



GM ACTIVE
WE MOVE AS ONE



in Greater Manchester

MANCHESTER
1824

The University
of Manchester



Manchester
Metropolitan
University

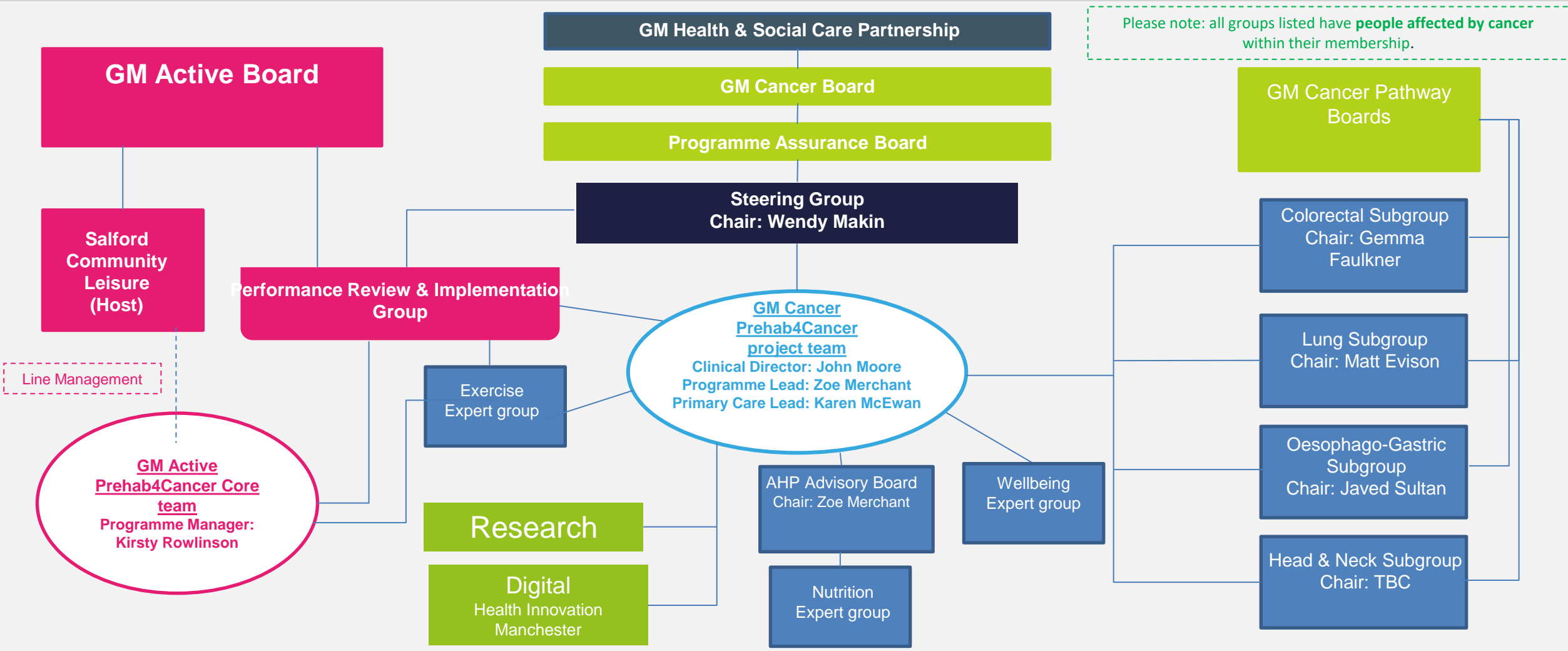


GM Cancer Prehab4Cancer and Recovery programme





Governance Structure



Co-Design & Collaboration at all stages

- The collaborative partnership allows for a regional approach. The programme is delivered across:
 - 10 Boroughs
 - 10 Local authorities
 - 10 CCG's
 - 12 referring hospitals
 - 12 leisure providers
- Interdisciplinary team. Clinically led with specialists in their field delivering the programme. Influenced and steered by people affected by cancer.



The GM Model

- 1st Integrated Care System to provide prehabilitation and rehabilitation for cancer patients at system level – launched April 2019
- Collaboration as **clinically** led (NHS – GM Cancer alliance) & **locally** delivered (Leisure – GM Active)
- 3 Point programme – Exercise, Nutrition, Wellbeing
- Patients referred from MDT to Single Point of Access
- Prehab4Cancer embedded in NHS clinical pathways
- Patients assessed at set time points using validated measures – Personalised Care model
- People Affected By Cancer are key members of the steering group





COMMUNITY BASED PREHAB

2019
System level prehab & rehab
Patient and Healthcare Partnership

Gym – healthcare team developed
80+ facilities
14 evaluation centres





Inspiring healthy lifestyles



Greater Manchester: 2.8 million people, 500 square miles

Hello!

WELCOME!

