and patients became aware or were already aware that the HWCs were a Macmillan initiative.	56	3
	Macmillan's work was found to be breaking stereotypes of cancer and increasing optimism.	56	3
	Macmillan helps to increase knowledge and it was seen as a trusted organisation.		
	HWCs raised awareness of Macmillan services. This can potentially reduce demand for "mainstream health services".		
	Healthcare providers wanted Macmillan's involvement in sharing good practice (38%). They also wanted Macmillan to help to develop online resources (19%) and run training sessions (12%) on HWCs.	43	3
	Volunteers		
	Volunteering was the big part of the HWCs and their work was found to be helpful		
	People living with cancer had positive interactions with volunteers at HWC events.	56	3
	Volunteers create a friendly atmosphere and make HWCs accessible for people living with cancer. Volunteers are found to be friendly and showing empathy and use simple terminology for medical advice.		
	Volunteers "provided information and signposted to relevant professionals at the clinic".		
	Volunteers can enhance the productivity of the HWCs and promote the Big Society Agenda		
	The process enabled volunteers to share their experiences and partnership working. Good attendance and engagement with the process is important and can boost productivity of the clinics.	56	3
	Volunteering promotes the Big Society Agenda, set by the government, by involving volunteers in health and social care activities and enables volunteers to work with professionals		

	to support the community. Potentially, the process can help to address health inequalities by targeting black and minority ethnic communities by providing one-to-one support, which may reduce the need for onward referral to services.		
	One-to-one support can help to make referrals to other services (financial advice services, employment advice services, counselling, complementary therapies) and can increase access to these services.		
	Healthcare services		
	The effectiveness of the HWC does not depend on amount of resources used		
	The HWCs that used more resources such as clinician's time did not necessarily result in better outcomes than those that used fewer resources.	56	3
	"As resources have been invested into the clinics in terms of health professionals' time, it is desirable that this should have the effect of reducing patients' use of health services after attending a clinic. In this way cost-savings in service use post-clinic might equal or exceed the investment in the clinics."		
	Market stalls are found to provide useful information and were well attended, however, they are found be costly		
	Market stalls provided useful information and support. Those about diet and nutrition were most well attended.	57	3
	However, the market stalls were found to be costly and it was suggested that the information could be obtained by other means.	11	2
Recommendations	The outcomes measured vary across the clinic types. This could be due to the HWC targets, i.e. what are they trying to achieve? Or, simply because the outcomes were not measured consistently. The costs also vary by type. The cost of a volunteer-led HWC is relatively high compared to other clinics. There was no indication of why this cost was so high. It is important, however, to see the impact on volunteers themselves and acknowledge the Big Society Agenda.		

	It might be useful to tailor clinics to the minority ethnic groups to ensure their needs are met. There was no accepted number of patients to attend the event and it is important to establish best practice. It was established that more resources, such as clinician's time did not necessarily result in better outcomes than those that used less resources.

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