Health Innovation East

NHS
Bedfordshire, Luton and Milton Keynes
Integrated Care Board

Bedfordshire, Luton and Milton Keynes (BLMK) Cancer (P)rehabilitation Evaluation report

COMMISSIONED BY BLMK INTEGRATED CARE BOARD (ICB)

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Part of the Health Innovation Network
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Executive summary

Background

The impact of a cancer diagnosis and treatment may extend many years after treatment has finished. This can have a significant impact on a person's physical and mental health. Cancer (P)rehabilitation is reported to have many health benefits for patients and their quality of life during and after cancer diagnosis, irrespective of cancer type or stage (1-4).

Bedfordshire, Luton and Milton Keynes (BLMK) Integrated Care Board (ICB) funded any willing personal trainers working in BLMK, between 2019 to 2025, to attend Level 4 Cancer (P)rehabilitation training. The Cancer (P)rehabilitation programme across BLMK aims to improve patients' recovery and outcomes, whether they are undergoing surgery, chemotherapy, radiotherapy or receiving no active treatment.

BLMK ICB commissioned Health Innovation East to conduct a five-month evaluation to assess engagement with the Cancer (P)rehabilitation programme across BLMK, and what impact the programme had on patients' outcomes and quality of life. The evaluation also sought to explore determinants of personal trainer attrition and whether there could be a role for innovation in delivering the Cancer (P)rehabilitation programme.

Methods

A mixed methods evaluation was conducted between August 2024 to March 2025. An online survey was used to collect data from cancer patients and clinicians across BLMK, irrespective of their engagement with the BLMK Cancer (P)rehabilitation service. Semi-structured interviews were conducted with personal trainers delivering the programme in BLMK and aggregated provider data from personal trainers was also sought. An innovation horizon scan was undertaken to identify suitable digital innovations to support service delivery.

Findings

Physical, mental and social benefits of the programme were reported unanimously by clinicians, patients and personal trainers. However it was apparent that survey respondents lacked awareness of the programme prior to this evaluation. Patients and clinicians reported that there should be better awareness of the Cancer (P)rehabilitation programme for more patients to benefit from the service. The survey and personal trainer interviews indicated that younger cancer patients (<45 years) were less likely to engage with the service. The data

suggests that older age groups were more likely to engage with the Cancer(P)rehabilitation sessions. There was agreement across all participant groups that digital innovations could improve and increase accessibility of Cancer (P)rehabilitation more widely. The innovation horizon scan identified six possible innovations that met the horizon scan brief.

Recommendations

Recommendations for improving delivery of the Cancer (P)rehabilitation were:

1. Increase access to the service for more patients. Cancer (P)rehabilitation delivered via a digital innovation may improve access for potentially underserved groups
2. Ensure consistent and regular data collection and feedback to measure impact
3. Provide formal emotional support mechanisms for personal trainers
4. Continued professional development and financial recognition for personal trainers
5. Further engagement with diverse communities is needed to explore barriers and enablers of engaging with Cancer (P)rehabilitation.

Background

Cancer survival rates have improved over time and overall one-year cancer survival rates were reported to be 74.6% in 2023 (5). The impact of cancer and cancer treatments on a person's physical and psychological health may extend far beyond the treatment period itself (6). Cancer rehabilitation has demonstrated many benefits for patients and is important for patients' quality of life during and after cancer diagnosis, regardless of cancer type or stage (1).

There are various forms of Cancer (P)rehabilitation implemented across NHS Trusts in England. Whilst not yet evaluated, the James Paget University Hospital implemented a digital app developed by Careology, to deliver a Prehabilitation programme including exercise, diet and nutrition advice, smoking and alcohol cessation support and mental wellbeing support to patients newly diagnosed with colorectal cancer to prepare for their treatment (3, 4). The Greater Manchester Prehab4Cancer programme was designed to improve post-operative outcomes for cancer patients undergoing colorectal, lung and oesophago-gastric cancer surgery (2). The NHS South, Central and West Commissioning Support Unit evaluated the Greater Manchester Prehab4Cancer programme to assess its impact on patient outcomes, and service efficiencies. The evaluation reported improved patients' health and quality of life before and after surgery, increased survival rates, reduced readmission or A&E admission, and lower demand on healthcare services (2).

Bedfordshire, Luton and Milton Keynes (BLMK) Integrated Care Board (ICB) have supported delivery of the Cancer (P)rehabilitation programme across the BLMK integrated care system for five years. BLMK ICB funds training for personal trainers to complete the Level 4 Cancer (P)rehabilitation qualification via The Wright Foundation, which equips personal trainers in supporting patients living with cancer. Any personal trainer in BLMK is eligible to receive the training, whether they are employed or self-employed. The BLMK Cancer (P)rehabilitation programme supports the physical and mental health of patients throughout their cancer journey. The programme aims to improve patients' recovery and outcomes, whether they are undergoing surgery, chemotherapy, radiotherapy or receiving no active treatment. To date, twelve personal trainers have achieved the qualification across eight providers in BLMK.

