

PRosPer project update

Monday 31st May 2022

PRosPer

Project commenced in early 2020 and was developed to increase the awareness, knowledge and skills with healthcare professionals and the wider workforce about:

- Personalised care and support planning
- Cancer prehabilitation:
- Cancer rehabilitation and symptom management:
- Service redesign and workforce development

The suite/package of products from PRosPer include:

E-learning, accessed through the E-Learning for Health platform, <https://www.e-lfh.org.uk/programmes/prosper/> on:

- An introduction to personalized care support planning, prehabilitation and rehabilitation
- Prehabilitation screening, assessment and interventions
- Rehabilitation screening, assessment and interventions including all symptoms and side effects associated with cancer and its treatment.
- Service redesign and workforce which includes service video case studies and patient videos of what people living with cancer expect from cancer services.

Involved over 40 subject matter experts from a wide range of disciplines from across the UK.

This e-learning has involved and is being used and adapted for long term conditions within HEE.

Introduction to cancer prehabilitation, rehabilitation and personalised care and support



In order to complete this learning, visit each of the chapters shown below; a green tick appears on the main menu when the chapter has been completed. Complete the assessment in order to gain a certificate of achievement.



Introduction



Personalised care and support



Principles of self-management



Principles of behaviour change



The connection between prehabilitation, rehabilitation and personalised care



Assessment



Summary and resources

Prehabilitation in cancer care



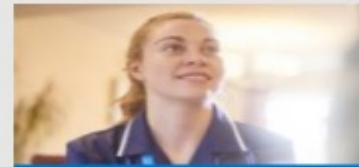
In order to complete this learning, visit each of the chapters shown below; a green tick appears on the main menu when the chapter has been completed. Complete the assessment in order to gain a certificate of achievement.



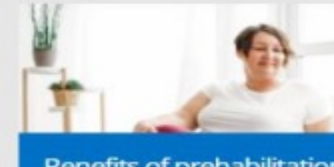
Introduction



Prehabilitation stages



Who delivers
Prehabilitation?



Benefits of prehabilitation
for people living with
cancer



Prehabilitation in practice



Assessment



Summary and resources

Rehabilitation across the cancer pathway



In order to complete this learning, visit each of the chapters shown below; a green tick appears on the main menu when the chapter has been completed. Complete the assessment in order to gain a certificate of achievement.

Introduction

Consequences of cancer and cancer treatment

Cancer rehabilitation

Principles of rehabilitation assessment

Rehabilitation management

Assessment

Summary and resources

Components of personalised care and support planning



In order to complete this learning, visit each of the chapters shown below; a tick appears on the main menu when the chapter has been completed. Complete the assessment in order to gain a certificate of achievement.



Introduction



Principles of behavioural science



Patient activation



Promoting self-efficacy



Health coaching



Motivational interviewing



Assessment



Summary and resources

Approaches to prehabilitation screening, assessment and interventions



In order to complete this learning, visit each of the chapters shown below; a tick appears on the main menu when the chapter has been completed. Complete the assessment in order to gain a certificate of achievement.



Introduction



Screening, assessment and intervention



Physical fitness



Nutrition



Psychological support and behaviour change



Summary and resources

Cancer rehabilitation and symptom management: cluster 1



In order to complete this learning, visit each of the chapters shown below; a tick appears on the main menu when the chapter has been completed. Complete the assessment in order to gain a certificate of achievement.



Introduction



Anxiety, worry, depression



Breathlessness



Cognitive function



Communication



Fatigue



Sleep



Summary and resources

Cancer rehabilitation and symptom management: cluster 2



In order to complete this learning, visit each of the chapters shown below; a tick appears on the main menu when the chapter has been completed.



Introduction



Pain



Mobility and physical
function



Lymphoedema



Neuropathy, hemiplegia
and paraplegia



Bladder and bowel
function



Sexual difficulties



Summary and resources

Cancer rehabilitation and symptom management: cluster 3



In order to complete this learning, visit each of the chapters shown below; a tick appears on the main menu when the chapter has been completed. Complete the assessment in order to gain a certificate of achievement.



