Prehabilitation and Rehabilitation in Cancer Care

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Prehab4Cancer Programme Manager

GM ACTIVE

WE MOVE AS ONE

Nutrition

Exercise

Wellbeing

PREHAB 4 CANCER

GREATER MANCHESTER

Greater Manchester Cancer

in Greater Manch

GMCA

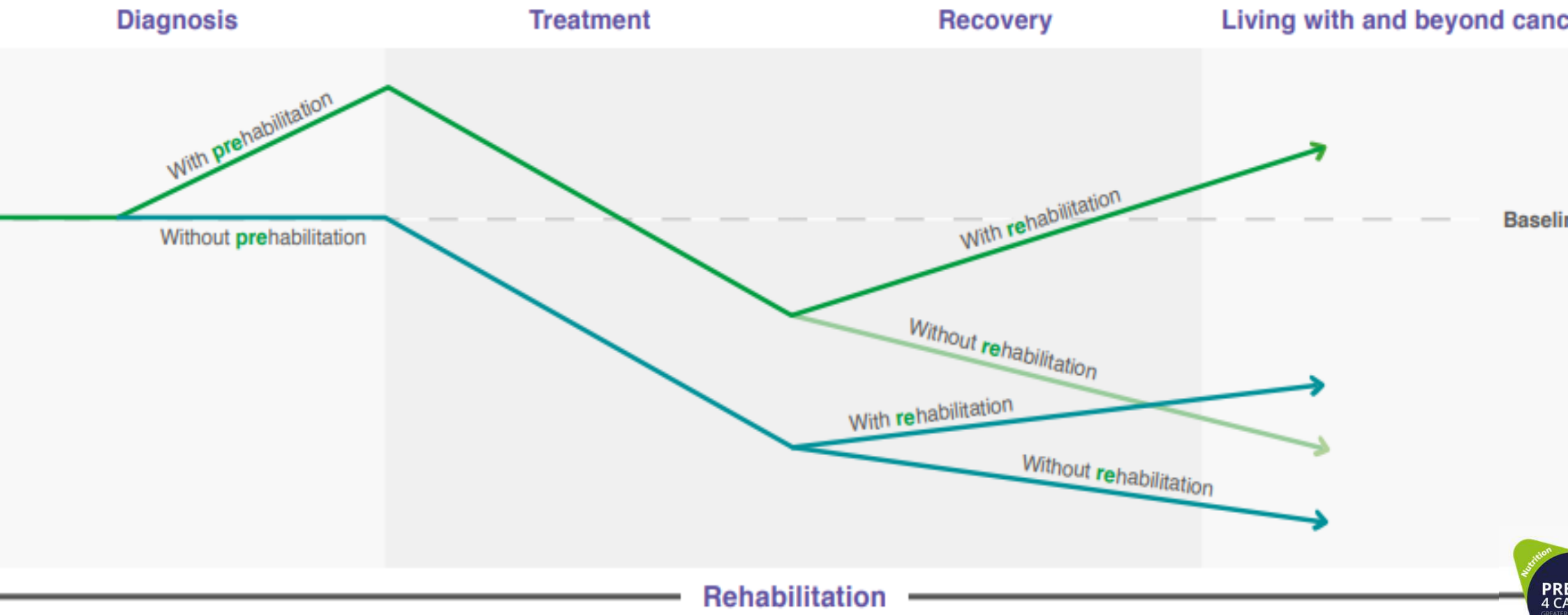
Prehabilitation can be defined as:

*"Prehabilitation enables people with cancer to **prepare for treatment** through promoting **healthy behaviours** and **through needs-based prescribing** of **exercise, nutrition** and **psychological interventions.** Prehabilitation is part of a **continuum to rehabilitation."***

Why do Prehabilitation?