Patients can access any training provider across BLMK (Table 1 below), regardless of their own geographical location. However at the time of this evaluation, there were no personal trainers trained in Milton Keynes. There is no uniformity in how training providers deliver Cancer (P)rehabilitation or in how much they charge patients for attending sessions. The Cancer

(P)rehabilitation programme is currently delivered by the following eight providers across BLMK:

TABLE 1. DETAILS OF TRAINING PROVIDERS AND THE COST OF THEIR SESSIONS FOR CANCER (P)REHABILITATION SERVICES IN BLMK

Provider	Session cost	Referral route
The University of Bedfordshire	Free	Consultant
Sharnbrook Community Sports Centre	£3.50	Oncologist
John Bunyan Sports and Fitness	£3.50	Any health professional
Saxon Pool and Leisure Centre	£4.50	GP
Total Wellbeing – Lea Manor Recreation Centre	£3.50	Any health professional
Total Wellbeing – Lewsey Sports Park	£3.50	Any health professional
Total Wellbeing – Inspire: Luton Sports Park	£3.50	Any health professional
Total Wellbeing – Hightown Centre	£3.50	Any health professional

BLMK ICB commissioned Health Innovation East to evaluate the uptake and adoption of the Cancer (P)rehabilitation programme across the BLMK integrated care system, assess its impact on patient outcomes, and explore patient and staff experiences of the programme. Findings and recommendations from the five-month evaluation are intended to inform service improvement and any future implementation of innovations delivering Cancer (P)rehabilitation across the BLMK integrated care system.

Aims

The evaluation aimed to assess how the Cancer (P)rehabilitation programme was engaged with across BLMK, and what impact the programme had on patients' outcomes and quality of life. The evaluation also sought to explore determinants of personal trainer attrition and whether there could be a role for innovation in delivering the Cancer (P)rehabilitation programme. Specifically, the evaluation aimed to address the following objectives:

1. To assess how cancer patients use and engage with the Cancer (P)rehabilitation programme.
2. To assess the impact of the Cancer (P)rehabilitation programme on patient outcomes and quality of life.
3. To explore the acceptability, usability, and user experience of the Cancer (P)rehabilitation programme.

4. To explore the high attrition of personal trainers involved in delivering Cancer (P)rehabilitation.
5. To identify recommendations to improve the Cancer (P)rehabilitation programme.

Methods

This mixed-methods evaluation was conducted between August 2024 to March 2025.

Participant recruitment

Three groups of participants were eligible to take part in the evaluation:

- Any patient ever diagnosed with cancer in BLMK
- Clinicians working in BLMK responsible for referring cancer patients to Cancer (P)rehabilitation
- Personal trainers in BLMK delivering Cancer (P)rehabilitation

Stakeholder engagement

To raise awareness of this evaluation and promote opportunities for eligible groups to participate, the Evaluation Team attended cancer engagement events and facilitated webinars.

The Team presented plans for the proposed evaluation at the BLMK Cancer Board in August 2024 to seek wider stakeholder feedback into the evaluation plan. There was agreement from the Board to deliver the evaluation as proposed and a service user diagnosed with cancer offered to contribute to the survey design.

The Team hosted two online engagement sessions and invited personal trainers and clinicians across BLMK to attend and learn about the evaluation and opportunities to participate. The Evaluation Team attended an in-person Cancer event in Flitwick in September 2024, organised by the ICB, which clinicians and personal trainers from across BLMK were invited to attend. The Team used this opportunity to raise awareness of the evaluation and to create a mailing list of interested potential participants for survey dissemination. The Team were also invited to a hospice in BLMK to share the evaluation opportunity further.

Data collection

Data collection for this evaluation comprised a survey disseminated to patients and clinicians, and semi-structured interviews involving personal trainers.

Patient and clinician survey

An online survey was used to collect data from clinicians who were responsible for referring patients to the Cancer (P)rehabilitation programme, as well as anyone who identified as ever being diagnosed with cancer and living in BLMK.

The survey questions and multiple choice options were designed by collating input from a service user with the existing literature reporting impacts of Cancer (P)rehabilitation. The survey asked questions relating to:

- patients' demographics and health
- patients' and clinicians' awareness of the Cancer (P)rehabilitation offer in BLMK
- how patients access the service
- how clinicians refer patients into the service
- what impact the service has on cancer patients' physical and mental wellbeing and quality of life
- how the current service could be improved

Patients' quality of life was assessed using the EQ-5D-5L (7) which enables patients to score themselves on a five-point Likert scale for mobility, self-care, usual activities, pain/discomfort and anxiety/depression, as well as self-reporting a measure of their health today on a scale of zero to 100 (7). The survey was initially drafted in a Microsoft Word document and subsequently transferred to an online survey platform for data collection (Zoho One) (8). Patient input and feedback was sought before data collection started: the draft version of the survey was shared with a cancer patient who had engaged with BLMK's Cancer (P)rehabilitation, inviting them to share their comments and feedback. Following this important feedback, the question relating to ongoing cancer treatment was amended, to allow respondents to specify the treatment being received, as this may vary between patients.