Introduction



Taste changes



Nausea and vomiting



Diarrhoea



Dysphagia



Weight changes



Oral health



Summary and resources

Optional 15 credit Master's module on Prehabilitation and rehabilitation in people with cancer

<https://www.shu.ac.uk/study-here/options/health-and-social-care/short-courses-and-modules/msc-enhanced-radiotherapy-and-oncology>

Commences in May 2022 – July 2022

Over 60 applications for first cohort

15 places on the module funded free for participants through programme funding.

A 'how to guide' (<https://www.e-lfh.org.uk/programmes/prosper/>) is an interactive PDF encompassing designing, developing and funding personalised cancer prehabilitation and rehabilitation services in supporting people living with cancer designed for clinical and strategic leads and decision makers includes:

- 18 individual service case studies from across the UK focusing on cancer prehabilitation, rehabilitation or both.
- Videos, data, outcomes, health economic framework and cost consequence calculator
- Contributions from over 50 individual stakeholders and subject matter experts from across the UK
- Evaluation of all the elements of PROsPer is actively underway and being led by the University of Southampton

<https://www.southampton.ac.uk/msrg/index.page>

Designing, developing, and funding personalised cancer prehabilitation and rehabilitation

A How to Guide

PRosPer (Prehabilitation, Rehabilitation and Personalised Care) project funded by Health Education England and produced by Macmillan Cancer Support



Section 1: What is 'prehab' and 'rehab' in personalised cancer care?

Section 2: Case studies

Prehabilitation Projects

Rehabilitation Projects

Prehabilitation and Rehabilitation Projects

Section 3: Design

Health economic framework and cost consequence calculator:

The calculator is useful in several ways. It can:

- Act as a checklist for understanding what measures to consider and the data to collect
- Be used to help develop a business case to demonstrate potential or expected costs and impacts
- Be used to consider benefits realisation when a project has been running for a period of time and data have been collected on costs and impacts

The calculator includes worked examples to demonstrate changes in the costs and the patient and other clinical outcomes, based on case study projects.

Users can use their own data in the calculator to carry out their own estimates and develop economic scenarios.

Patient videos

As part of the PROsPer project we made two videos which resulted from two patient engagement groups.

We wanted the films to illustrate, from a patient perspective, the importance of personalised care, specifically prehabilitation and rehabilitation, on their cancer journey. The films will complement and give context to the accompanying e-learning materials in the Persona 3 section of the PROsPer resources.

Clive, Martin, Chris: <https://we.tl/t-Fn91vYMkzY>

Valerie, Anna: <https://we.tl/t-Hp75kwVz2C>

PRosPer Cost-Consequences Calculator

RACHAEL MACDONALD, Research Consultant
JAMES MAHON, Senior Research Associate
NICK HEX, Associate Director

www.yhec.co.uk



Purpose of the Calculator

- It is important to consider the costs and consequences of implementing Personalised Care projects as decision makers within the health and social care system need to understand the economic impact of any new initiatives.
- The PROsPer cost consequences calculator has been developed to illustrate the potential costs and consequences of implementing prehabilitation and/or rehabilitation programmes for people with cancer.
- The calculator compares the costs of such programmes with their benefits in economic terms.
- The purpose of the calculator is to allow those working in health and social care services to enter data on their own local interventions and see the extent of net costs and benefits arising from those interventions.

Purpose of the Calculator

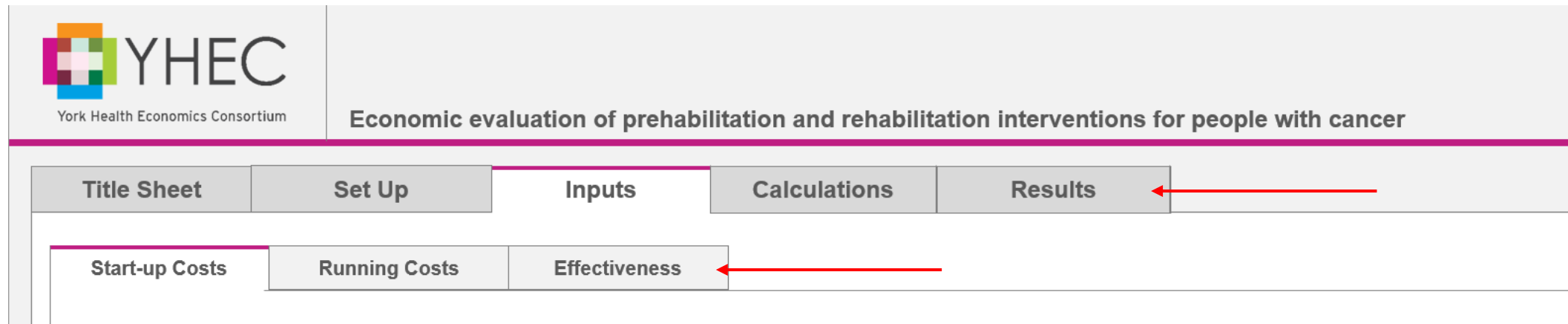
- The calculator is useful in a number of ways. It can:
 - Act as a checklist for understanding what measures to consider and the data to collect
 - Be used to help develop a business case to demonstrate potential or expected costs and impacts
 - Be used to consider benefits realisation when a project has been running for a period of time and data have been collected on costs and impacts