Thankyou for coming

We want to gain your thoughts on a prehab and recovery programme for patients diagnosed with cancer

What is Prehab anyway?

improve surgery outcomes

I go to communal walking groups or litter picking - there are people here who also have cancer and we understand each other

I enjoyed the gym - especially rowing

I WOULD NEED SOMEONE TO PUSH ME THE RIGHT AMOUNT

GET OUT OF THE HOUSE

Meeting the needs of all GM wide - costs, cultures and gender

No need for expensive sportswear.

NON JUDGEMENTAL



BUDDY SYSTEM

Part of the treatment

Im already suffering from FATIGUE from treatment

Prehab Surgery

JUST WEAR LOOSE CLOTHING

Exercise program me before and after surgery, at a gym, with a cancer - trained fitness instructor - to

If you were back at the start... How would you feel about Prehab?

Keep me involved in decisions - what exercise to avoid fatigue.

Target Setting

I'd want it to come from my oncologist - facts on outcomes for encouragement

Who should you hear it from?

swimming

What if I didn't want to do it?

Rehab



EMOTIONAL BENEFITS

Exercise improves and addresses fatigue

What is important for us to consider?

Prehab4Cancer

BRING WITH SIMILAR PEOPLE IN OR OUT OF THE GYM

It would fill a void before surgery

Yoga techniques helped me to keep in control during my scans

No pass or fails

Amazing nurses

knowing where you're going

WEARABLE DATA

At the end of treatment you feel like you drop off a cliff... this would give me a focus

Make it easy CAN DO!

SPECIALIST CANCER TRAINED PT'S - UNDERSTANDING MY ENERGY, FOOD AND ABILITY

Enjoying what you eat

FAMILY AND FRIENDS accepting who you ARE

Markers

MENTAL HEALTH AND WELLBEING

CONTROL to go further

I'll be feeling like I'm making a contribution to my own wellbeing

LIVING WITH AND BEYOND CANCER

TAI CHI

SUPPORT NETWORK

NUTRITION

SYMPATHY AND TRAINED STAFF

FREQUENCY INTENSITY DURATION



GM Cancer Surgical Pathway Colorectal, Lung and Upper GI Since April 2019 August 2020 – extended to non-surgical Lung curative intent cohorts



MDT decision to operate



GM ACTIVE



ERAS+



GM ACTIVE

90 day hospital length of stay

2 year mortality

⊗ Prehab



⊗ Rehab 12 weeks



Lung Cancer Prehab Pathway

Patient Journey



*Refer eligible patients as early as possible in the pathway, once patient has been informed of the diagnosis of cancer**

Lung cancer with curative intent treatment options including surgical resection and curative intent oncology treatments (SABR, radical radiotherapy chemoradiotherapy)

AND:

1. Performance status 0-2
2. Clinical frailty score ≤5
3. Consultant assessment to confirm suitability for prehab

Include any hospital-based functional testing results with the referral

**The point of referral is ideally after MDT discussion with a confirmed diagnosis of lung cancer & a curative intent treatment plan. Referral can occur earlier if the patient is fully aware of the diagnosis and treatment plan.*

Online Prehab4cancer referral
Provide prehab4cancer leaflet and signpost to website www.prehab4cancer.co.uk

Prehab4cancer assessment clinic
Including functional assessment e.g. shuttle walk test, 6MWT or sit-stand test to help determine prehab pathway**

Prehab

Universal Pathway
Do NOT delay treatment for prehab

Free gym membership/home ex. Programme (HEP)
Nutritional advice/Wellbeing support
Self-managed exercise prescription
Weekly support aiming for 3x HIT

Prehab

Targeted Pathway
Consider a minimum of 9 HIT sessions / 3 weeks prehab prior to treatment

Free gym membership/HEP
Nutritional advice/wellbeing support
Supervised exercise prescription
3x weekly HIT

No Prehab

Not suitable for community prehab

Refer back to hospital team
Consider specialist prehab if available

Treatment

Embedding Prehab/Rehab into NHS cancer pathways:

- COLORECTAL
- LUNG
- OESOPHAGO-GASTRIC

Initially 2 years Cancer Transformation Funding:

2000 patients prehab and rehab
Universal & targeted pathways
From ALL GM Boroughs (& Cheshire)

Recurrent funding now awarded.