The survey contained a combination of up to 49 multiple choice, Likert scale and open questions for patients and up to 11 questions for clinicians. Survey logic was used to guide respondents through relevant elements of the survey, depending on their responses. The online survey link was distributed electronically via BLMK cancer community connectors, cancer patient support groups, cancer networks, the ICB cancer board meetings, clinicians, the ICB Transformation Manager for cancer, and the personal trainers delivering Cancer (P)rehabilitation. Survey respondents were required to read the terms and conditions and confirm they understood and agreed with how their data would be used prior to completing the survey. Survey respondents were also informed that Health Innovation East would donate £1 for every patient who completed the survey in full to the Henry Allen Trust, up to a maximum of £100.

Training provider data

Anonymised and aggregated data from existing training provider databases were requested from Cancer (P)rehabilitation personal trainers, to supplement quantitative and qualitative data collected via the surveys and interviews. The data varied between training providers but consisted of number of patients referred into the service, how many training sessions had been attended and demographics of patients who had attended sessions.

Semi-structured interviews

Personal trainers delivering Cancer (P)rehabilitation in BLMK were invited to participate in semi-structured interviews to discuss their experiences of delivering the service and any recommendations they had for improving the service. All personal trainers had received specialist Level 4 Cancer (P)rehabilitation training via The Wright Foundation and had delivered cancer prehabilitation and rehabilitation to patients within their role. Personal trainers were recruited between 1st November 2024 and 31st January 2025. Potential participants were identified by the commissioner and invited via email, including a Participant Information Sheet (Appendix 1) by a member of the Evaluation Team to attend an interview. If no response was received after a week following the initial interview invitation, a follow-up reminder was sent by email, with a maximum of four reminders sent over a period of two months.

Interviews were conducted online via Microsoft Teams between 1 November 2024 and 31 January 2025. Interviews were video and audio-recorded and lasted approximately 60 minutes in total, using an exploratory topic guide (Appendix 2). On completion of the interview, the video recording was converted to MP3 format using VLC 3.0.21 (9) and saved in the Data Storage Area (restricted access) of Health Innovation East's SharePoint. The video recording was then deleted and the interview transcript generated by Microsoft Teams checked against the audio recording, de-identified, and imported into NVivo version 14.23.3 software (10), to organise the data.

Innovation horizon scan

The Commercial Team from Health Innovation East conducted a horizon scan of potentially suitable innovations for delivering Cancer (P)rehabilitation using the criteria below*:*

TABLE 2. HORIZON SCAN SEARCH CRITERIA

Search criteria	• Self-management • Patient education • Cancer • Pain management • Physical activity • Prehabilitation • Mental health
Stage of innovation maturity	• Market ready • Adoption and spread ready

Whilst the horizon scan specification requested an app that provided health information, symptom management and exercise and nutrition monitoring for cancer, it was considered acceptable to include apps which may be focussed on other long-term conditions which may be transferable to Cancer (P)rehabilitation.

Analysis

Quantitative survey data and aggregated training provider data were analysed descriptively using Microsoft Excel and Power Bi. Qualitative analysis was initially approached deductively, using a coding framework developed from the interview topic guide. Interview transcripts were then analysed independently by two researchers using inductive, thematic analysis (11). Data were organised using NVivo version 14.23.3 software (10).

Ethical approval

The protocol was reviewed by the Decision Panel Advisors at NHS Health Research Authority (HRA) alongside a PDF of the results page of the HRA decision tool (12) to determine whether the evaluation required ethical approval. The advisors decided on 19th September 2024 that the project did not require review by an NHS Research Ethics Committee or HRA as it was considered a service evaluation.

Findings

Findings from the clinician and patient survey, along with personal trainer interviews are presented below. The results of the innovation horizon scan are also presented.

Participant characteristics

Patient demographics

From across BLMK, forty eight patients completed the survey, of which the majority were female (66.7%). The majority of respondents were aged 45-84 years with only one respondent reporting to be aged 25-34 years. Survey respondents reported being predominantly from the White ethnic group (91.67%), whilst two respondents reported being from the Asian ethnic group, one respondent reported being from the Mixed ethnic group and one respondent reported being from the Other ethnic group. A breakdown of this demographic data is provided in Appendix 3.

Survey respondent (patients) geographical mapping

There was a spread of survey respondents living across BLMK with a range of 23 postcodes being reported. The majority of survey respondents reported being from MK43 (n=8) (Figure 1.)