Using the Calculator

- The calculator contains a user guide, glossary, and information buttons throughout.
- Two worked examples are included within the calculator to illustrate how it may be used.
- The worked examples show the start-up costs, running costs, and effectiveness data based on evidence collected from case studies provided by NHS organisations participating in the PROsPer programme.
- The user has the option to use the calculator in three ways:
 - View the worked examples
 - Input data for a new local intervention
 - Input data for a service that has been up and running

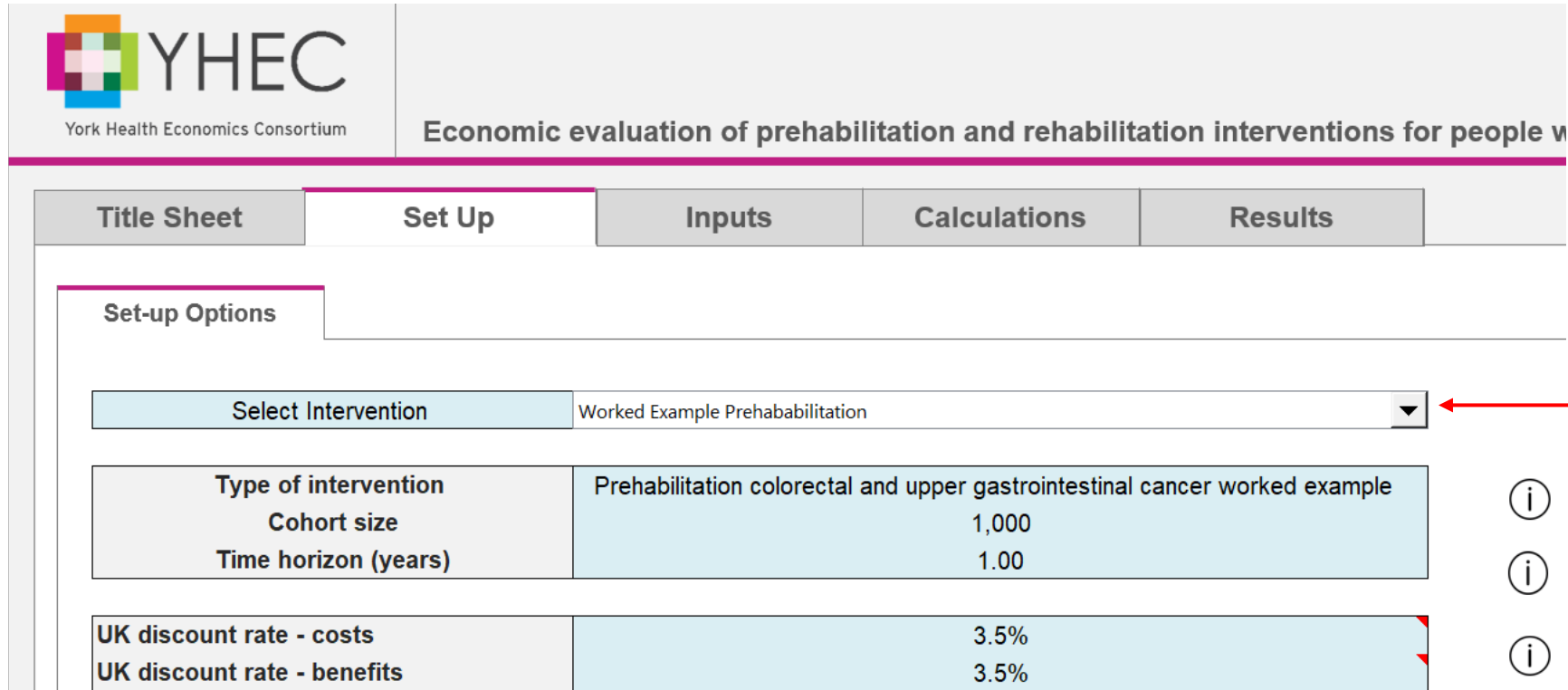
Navigating the Calculator

- It is recommended that users navigate through the calculator using the buttons provided.
- The first layer of buttons show the main sections in the calculator while the second layer splits these into subsections.



Viewing the Worked Examples