Single Point of Access Referral Portal – 48 hour turnaround:

<https://prehab4cancer.co.uk/how-to-refer/>



HOME EXERCISE GUIDE

PATIENT NAME

Contact details for your Exercise Specialist

Name:

Mobile Number:

Email:



Monitoring

EXERCISE INTENSITY

Rate of Perceived Exertion Scale		
10	V.Hard	Feels almost impossible to continue
9	Hard	Not able to maintain for long
8	Challenging	Breathing rate increases, Feel warmer
7		
6	Manageable	Becoming challenging but you can maintain this intensity. Slight increase in breathing
5		
4	Very Easy	
3		
2		The exercise is causing no exertion & no increase in breathing rate
1		

Throughout your home exercise guide, you will notice a section titled "Rate of Perceived Exertion Log". The Rate of Perceived exertion or RPE, is simply how the exercise feels whilst you are performing it. In this section, please record a number that you feel represents the intensity of the exercise based on the prescription provided to you by your exercise specialist. "Record how difficult you thought the exercise was"

Monitoring your RPE (how you feel whilst you are exercising) is an essential tool for your exercise specialist to gauge your progress, so please make every effort to complete this section so that you can feedback the information to the specialist.

Please complete the RPE log with a value that corresponds to the table below.

If you have any trouble with the exercises then please record this in the notes section.



Cardiovascular

CONDITIONING



Standing Marching

Cardiovascular Exercise

Improves health of heart & lungs

Equipment Required: Chair for support

Description: March on the spot, with arms pumping, for the advised amount of time. Alternate your steps. Use support if needed (have a chair in front of you)

Duration	Sets	Repetitions
Rate of Perceived Exertion Log		
Notes		



Side Steps

Cardiovascular Exercise

Improves health of heart & lungs

Equipment Required: Chair

Description: Stand tall with your feet shoulder width apart.

Take a comfortable step out to the side with one leg and then bring the other leg to meet it shoulder width apart. Repeat to the other side.

Duration	Sets	Repetitions
Rate of Perceived Exertion Log		
Notes		



Upper Body

EXERCISES



Bicep Curl

Bicep and brachialis strengthening exercise

Aids lifting and carrying ability

Equipment Required: Resistance Band/ Dumbbell

Description: Anchor band under foot. Lift to shoulders, keep elbows tucked in, slowly return to the start & repeat

Duration	Sets	Repetitions
Rate of Perceived Exertion Log		
Notes		



Tricep Extensions

Deltoid strengthening exercise

Aids lifting ability

Equipment Required: Resistance Band

Description: Position your hands close together and in front of your chest with your elbows raised out to your sides. Slowly extend arms out to your sides. Keep the stretched band at chest level. Hold for 2-3 seconds and slowly return to start position

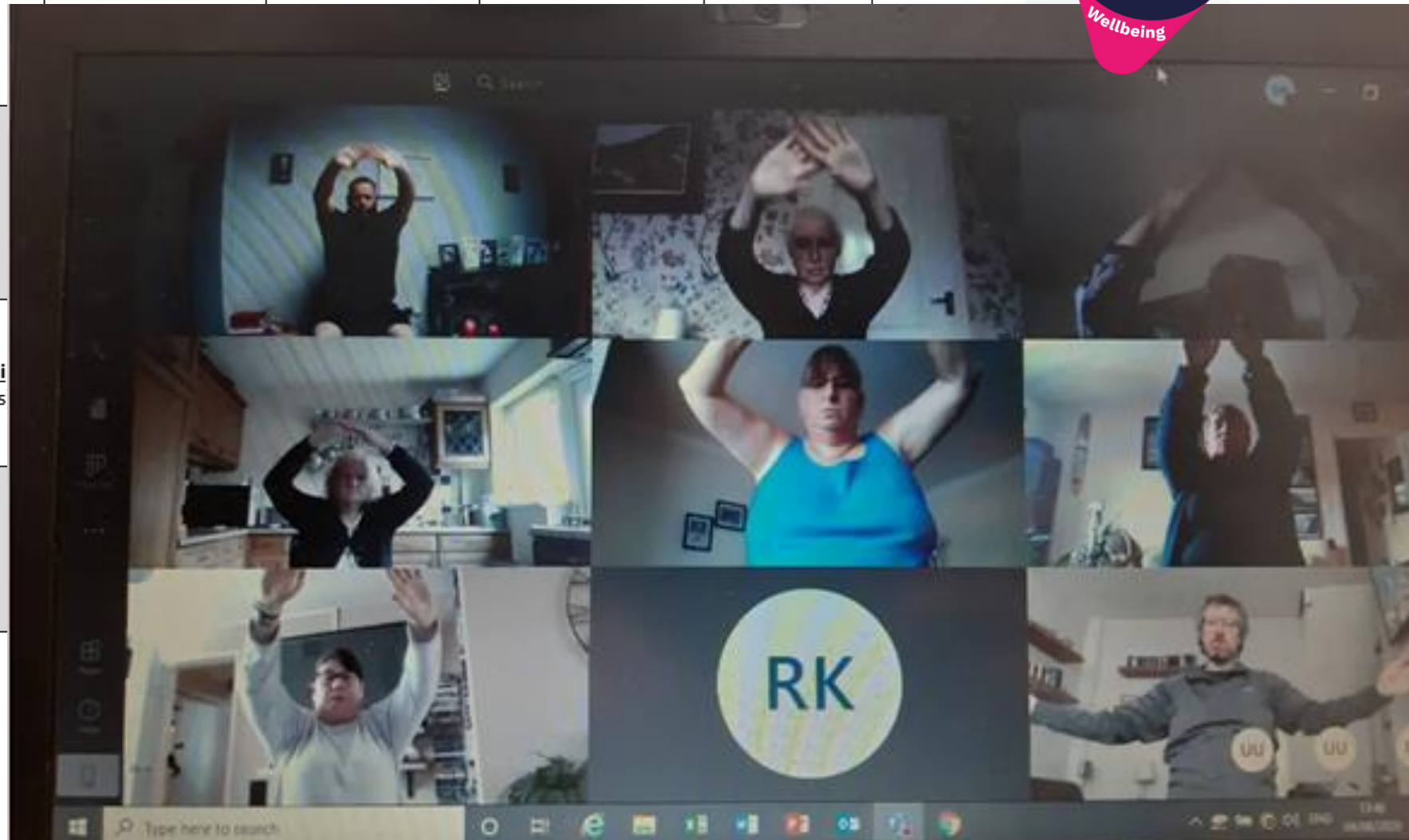
Duration	Sets	Repetitions
Rate of Perceived Exertion Log		
Notes		