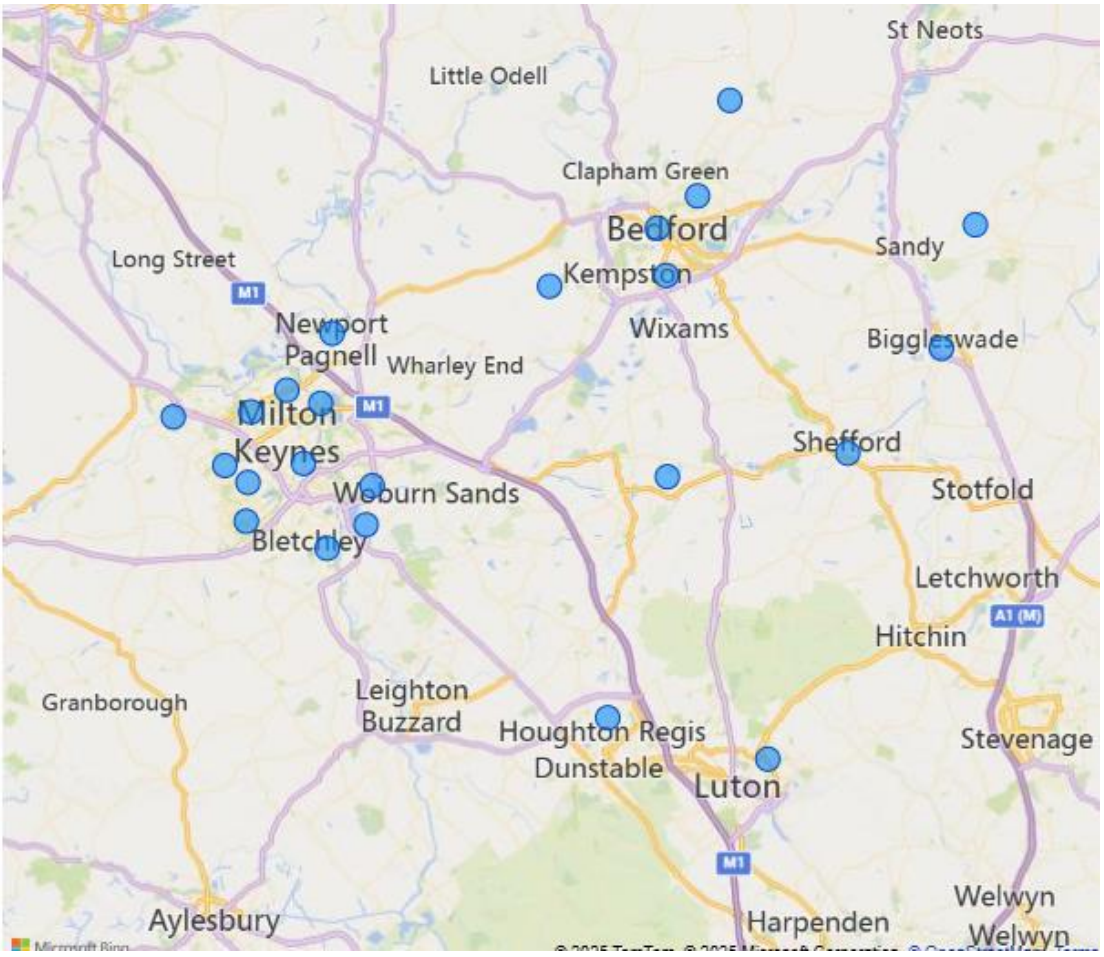

FIGURE 1: POSTCODE MAPPING OF SURVEY RESPONDENTS (N=48)

Patients' cancer diagnoses

All respondents had previously been diagnosed with cancer and for 68.8% (n=33) this was their first diagnosis, but for 22.9% (n=11) it was their second diagnosis, for 6.2% (n=3) it was their third diagnosis and for 2% (n=1) they had received more than three diagnoses of cancer. The most common types of cancer patients had been diagnosed with was gynaecological (39.6%), followed by haematologic (22.9%) then genitourinary (16.7%). Seven patients (14.6%) had been diagnosed with multiple types of cancer.

Patients' treatment histories

The majority of patients who were diagnosed with Stage 1 (29.17%) or Stage 2 (22.92%) cancer had received chemotherapy (40%), cancer medication (40%) and/or immunotherapy (35%) to treat their cancer. Over half of survey respondents were receiving ongoing treatment (41.7%) or had finished treatment within the last six months (18.8%) with 16.7% having finished treatment between one and five years ago and a further 16.7% finishing more than five years ago. One person (2%) had stopped all treatment due to side effects and 4.2% had not received treatment for their cancer. Two-thirds of patients (64.6%) had undergone surgery for their cancer with the median length of stay in hospital being 2.5 days but ranging between day surgery and an 8-day stay.

Personal trainers

Seven personal trainers were identified by the BLMK ICB Cancer Transformation Manager. The evaluation team contacted the seven potential participants and invited them to interview. Four out of the seven potential participants provided written consent for their participation. The evaluation team experienced challenges recruiting personal trainers and some responses from personal trainers indicated that this was due to workload and capacity issues. Four personal trainers participated in interviews. Digital written consents were completed by all participants prior to interviews and consent was verbally confirmed at the start of each interview.

All personal trainers who participated in interviews for this evaluation were female. Three were employed and one was self-employed. Three of the trainers were based in Bedfordshire and one was based in Luton. All reported being in role for approximately two years or longer. All trainers delivered Cancer (P)rehabilitation alongside other programmes and/or commitments. The number of sessions delivered per week varied considerably due to the trainers' autonomy in how they provided the service. See Table 3 below for further detail.