- The worked examples can be selected and viewed using the drop-down box presented on the set-up sheet.



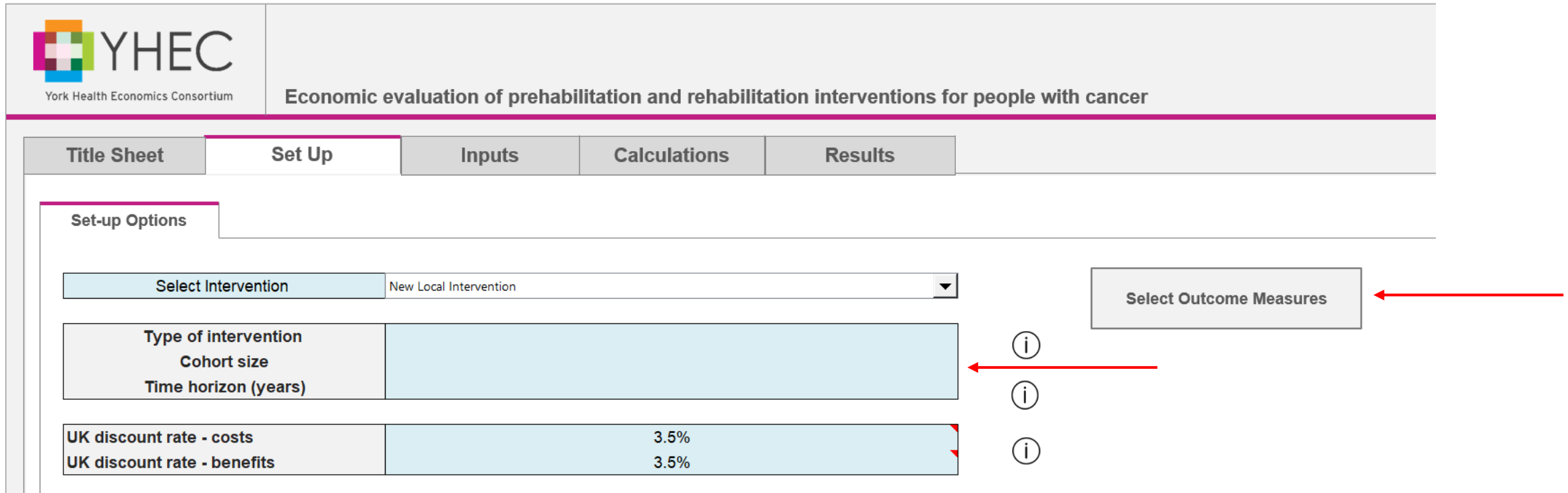
The screenshot shows the YHEC software interface. At the top left is the YHEC logo and name. The main title is "Economic evaluation of prehabilitation and rehabilitation interventions for people with...". Below this is a navigation bar with tabs: "Title Sheet", "Set Up" (selected), "Inputs", "Calculations", and "Results". Under the "Set Up" tab, there is a "Set-up Options" section. A dropdown menu labeled "Select Intervention" is set to "Worked Example Prehabilitation", with a red arrow pointing to it. Below the dropdown are three rows of input fields, each with an information icon (i) to its right:

Type of intervention	Prehabilitation colorectal and upper gastrointestinal cancer worked example	(i)
Cohort size	1,000	(i)
Time horizon (years)	1.00	(i)

UK discount rate - costs	3.5%	(i)
UK discount rate - benefits	3.5%	(i)