Online Live Classes



DAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
SUNRISE 7-7:45am		<u>Rise & Shine</u> Level 1-3				
MORNING All morning classes begin at 10:30-11:30am	<u>Gentle Circuit</u> (Level 1-2 Class) <u>Circuit Class</u> (Level 2-3 class)					
AFTERNOON All Afternoon classes begin at 1:30-2:15pm	<u>CORE Class</u> (Level 2-3 Class)	<u>Seated Tai Chi</u> (Level 1-3 Class)				
EVENING 6:30pm						



Greater Manchester Mayor Andy Burnham



Cancer Research UK, 2021 Prehabilitation resources



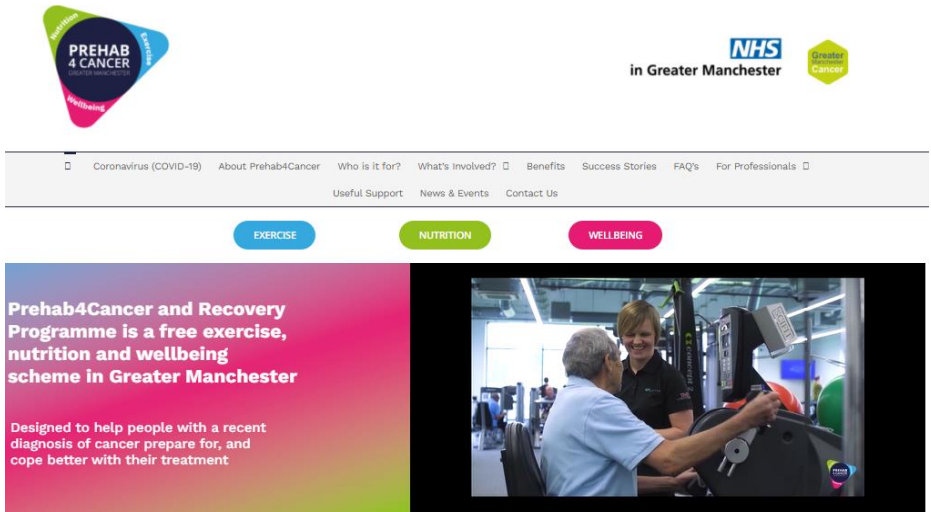
Royal visit from HRH Princess Anne



GM Active Training Academy



70,000 hits on Prehab4Cancer website



Why was an Independent Evaluation required?

- Prehab4Cancer established using GM Cancer Transformation Funding
- First in UK to deliver a system-wide, multi-modal prehab and recovery programme
- A condition of the funding was a continued evaluation process
- SCW were commissioned to undertake an independent evaluation
- Establish impact P4C had on patient outcomes, pathway and service efficiencies

Assessment Clinic Overview



Functional Capacity

- ISWT or 6 Min Walk
- Hand Grip Dynamometry
- 1 Minute Sit to stand

Questionnaires

- EQ5D-5L
- IPAQ
- Self Efficacy Scale
- Rockwood Frailty
- WHODAS 2.0
- EORTCQLQ-C30

Health checks

- Blood pressure
- Height
- Weight
- Resting HR
- Oxygen stats
- PG-SGA

What was evaluated?