"Prehabilitation and rehabilitation are essential for reducing the future needs of people with cancer"

Independent Cancer Taskforce 2015 5-yr Strategy for cancer



e: MacMillan 2019 Principles and guidance for prehabilitation within the management and support of people with cancer

The GM Model

- First system to Launch in the UK – April 2019
- Whole system, Multimodal approach to Prehabilitation and Rehabilitation for Greater Manchester
- Clinically led – Evidence-Based practice
- Designed in collaboration with GM Cancer & GM Active
- 3 Point programme – Exercise, Nutrition, Wellbeing
- Patients referred from MDT to central portal and built into clinical pathways
- Patients assessed at set time points using validated measures
- Tailored and progressive exercise prescription
- Specialised exercise guidelines, wellbeing intervention and dietic support
- Local & accessible across Greater Manchester
- Equity of access for patients across GM
- Standard practices for raising concerns and feeding back to clinical teams
- Steering groups to support and shape the service including Patient r

enefits of Prehabilitation

For Surgery & Treatment

Shortened and less complex recovery

Potential reduction in **length of stay**

Reduce treatment-related complications

Improve **adherence & completion** of treatment

Potential **reduction in toxicity**

Improved cardiorespiratory function

Reduced impact of **Sarcopenia**

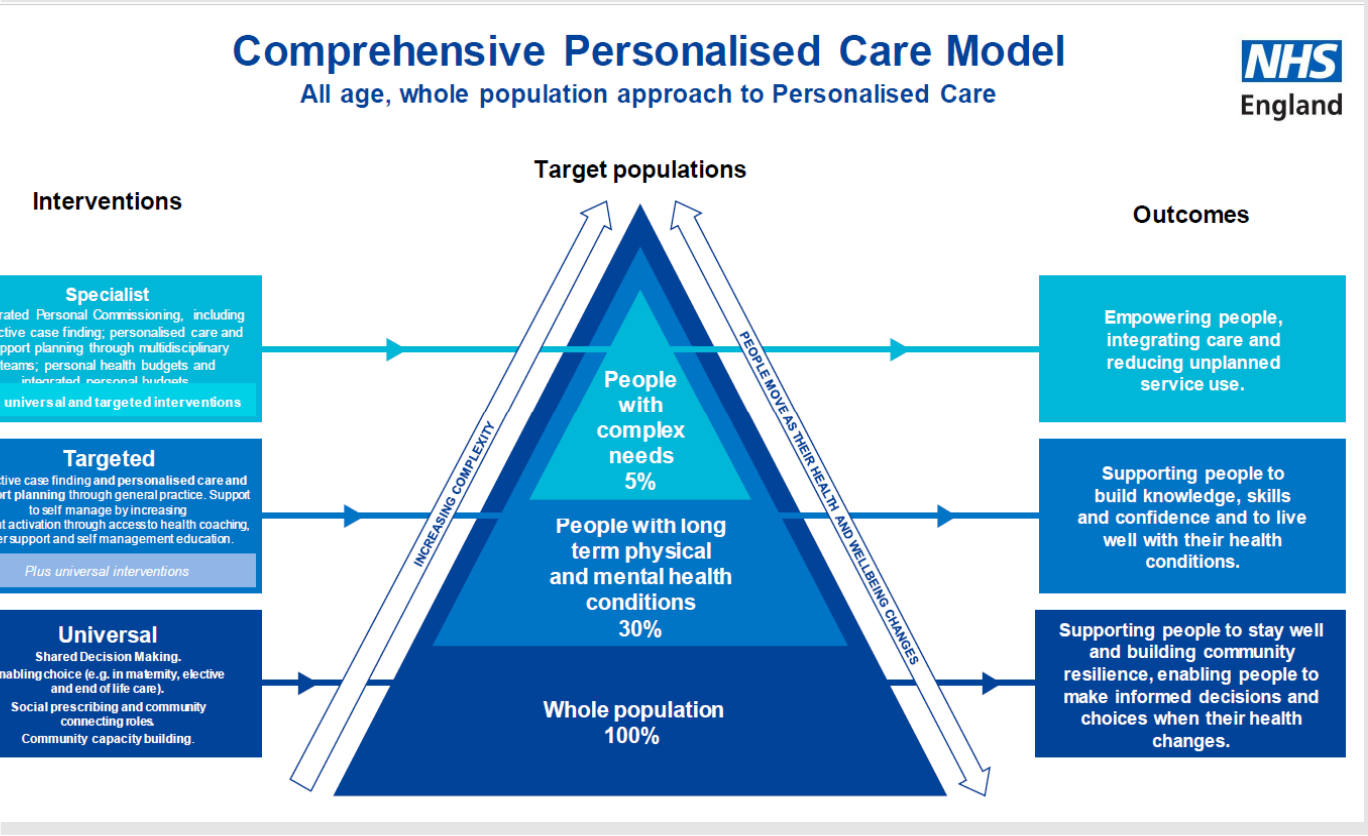
For Longer Term Rehabilitation

- Improved **functional capacity**
- Improved **strength & bone** health
- Improved **Mental wellbeing**
- Improved **confidence** & Self esteem
- Improve aspects of **Neuro-cognitive functi**
- **Transition to lifelong habit of physical acti**
- Reduced risk of **cancer specific mortality**
- Reduced risk of **all-cause mortality**
- Reduced **risk of recurrence**

Whole Systems Approach

- 10 Boroughs
- 10 Councils /Local authorities
- 10 Clinical Commissioning Groups
- 12 Referring Hospitals
- 5 Cancer Hubs
- Specialist AHP Board
- 2 Rapid Diagnostic Centres
- 12 Leisure Providers
- 17 Pathway Board Managers
- 5 Clinical Leads