Training provider data is not routinely and systematically collected across training providers delivering Cancer (P)rehabilitation. Each training provider varied in the number of referrals received, ranging from 5 to 124 referrals. Two training providers provided an activity breakdown of clients attending Cancer (P)rehabilitation sessions, which reported that 12-247 sessions had been delivered and people aged 50-79 years attended these sessions (Appendix 4).

TABLE 3. DESCRIPTION OF CANCER (P)REHABILITATION SESSIONS PROVIDED BY PERSONAL TRAINERS

ID	Reported number of sessions delivered per week
PT001	15 one to one sessions
PT003	2 group sessions
PT004	5 to 10 mixed group sessions
PT005	3 one to one sessions

Qualitative data

Five key themes were identified from the interview data with personal trainers. These were 1) accessibility of service, 2) patient benefits, 3) barriers to engagement, 4) enablers to engagement, and 5) possible reasons for personal trainer attrition. The overarching themes and their associated sub-themes are described in Table 4, below. Each theme is presented in further detail in the following section, organised by evaluation objective.

TABLE 4. OVERALL STRUCTURE OF KEY THEMES AND SUB THEMES

Key themes	Sub-theme(s)
Accessibility of service	Access
	Location, transport and travel
	Referral routes
	Cost
	Awareness

Patient benefits	Patient Empowerment Mental health Physical health Social connection
Barriers to engagement	Physical health Mental health Patient identity
Enablers to engagement	Delivery environment Flexibility and accommodation of personal trainer Patient commitment and accountability
Possible reasons for personal trainer attrition	Emotional burden and lack of emotional support Financial security Training and professional development Characteristics of the personal trainers

How do cancer patients use and engage with the Cancer (P)rehabilitation programme?

Patients' perspective

Only six out of 46 survey respondents were aware of the Cancer (P)rehabilitation programme, with only four survey respondents reporting having ever engaged with the programme. Of those six survey respondents, only four patients became aware of the programme from their specialist cancer nurse whilst the other two respondents became aware of the programme through a patient support forum/group. It should be noted that the majority of survey respondents lived in Milton Keynes where there is currently no Cancer (P)rehabilitation being delivered.

Of the four patients who had engaged with the programme, poor physical health, including reduced confidence with mobility, muscle and weight loss, were the main reasons cited for attending Cancer (P)rehabilitation sessions. Respondents also cited reasons such as meeting other cancer patients, poor mental health, ability to travel and cost of the sessions as reasons for engaging.

All four respondents attended Cancer (P)rehabilitation sessions on weekdays and two of the four respondents had attended more than five sessions. All respondents reported receiving a tailored physical activity programme (n=4), whilst some respondents reported receiving gym access, swimming, yoga, Pilates and circuit training.

Clinicians' perspective

It is not known how many clinicians are eligible to refer patients to Cancer (P)rehabilitation across BLMK. However, out of the nine clinicians who completed the survey, only three had experience of referring patients to Cancer (P)rehabilitation. All clinicians considered patients' level of physical activity and their willingness to engage with the programme before making referrals. Clinicians were also likely to consider patients' requests for Cancer (P)rehabilitation referrals, along with perceived patient benefit and their assessment of how well a patient may engage with the sessions (Figure 2).