Inputting Data for a New or Existing Service: Set-up

- Selecting 'New local intervention' from the drop-down on the set-up sheet will provide a blank template of the calculator
- The type of intervention, cohort size, and time horizon must then be entered by the user



The screenshot shows the 'Set Up' tab of the YHEC calculator. The interface includes a header with the YHEC logo and the title 'Economic evaluation of prehabilitation and rehabilitation interventions for people with cancer'. Below the header are five tabs: 'Title Sheet', 'Set Up', 'Inputs', 'Calculations', and 'Results'. The 'Set Up' tab is active and contains a 'Set-up Options' section. This section includes a 'Select Intervention' dropdown menu set to 'New Local Intervention', a 'Select Outcome Measures' button, and a table for entering intervention details. The table has three rows: 'Type of intervention', 'Cohort size', and 'Time horizon (years)', all of which are currently blank. Below this table are two rows for discount rates: 'UK discount rate - costs' and 'UK discount rate - benefits', both set to 3.5%. Information icons (i) are present next to the intervention details table and the discount rate rows. Red arrows point to the 'Select Outcome Measures' button and the first row of the intervention details table.

Set-up Options	
Select Intervention	New Local Intervention
Type of intervention	
Cohort size	
Time horizon (years)	
UK discount rate - costs	3.5%
UK discount rate - benefits	3.5%

Inputting Data for a New or Existing Service: Set-up

- The ‘Select Outcome Measures’ button allows the user to select the outcome measures which are relevant to their intervention

Title Sheet | **Set Up** | Inputs | Calculations | Results

Set-up Options

Click on the categories of outcome that you want to include within the calculator and then de-select those measures that are not required. The headers must be selected as well as the relevant measures.

[Return to Set-up](#)

<input type="checkbox"/> Resource related to hospital care
<input type="checkbox"/> Readmissions
<input type="checkbox"/> Length of stay
<input type="checkbox"/> Outpatient visits
<input type="checkbox"/> A&E attendance

<input type="checkbox"/> Resource use related to non-hospital care
<input type="checkbox"/> GP appointments
<input type="checkbox"/> GP Practice nurse appointment
<input type="checkbox"/> Community nursing visit
<input type="checkbox"/> Other community appointment
<input type="checkbox"/> Social care appointment

<input type="checkbox"/> Clinical outcome measures
<input type="checkbox"/> 5 times sit to stand test
<input type="checkbox"/> 6-minute walk test (6MWT)
<input type="checkbox"/> Cardiopulmonary exercise test
<input type="checkbox"/> Incremental shuttle walk test (ISWT)
<input type="checkbox"/> Days alive and out of hospital (30)
<input type="checkbox"/> Days alive and out of hospital (60)
<input type="checkbox"/> Days alive and out of hospital (90)
<input type="checkbox"/> Rockwood clinical frailty scale
<input type="checkbox"/> Malnutrition universal screening tool (MUST)
<input type="checkbox"/> Royal Marsden nutrition screening tool
<input type="checkbox"/> Patient generated subjective global assessment questionnaire (PG-SGA)
<input type="checkbox"/> Patient health questionnaire-9 (PHQ-9)
<input type="checkbox"/> Generalised anxiety disorder assessment (GAD-7)
<input type="checkbox"/> Hospital anxiety and depression scale (HADS) - depression
<input type="checkbox"/> Hospital anxiety and depression scale (HADS) - anxiety

<input type="checkbox"/> Wellbeing/quality of life measures
<input type="checkbox"/> EQ-5D-5L
<input type="checkbox"/> EORTC QLQ-C30
<input type="checkbox"/> Brief fatigue inventory
<input type="checkbox"/> WHO disability assessment schedule

Inputting Data for a New or Existing Service: Costs

- The user must enter the start-up and running costs associated with their intervention.
- Costs are categorised as capital, non-capital, and staff costs.
- Start-up costs are any costs incurred in the initial set-up process. This may include:
 - Staff training
 - Purchase of equipment, such as exercise equipment
 - Project implementation management required to start the programme
- Running costs are any costs that are regularly spent on the intervention, such as staff wages.
- If a programme is utilising existing staff/practice any time spent should still be entered into the calculator as this will be an opportunity cost.

Inputting Data for a New or Existing Service: Costs

- The user should enter the total cost of items into the tables in the start-up and running cost sheets, selecting the section of the health and social care system responsible for funding each item from the drop-down boxes.