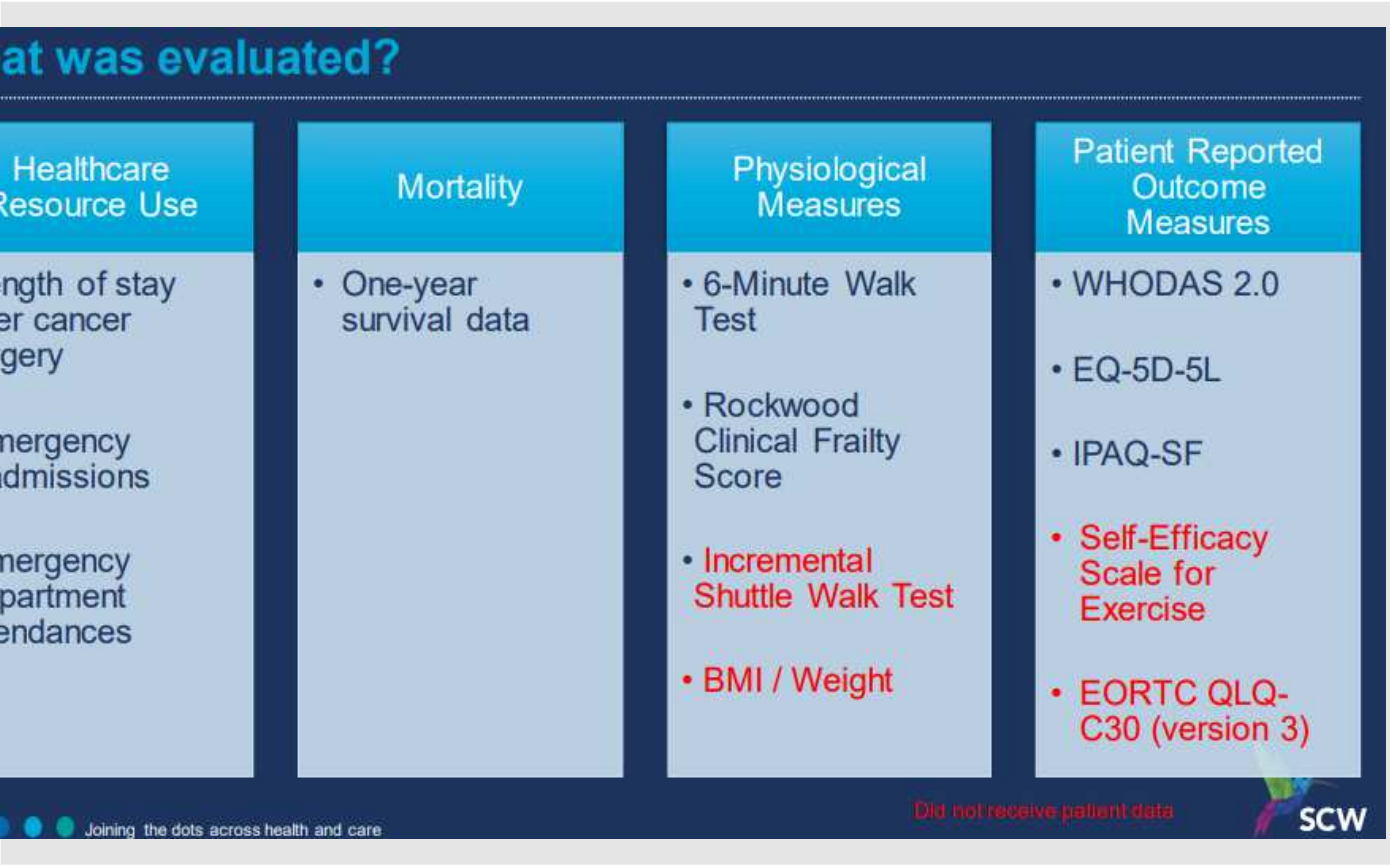
1 Prehab4Cancer Programme



Assessments = Personalisation

- Assessments lead to Personalised care.
- Tailored, person-centred prescription can be created
- The full assessment allows for the patients needs to be met with the correct level of support
- Targeted resources
- Each patients receives an Exercise, Wellbeing & nutritional support package based on needs
- Link with NHS services by replicating the Care Model

Recent Evaluation



- NHS South, Central and West Commissioning Support Unit (SCW) were commissioned to undertake a full independent service evaluation
- P4C assessment data (ReferAll) was matched with Secondary Usage Services (SUS) data and analysed:
  - Healthcare resource use – converted in to cost savings and ROI
  - Mortality Impact