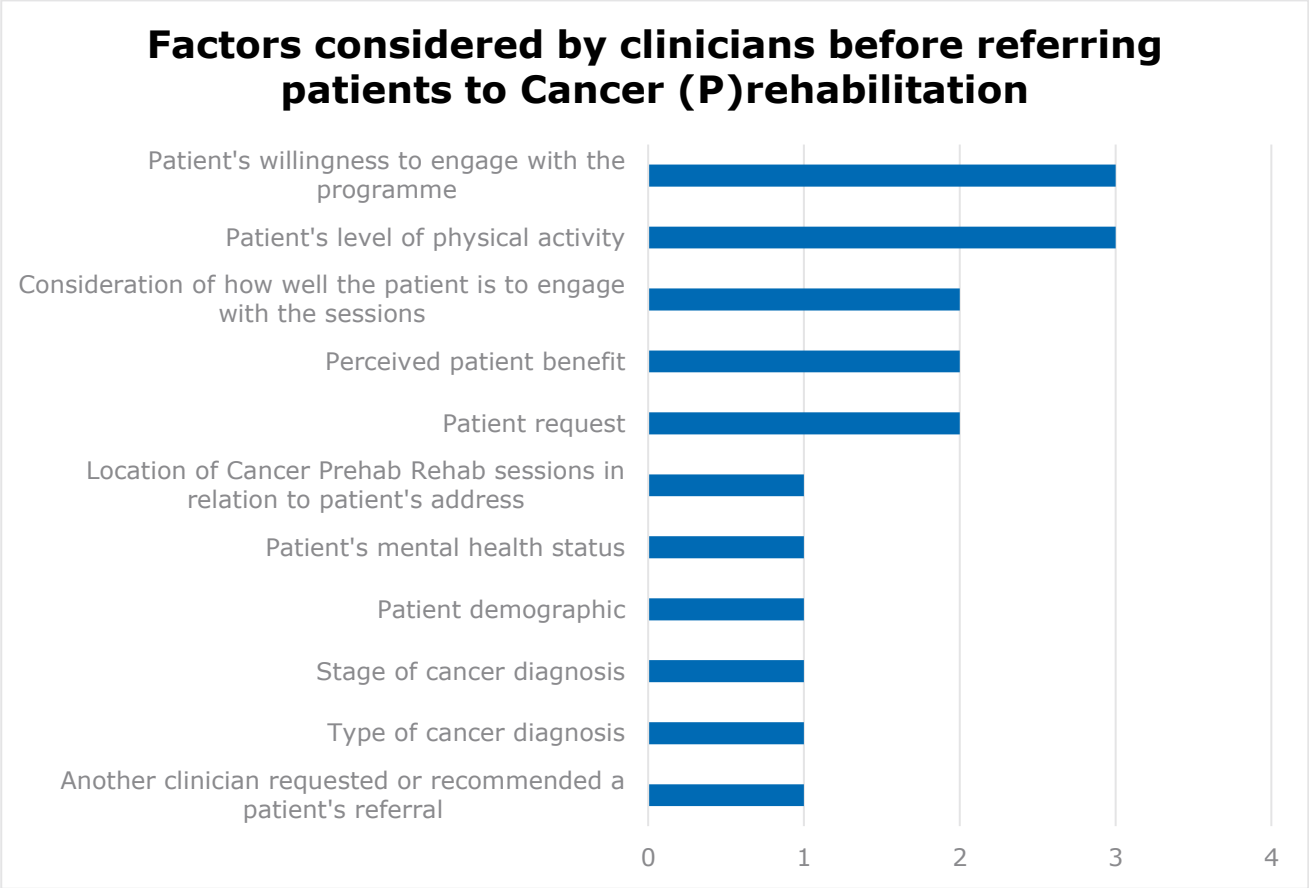

FIGURE 2: FACTORS CONSIDERED BY CLINICIANS BEFORE MAKING REFERRALS

Clinicians gave reasons for not referring patients to Cancer (P)rehabilitation as lacking awareness of the location of training sessions, lacking the time to discuss the programme to patients or being unaware of the programme.

Clinicians advised in their free-text responses that the Cancer (P)rehabilitation is a great offering and more patients and clinicians need to be made aware of it. One clinician commented on the need for some patients to travel further to attend sessions, which may impact their willingness to engage.

Personal trainers' perspective

A key theme identified from the interviews with personal trainers related to accessibility of the service. Sub-themes of this theme included: referral routes, location, transport and travel, cost, and awareness of the service.

Referral routes

All personal trainers reported that they received referrals for cancer patients mostly through the Macmillan hospital nurses. A small number of patients were referred via other routes such as the GP, self-referrals and word-of-mouth. Personal trainers reported that all patients were initially reviewed to assess suitability for the programme, particularly those who have self-referred.

> *"So usually for cancer rehab, they usually come from the Macmillan nurses, so it comes straight away from a proper consultant straight away to us. So that one's a little bit easier." (PT004)*

Location, transport and travel

Personal trainers discussed patients' ability to travel to attend training sessions and reported how some patients needed to travel up to 45 minutes.

> *"the only struggle we get is we're north [location], so if people are going to [local] Hospital. Then they may be south [location], so you might get somebody coming from maybe towards [town] away, so to from them to us is probably 40, 45 minutes, which for a gym session is quite a way, is quite a distance." (PT001)*

Another personal trainer worked across multiple venues which was both beneficial for reaching more patients but also presented restrictions in terms of training capacity (PT003).

> *"I suppose it would have to be capped at some point because the second room is much smaller as well. I use a big hall for the first one. The second room is much smaller. I think it would probably need to run to a third session if I got more than maybe another five or ten people." (PT003)*

Trainers reported that patients were also driven by family or carers, or would drive themselves if well enough (PT001, PT003). One trainer reported that some patients used taxis or public transport to attend sessions, but this was reported to be costly or impractical.

> *"I've sent bus timetables to some people and it's just the little things like, you know, incontinence and stuff and worrying about, you know, if you're going to have to wait at a bus stop for 20 minutes and then get on a bus, and it's jiggling about by the time you get there, you might have, you know, it's all those things they need to think about and temperature standing outside of the freezing cold in the rain." (PT003)*

Personal trainers tried to remove barriers of travel for patients wherever possible. For example, one trainer explored whether a door-to-door transport service could be provided, but this was found to be too logistically challenging (PT003). Another trainer reported that their venue had created more disabled bays in the car park and had "*fought*" to have car parking charges for community exercise clients removed. Patients had access to a regular shuttle bus

at this training venue, accessible from the train and bus stations to maximise access and minimise physical barriers of attending.

Cost

Personal trainers reported considering the potential financial impact of a cancer diagnosis and treatment and noted that the cost of sessions was either free or heavily subsided to enable patients to attend.

> *"That gives them access to gym and classes for a big discounted rates and in certain cases where they have financial issues, we can give them a three months free pass as well to help them start their journey." (PT004)*
>
> *"It's free. It's free, so there's no cost of sessions, even if they join the gym, they get three months free at the gym and then they can start paying on top of that." (PT005)*

Awareness

All trainers highlighted a lack of awareness of the programme amongst clinicians and other potential referrers. Personal trainers identified that referrers needed to have the right knowledge and information to share with patients.