Capital Equipment		
Funder	Item	Total cost
Secondary care ▼		
Primary/community care ▼		
Social care ▼		
Please select ▼		
Please select ▼		
Total		£0

(i)

Non-capital expenditure		
Funder	Item	Total cost
Please select ▼		
Please select ▼		
Please select ▼		
Please select ▼		
Please select ▼		
Total		£0

(i)

Inputting Data for a New or Existing Service: Costs

- The profession, AfC pay band (if applicable), and whole-time equivalent of each member of staff involved in the intervention should be inputted.
- The calculator will automatically populate the cost of each member of staff using AfC pay rates. This cost can also be user-defined.
- The section of the health and social care system responsible for funding each member of staff should be selected using the drop-down boxes.

Ongoing staff costs								
Funder	Profession	Staff band	Whole time equivalent	Annual salary	Cost	User-defined Cost	Live	
Secondary care	Clinical services therapies lead Occupational therapist Physiotherapist Physiotherapy technician Dietician	Band 7	1.00	£42,589	£42,589		£42,589	
Social care		Band 6	1.00	£35,667	£35,667		£35,667	
Primary/community care		Band 6	1.00	£35,667	£35,667		£35,667	
Secondary care		Band 4	1.00	£23,716	£23,716		£23,716	
Primary/community care		Band 6	1.00	£35,667	£35,667		£35,667	
Please select		Please select		£0	£0		£0	
Please select		Please select		£0	£0		£0	
Please select		Please select		£0	£0		£0	
Please select		Please select		£0	£0		£0	
Please select		Please select		£0	£0		£0	
Please select		Please select		£0	£0		£0	
Please select		Please select		£0	£0		£0	
Please select		Please select		£0	£0		£0	
Total								£173,304



Inputting Data for a New or Existing Service: Effectiveness

- Data related to each outcome measure selected at the set-up stage should be entered for before and after the intervention has been introduced.
- Unit costs are provided for resource use outcomes, but these can be user-defined.

Prehabilitation for colorectal and upper gastrointestinal surgery worked example (i)					
Resource use related to hospital care					
Resource	Before Intervention	After Intervention	Unit Cost	User defined cost	Live cost
Length of stay	7.0	4.5	£355		£355

Resource use related to non-hospital care					
Resource	Before Intervention	After Intervention	Unit Cost	User defined cost	Live cost
GP appointments	1.0	2.0	£39		£39

Clinical outcome measures		
Measure	Before Intervention	After Intervention
Incremental shuttle walk test (ISWT)	60.00	58.00
Days alive and out of hospital (30)	27.0	27.0
Patient generated subjective global assessment questionnaire (PG-SGA)	12.0	8.0
Hospital anxiety and depression scale (HADS) - depression	8.0	7.0
Hospital anxiety and depression scale (HADS) - anxiety	14.0	12.0

Quality of life measures		
Measure	Before Intervention	After Intervention
WHO disability assessment schedule	55.0	40.0

Results

- The costs and benefits of the intervention per cohort and per participant are presented in the results section.
- A breakdown of the costs and benefits are given for each section of the health and social care system.

Summary Tables		
Net cost of intervention	Net cost per cohort	Net cost per participant
Total net cost in year 1 to health and social care system	-£649,910	-£650
Net cost to secondary care in year 1	-£795,909	-£796
Net cost to primary/community care in year 1	£110,333	£110
Net cost to social care in year 1	£35,667	£36
Costs	Cost per cohort	Cost per participant
Total cost to health and social care system in year 1	£198,590	£199
Cost to secondary care in year 1	£91,591	£92
Cost to primary/community care in year 1	£71,333	£71
Cost to social care in year 1	£35,667	£36
Benefits	Benefits per cohort	Benefits per participant
Total benefits to health and social care system in year 1	£848,500	£849
Total benefits to secondary care in year 1	£887,500	£888
Total benefits to primary/community care in year 1	-£39,000	-£39
Total benefits to social care in year 1	£0	£0

Results

- The incremental change in each outcome measure are presented
- Cost differences are provided for resource use outcomes. Whether the incremental change represents an improvement or not is reported for clinical and quality of life measures.