  - Physiological Measures – impacting on clinical outcomes
  - Patient reported outcomes
- Data then compared to legacy set to run comparisons

Health Care Resource Use & Associated Savings (ROI)

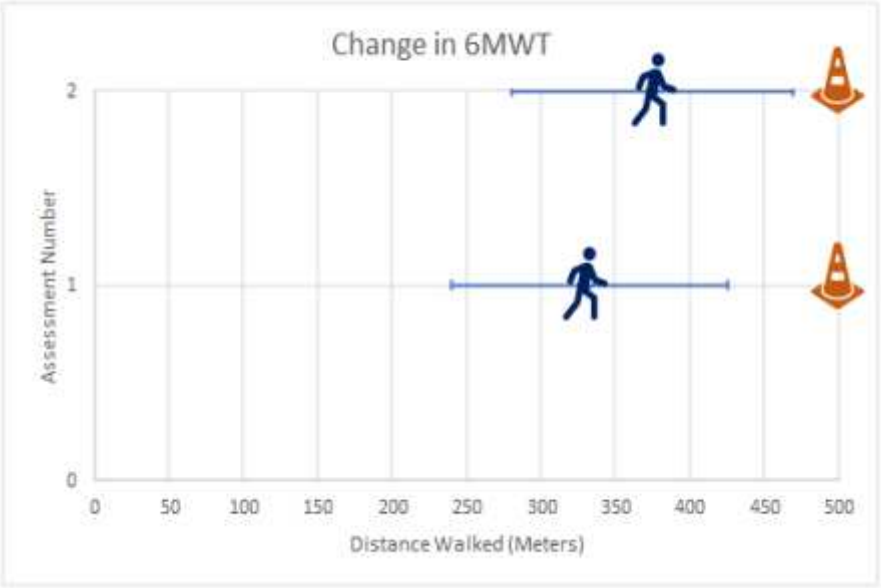
- Reduced Length of Stay by 2 days = 381 bed days saved
- Reduced 30 & 90 emergency readmissions = 35 bed days saved
- Reduced Emergency Department attendances = 6 bed days saved

	Number per Prehab Patient	Value	TOTAL (Based on 1000 participants
Bed Days released	1.5	£342 per day*	£513,000
Critical Care Bed Days released	0.4	£1214 per day*	£485,000
ED Attendances prevented	0.39	£375 per attendance*	£146,250
Emergency Readmissions prevented	0.29	£342 per admission*	£99,180
Estimated Financial Benefit			**£1,244,030**
P4C Programme Delivery Cost	-	£400 per participant	£400,000
Balance			**£844,030**