Healthcare Resource Use

- Length of stay after cancer surgery
- Emergency readmissions
- Emergency Department attendances

Mortality

- One-year survival data

Physiological Measures

- 6-Minute Walk Test
- Rockwood Clinical Frailty Score

Patient Reported Outcome Measures

- WHODAS 2.0
- EQ-5D-5L
- IPAQ-SF



AGREED WITH COMMISSIONERS

Evaluation Methodology

Prehab4Cancer data

Prehab4Cancer comprehensive dataset: 1534 patients from 24th April 2019 - 13th May 2021

- Physiological assessments
- Patient Reported Outcome Measures (PROMS)

Link to SUS data

Link to Secondary Usage Services data for agreed patient cohorts

Data review

Colorectal, lung and oesophagogastric (OG) surgical procedures.

Cohorts developed

SCW assigned patients to cohorts

(Prehab and Non-Prehab; Pre- and Post-COVID-19; Procedure Risk; CCG; Secondary Care Provider where surgery performed; Agreed List of procedures; Gender, Ethnicity; Age Range)

Confidence levels

Length of Stay calculated with 95% upper and lower confidence limits

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**





Improved Physiological Measures

Trained exercise specialists leading on the exercise prescription has led to:

- **Clinically significant** improvement in 6 Minute Walk Test (Functional capacity)
- **Clinically significant** improvement in lower body strength (Functional Strength)

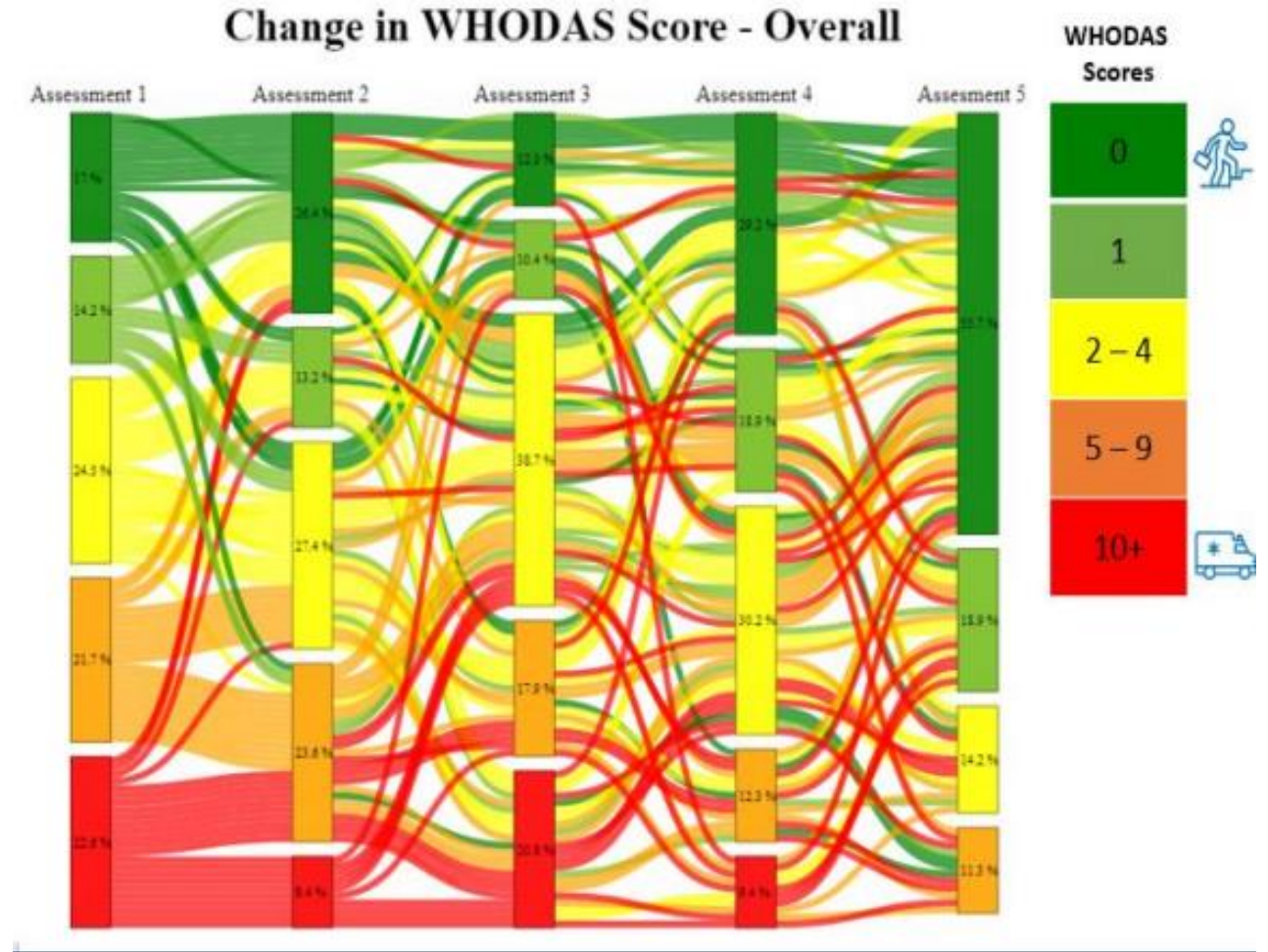
Assessment	Mean score (Metres)	Variation in score (Standard Deviation)
1: Initial P4C Referral	332.63	92.56
2: Pre-op	375.23	94.51
Difference	+42.60m (Significant)	