Resource use related to hospital care	Incremental change	Cost Difference
Length of stay	-2.5	-£887,500

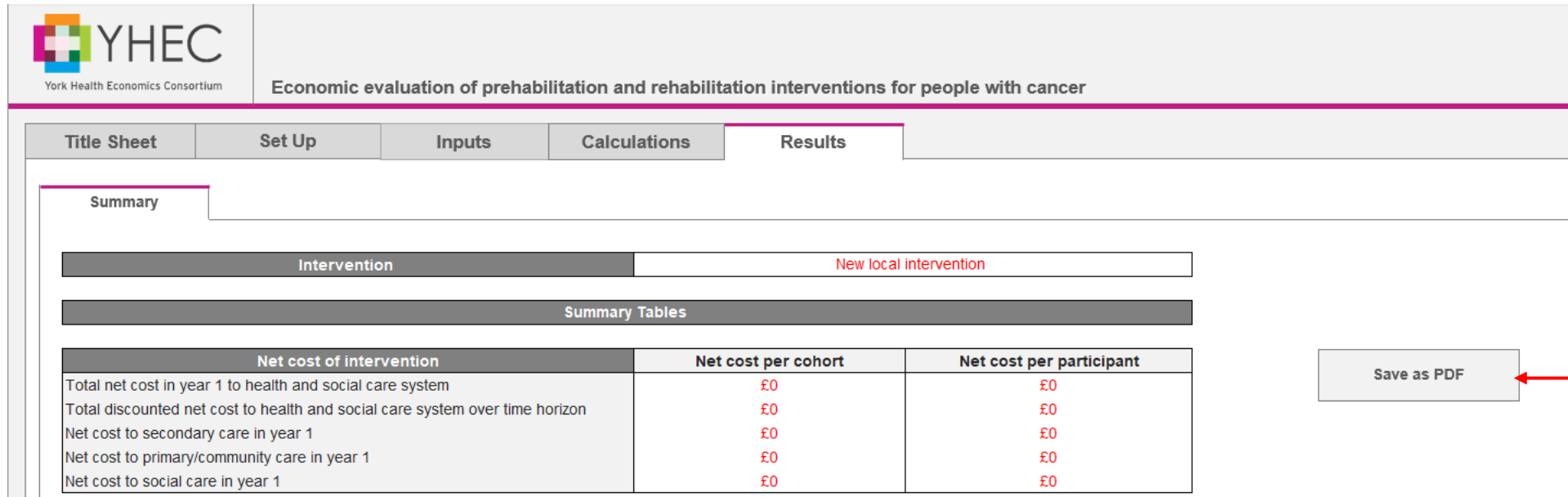
Resource use related to non-hospital care	Incremental change	Cost Difference
GP appointments	1.0	£39,000.00

Clinical outcome measures	Incremental change	Improvement ?
Incremental shuttle walk test	-2.0	Deterioration
Days alive and out of hospital (30)	0.0	No change
Patient generated subjective global assessment questionnaire	-4.0	Yes
Hospital anxiety and depression scale - depression	-1.0	Yes
Hospital anxiety and depression scale - anxiety	-2.0	Yes

Quality of life measures	Incremental change	Improvement ?
WHO disability assessment schedule	-15.0	Yes

Results

- The calculator includes a save to PDF function which allows users to save and print the net cost summary table.



The screenshot shows the YHEC calculator interface. The top header includes the YHEC logo and the title "Economic evaluation of prehabilitation and rehabilitation interventions for people with cancer". Below the header is a navigation menu with tabs for "Title Sheet", "Set Up", "Inputs", "Calculations", and "Results". The "Results" tab is active, and a sub-tab "Summary" is selected. The main content area displays the following information:

Intervention: New local intervention

Summary Tables

Net cost of intervention	Net cost per cohort	Net cost per participant
Total net cost in year 1 to health and social care system	£0	£0
Total discounted net cost to health and social care system over time horizon	£0	£0
Net cost to secondary care in year 1	£0	£0
Net cost to primary/community care in year 1	£0	£0
Net cost to social care in year 1	£0	£0

To the right of the table is a "Save as PDF" button, which is highlighted by a red arrow pointing to it from the right side of the image.

Thank you

RACHAEL MACDONALD, Research Consultant
JAMES MAHON, Senior Research Associate
NICK HEX, Associate Director

www.yhec.co.uk