- **£400 cost per participant to deliver**
- **£1,244 provider efficiencies per patient**
- **Enables the programme to be delivered to a further 2,110 patients**

Mortality Impact & Physiological Measures

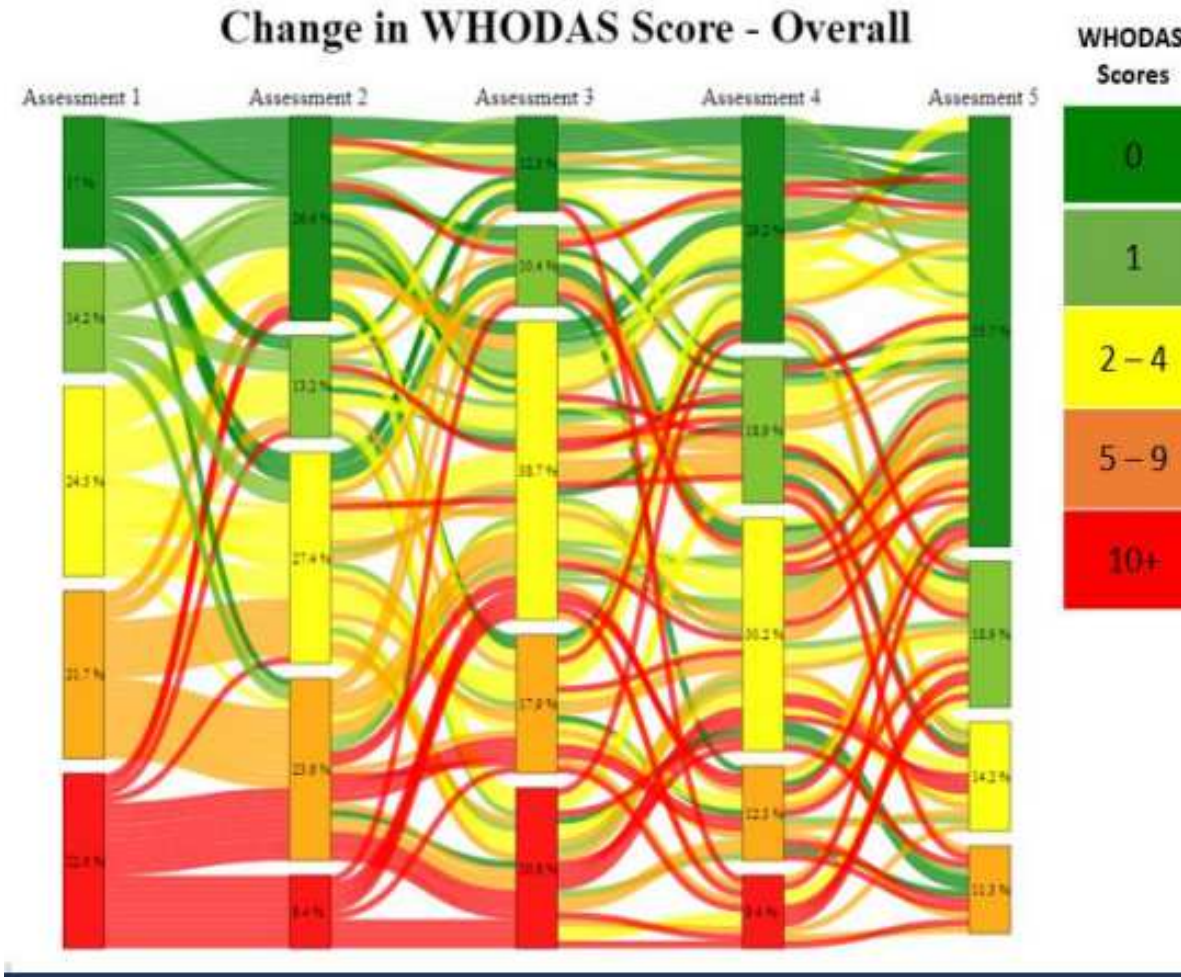
- Clinically significant improvement in 6Minute Walk Test (Functional capacity)
- Clinically significant improvement in lower body strength (Functional Strength)
- Positive association with 1 year survival rates (Up to 5%)