Improved Function, QoL & Patient Experience

Significant and sustained improvement at 1 year follow up:

- Quality of Life Measures (EORTC-QLQ30; EQ5D)
- **Disability level impacted by poor health (WHODAS)**
- Self Reported health status (EQ5D)
- **Health and disability assessment scores (WHODAS)**
- Clinical frailty scale (Rockwood scale)



One-Year Survival Post-Surgery

Cohorts	Number of Patients		Survival at One-Year Post-Surgery			
	Prehab	Non-Prehab	Prehab	Non-Prehab	Difference (%)	Significance (P-value)
Colorectal	593	1226	578 (97.47%)	1137 (92.74%)	4.73%	0.03246
Lung	358	454	333 (93.02%)	434 (95.59%)	-2.57%	0.110911
OG	93	91	89 (95.70%)	79 (86.81%)	8.89%	0.03246

Colorectal – appeared to be significant improvement completed prehab (97.5% compared to 92.7%)

Lung – there appeared worse survival in the prehab cohort

OG – appeared to be significant survival advantage completed prehab (95.7% compared to 86.8%)

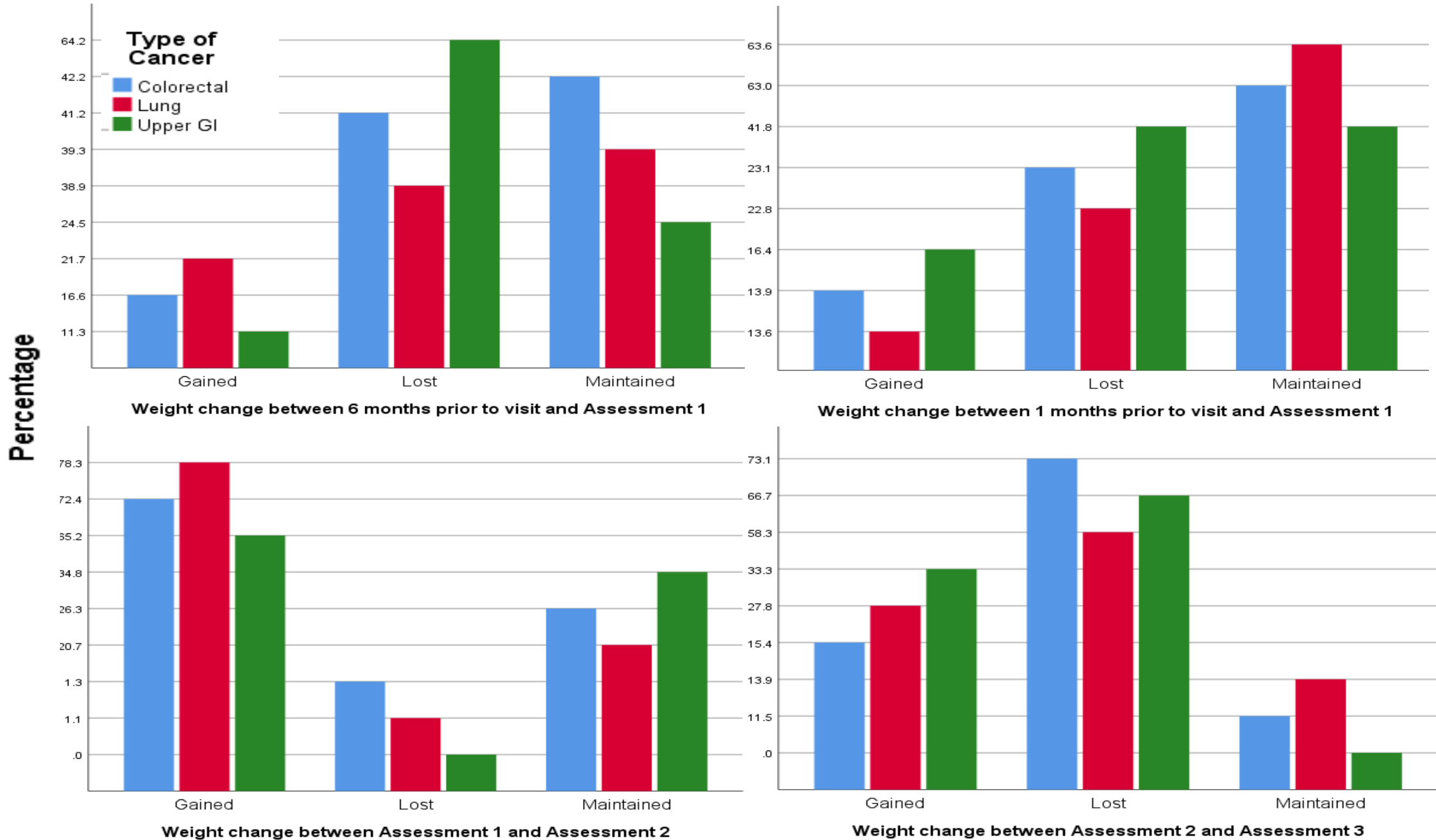
Recommendations to the GM P4C team