> *"Making sure that the doctors and specialists know and have access to the information that is going on and it's the service that is around what that can beneficial their patients." (PT004)*

However, the trainers acknowledged that they only had capacity (either due to venue capacity or trainer availability) to deliver the programme to a certain number of patients at any given time and so could not accommodate a large increase in referrals.

What is the impact of Cancer (P)rehabilitation programme on patient outcomes and quality of life?

Patients' perspective

Due to the low number of survey responses from people who had previously engaged with Cancer (P)rehabilitation (n=4/48), it is difficult to draw meaningful comparisons across groups and so these graphs should be interpreted cautiously. Figure 3 shows average scores on the domains from the EQ-5D-5L (7). Respondents were required to score 1-5 with one reflecting no issues with that particular domain (e.g. mobility) and a score of five reflecting severe difficulties with the domain. Respondents engaged with Cancer (P)rehabilitation reported similar scores on self-care, usual activities, pain-discomfort and anxiety/depression as the

wider survey cohort. The survey respondents who were aware of Cancer (P)rehabilitation but chose not to engage (n=2) tended to score lower on domains.

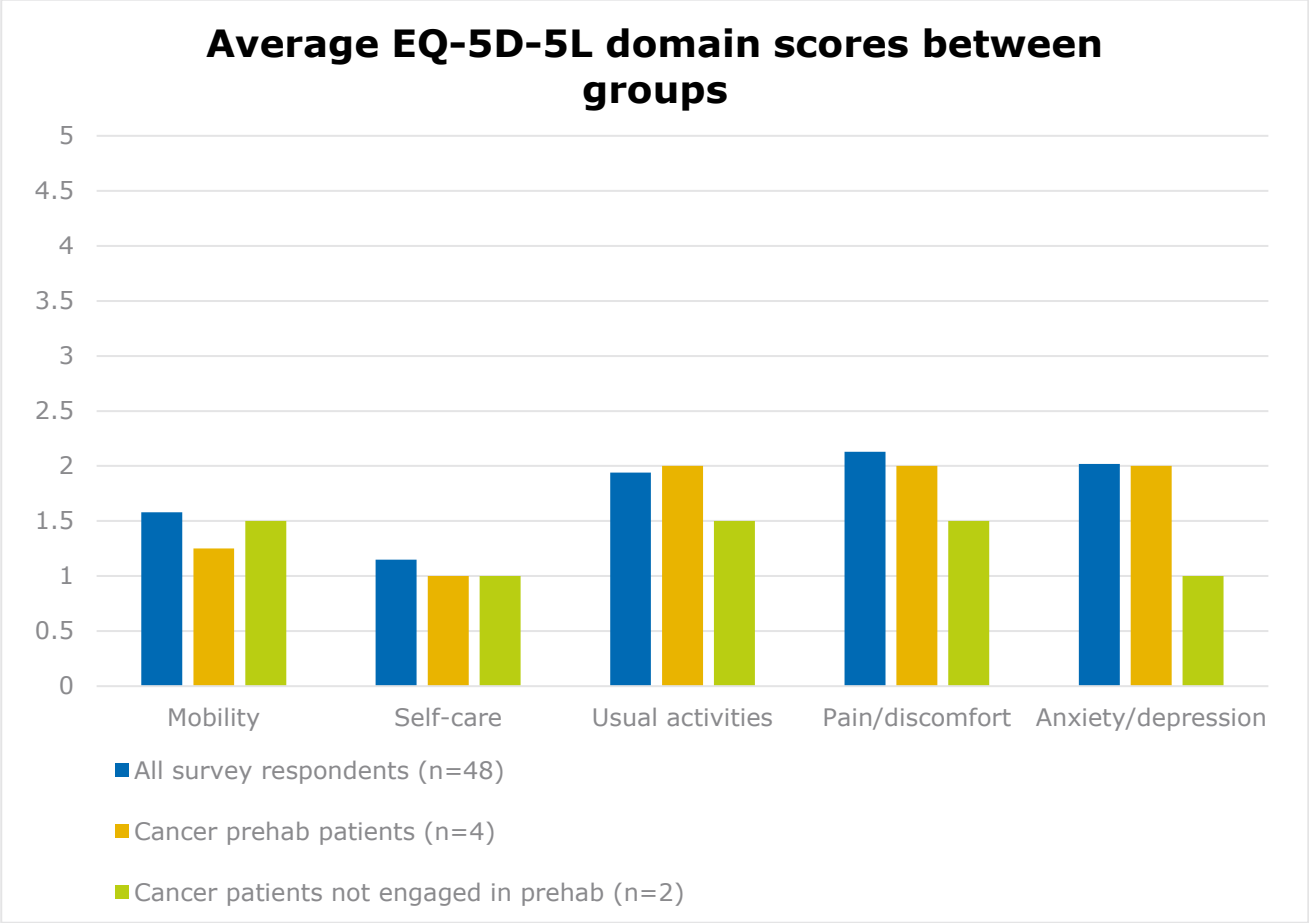

FIGURE 3: EQ-5D-5L SCORES FOR SURVEY RESPONDENTS

Respondents engaged with Cancer (P)rehabilitation scored their health to be on average 67.25%, compared to the whole group average of 70.3%, whilst patients who chose not to engage with Cancer (P)rehabilitation scored their health slightly higher with an average of 81.5% (Figure 4).