Assessment	Mean score (Metres)	Variation in score (Standard Deviation)
1: Initial P4C Referral	332.63	92.56
2: Pre-op	375.23	94.51
Difference	+42.60m (Significant)	

Patient Reported Outcome Measures

- *Significant (and Sustained) improvement in Self reported Quality of Life Measures
- *Significant reduction in disability level impacted by poor health
- *Significant improvement in self reported health status
- *Significant improvement in health and disability assessment scores

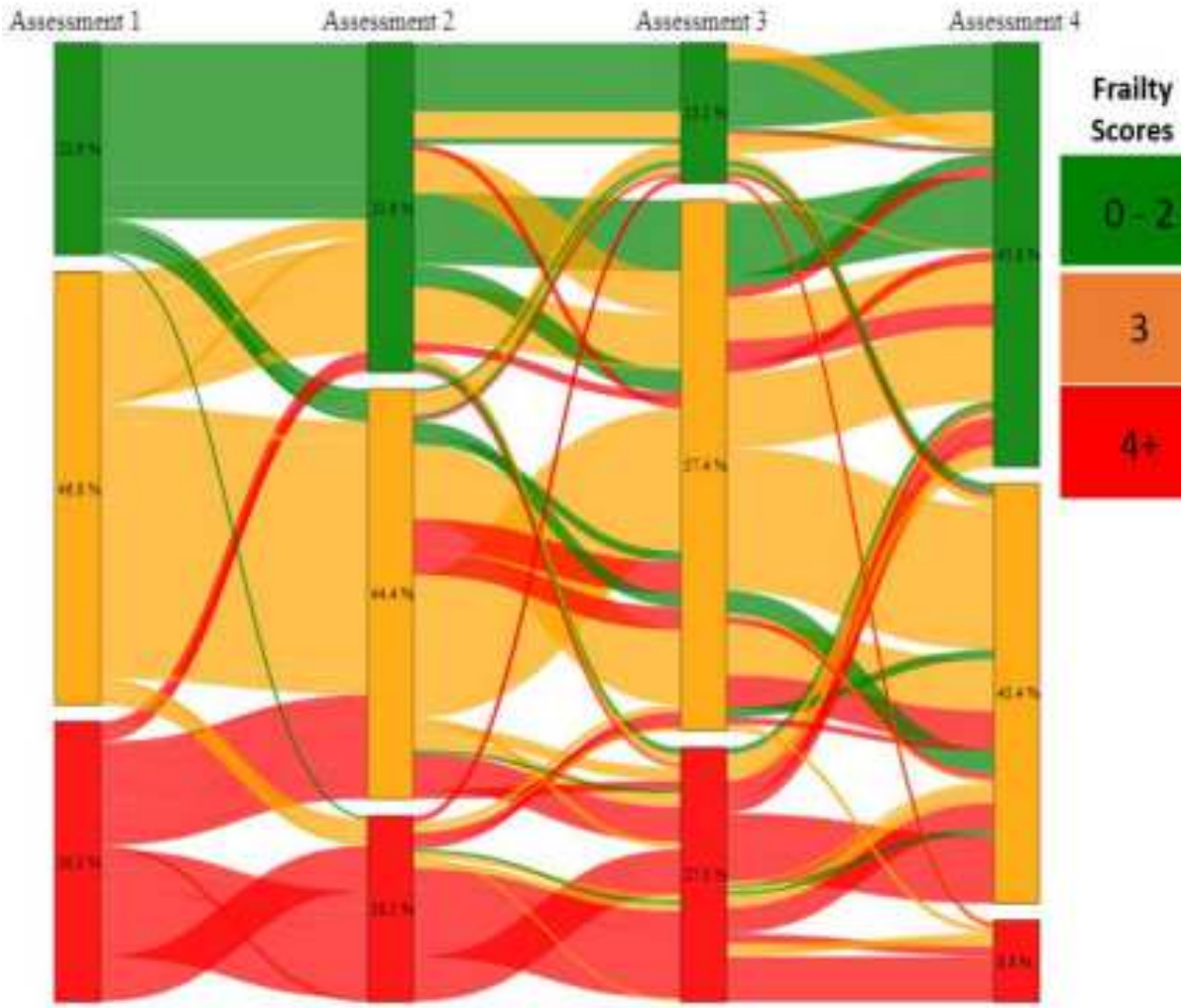


*Indicate statistical significance following data analysis

Rockwood Clinical Frailty Scale

- Significant (and Sustained) reduction in frailty scale
- Less than 10% of patients discharged as ‘Vulnerable’
- Indicates functionality and independence
- Reduces burden on community services

Rockwood Clinical Frailty Scale



Spotlight on Oldham

- 190 Referrals across all hospital trusts
  - 52% referrals direct from Oldham Royal
- 69% Engagement Rate
- 15% Drop out rate
- 48% Targeted arm

Walk test Results

Prehabilitation Phase	Baseline	Pre-Op	Improvement
6MWT	320m	375.1m	+55.1m
ISWT	420m	460m	+40m
Rehabilitation Phase	**Post Op**	**Post-Rehab**	**Improvement**
6MWT	352.6m	407.2m	+54.6m
ISWT	407.6m	470m	+62.4m

Sit to Stand Results

Prehabilitation Phase	Baseline	Pre-Op	Improvement
Sit to stand	23	28	+5
Rehabilitation Phase	**Post-Op**	**Post Rehab**	**Improvement**
Sit to stand	26	36	+10

potlight on Oldham

he World Health Organisation's Disability ssessment Schedule (WHODAS 2.0) easures 6 aspects of functionality:

- Cognition – understanding & communicating
- Mobility– moving & getting around
- Self-care– hygiene, dressing, eating & staying alone
- Getting along– interacting with other people
- Life activities– domestic responsibilities, leisure, work & school
- Participation– joining in community activities

WHODAS – Quality of Life measure

Prehabilitation Phase	Baseline	Pre-Op	Improvement
WHODAS	5.5	2.8	-2.7
Rehabilitation Phase	**Post Op**	**Post Rehab**	**Improvement**
WHODAS	4.6	3.4	-1.2

Self Efficacy – Sustained behaviour change