1. Embed P4C across other cancer treatments and non-cancer surgery to obtain maximum benefits

2. Use the SCW developed dashboard to enhance the P4C evidence base

3. Utilise learning from COVID-19 to develop a virtual, face to face and blended prehab to rehab offer to maximise effectiveness

4. Ensure equity of access to the P4C programme





UoM P4C Acceptability study

Dr Rachael Powell (Health Psychologist), Zoe Merchant (OT), Kirsty Rowlinson-Groves, Dr John Moore, Dr David French (Health Psychologist)



How do patients undergoing surgery for cancer perceive the GM Cancer Prehab4Cancer and Recovery programme? **Single, semi-structured interviews conducted by telephone call with cancer patients referred into the Prehab4Cancer service – participants & non-participants.** *Thematic Analysis – Framework approach (Ritchie & Spencer, 1994)*

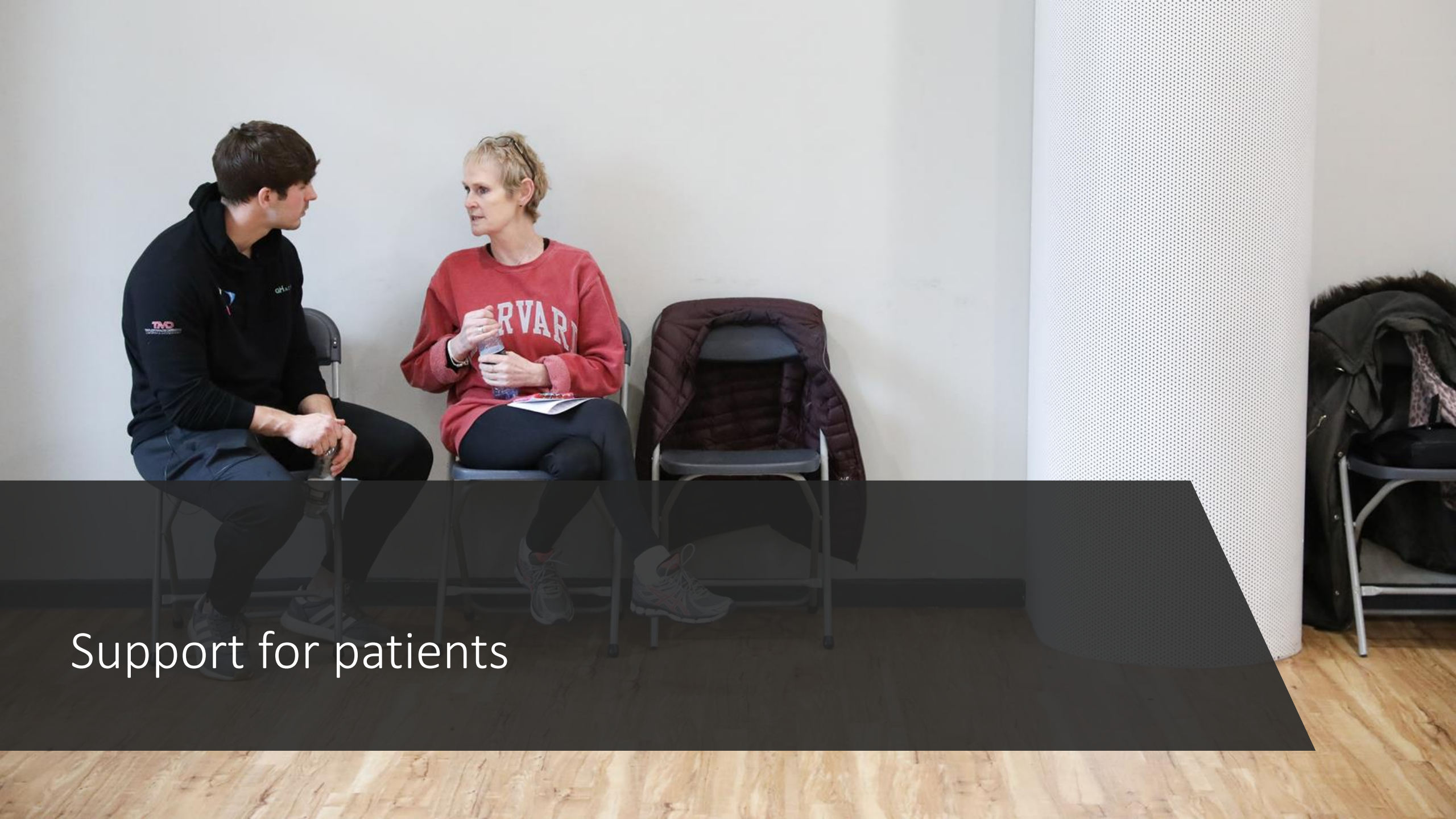
How do health professionals involved in referring patients to the GM Cancer Prehab4Cancer and Recovery programme perceive the programme? **Anonymous, web-based survey containing open-ended questions.**