Prehabilitation Phase	Baseline	Pre-Op	Improvement
Self-Efficacy for Exercise scale	58.1	64.5	+6.4
Prehabilitation Phase	**Post Op**	**Post Rehab**	**Improvement**
Self-Efficacy for Exercise scale	58.4	64	+5.6

Benefits to Patients, Pathways & Systems

Patients are optimised prior to surgery & treatments
Long-lasting health benefits following rehabilitation
Quality of life, physical activity improvements, long-term behaviour change
Improvements to wider health of patient reducing burden or primary care and local health and social care services
Improvements are seen in both ward and critical care bed da usage
Efficiency improvements to pathways
Evidence supports improved survival in patients who complete prehab
Cost-effective

“I just want to say how wonderful this service is. Exercise was to be honest the last thing on my mind when I was diagnosed! However, Sarah explained the importance of exercise and fitness both before and after the operation. This proved lifesaving for me both mentally and physically. It gave me something to focus on before and then when I was discharged from hospital it became a tool to regain my strength and start my new journey.

Unfortunately, I had CDiff when I was in hospital and couldn’t even keep food down etc. I ended up so weak I had to have the rehabilitation team in to provide me with aids to assist my basic daily living. My wound took along time to heal so I had district nurses for over two months visiting me at home. Sarah has kept in contact throughout. She has sent me exercises and a band which I use regularly and talked me through how to gradually build up my strength and mobility. I am now thanks to her constant and enthusiastic contact back up to a level of fitness I was before. I now go for walks in the park and next month will return to the gym. Before I didn’t really enjoy exercise, but Sarah’s approach has altered my perception so much I actually want to exercise because I enjoy it and I am feeling the benefits.

Thank you so much for giving me this opportunity. A Cancer diagnosis is certainly life changing but is also an opportunity to make life changes too