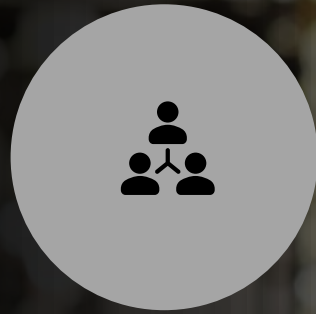
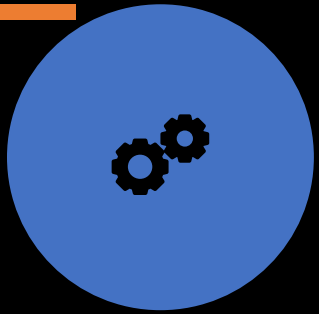
Initial salient findings:

- Transport **ALWAYS** a major consideration of acceptability
- Psychosocial support **KEY**: regular contact from P4C team throughout cancer pathway, more so than clinical teams particularly during pandemic
 - **Prehabilitation ACCEPTABLE.**

- Need to target non P4C participants and patients from lower SES areas, as well as P4C team members for further study



Support for patients



Acceptable

Performance

Outcomes

>2000
patients

Patients
get fitter
and
stronger

Less time
in hospital

Better
QOL





“When I first went I thought, what the bloody hell am I doing here, I must be mad”

“Having a diagnosis of a life threatening illness made me feel I had to do it”

“When I’ve been feeling really low I can concentrate on my wellbeing at the gym – made me feel better about myself”

“Being part of the programme has made me think about my health”

“What would you say to someone else who was just starting on the programme?”

“Gym can feel intimidating so went as a group the first time”

“I’m in a better position for treatment”

“It’s had a positive impact on my post op complications”

“Surgeons said I had to get fitter and put weight on or I would be dead, so it was a no brainer!”

“Mentally it has done us really well. It gets you out of the house. Seeing the same people in the group was good for me”

“I was told we’re going to get you fitter to get you out of hospital quicker, that was all the motivation I needed”

“Trainer gives us confidence”

“Did you want to take part?”

“People in hospital at the same time as me who’d not been through the programme struggled to get out of bed”

“How did you feel it went, what did you enjoy, was it better or worse than you expected, were you surprised and was there anything you didn’t like?”

“I’m better able to face surgery”

“If it wasn’t for prehab I wouldn’t have been able to have the op – I failed the shuttle test”

“I see this as part of my treatment”

“I was very weak after the op – the trainer took it slowly”

“The gym gave me a focus and I felt in control”

“It’s helping me with my chemo – I come the day before I have chemo and I feel better”

“It was great that there were 3 different gyms available for me to use”

“I was better able to cope with cancer and the treatment”

“Do it – don’t be frightened”

“Going to the sessions gave me confidence and a purpose”

“The advice was well balanced, including ‘don’t do too much!’”

“Prehab helped me to leave hospital early”

“How did you feel about coming back to the Rehab phase?”

“I had no doubts about taking part, the trainer knew her stuff”

“Has prehab had helped you during and after treatment?”

“I feel stronger and have less fatigue”

“If you weren’t offered prehab would you have gone to the gym?”

“prehab better than expected”

“It was important the health centre was near to where I live”

“Do it at your own pace”

“Getting the phone call from the trainer was important as I had enough appointments to go to.”

“I didn’t need any convincing to go once I’d been told about how it would impact my treatment and recovery”

“Tailoring the program to my needs important – giving me home exercises”

One person responded yes, the rest said no!



Achieving World Class Outcomes

Psycho-Social Support

Functional Recovery

Cancer Survivorship

NHS
in Greater Manchester

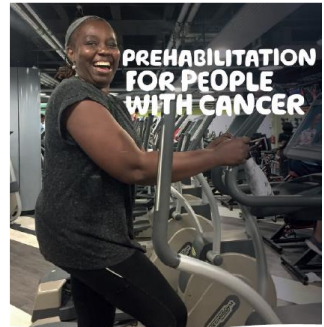


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NHS
in Greater Manchester

ACKNOWLEDGEMENTS



Principles and guidance for prehabilitation within the management and support of people with cancer

In partnership with
NIHR | | | **MACMILLAN CANCER SUPPORT**
RIGHT THERE WITH YOU