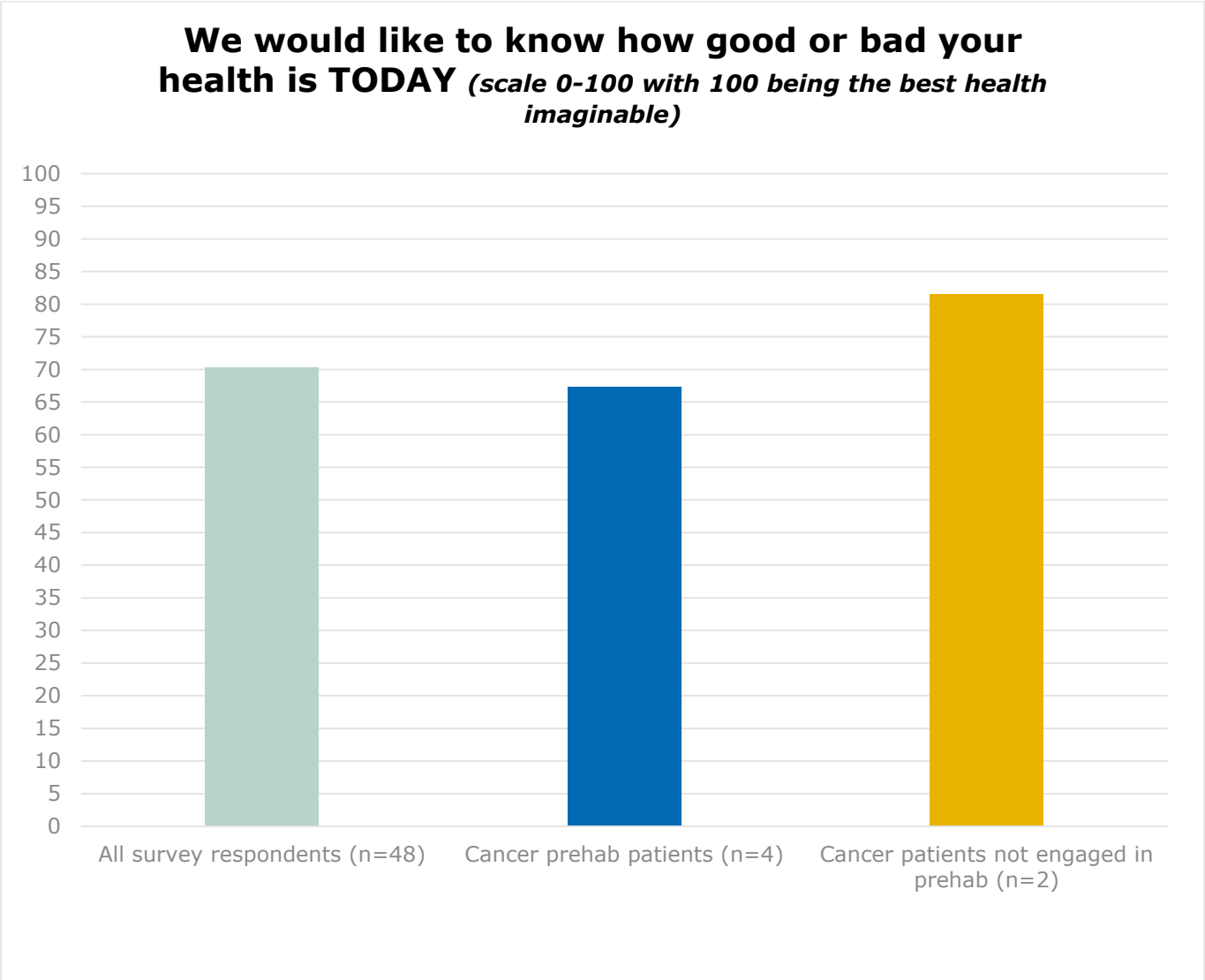

FIGURE 4: EQ-5D-5L VAS SCORE FOR SURVEY RESPONDENTS

One respondent who had engaged with the Cancer (P)rehabilitation reported no benefit in terms of feeling a sense of community or improved mental health and wellbeing from attending the sessions. No respondents (n=4) felt that preparedness for surgery or becoming more aware of managing cancer symptoms was applicable to the benefits they experienced as part of Cancer (P)rehabilitation. The strongest benefit was seen by patients in their enjoyment of attending sessions, being more active, feeling physically fit, improvements in mental health and wellbeing and feeling more informed about managing their own health. No survey respondent reported feeling more prepared for cancer treatment or surgery or being better informed about self-managing cancer symptoms, however this may be because the survey respondents were post-treatment (Figure 5).

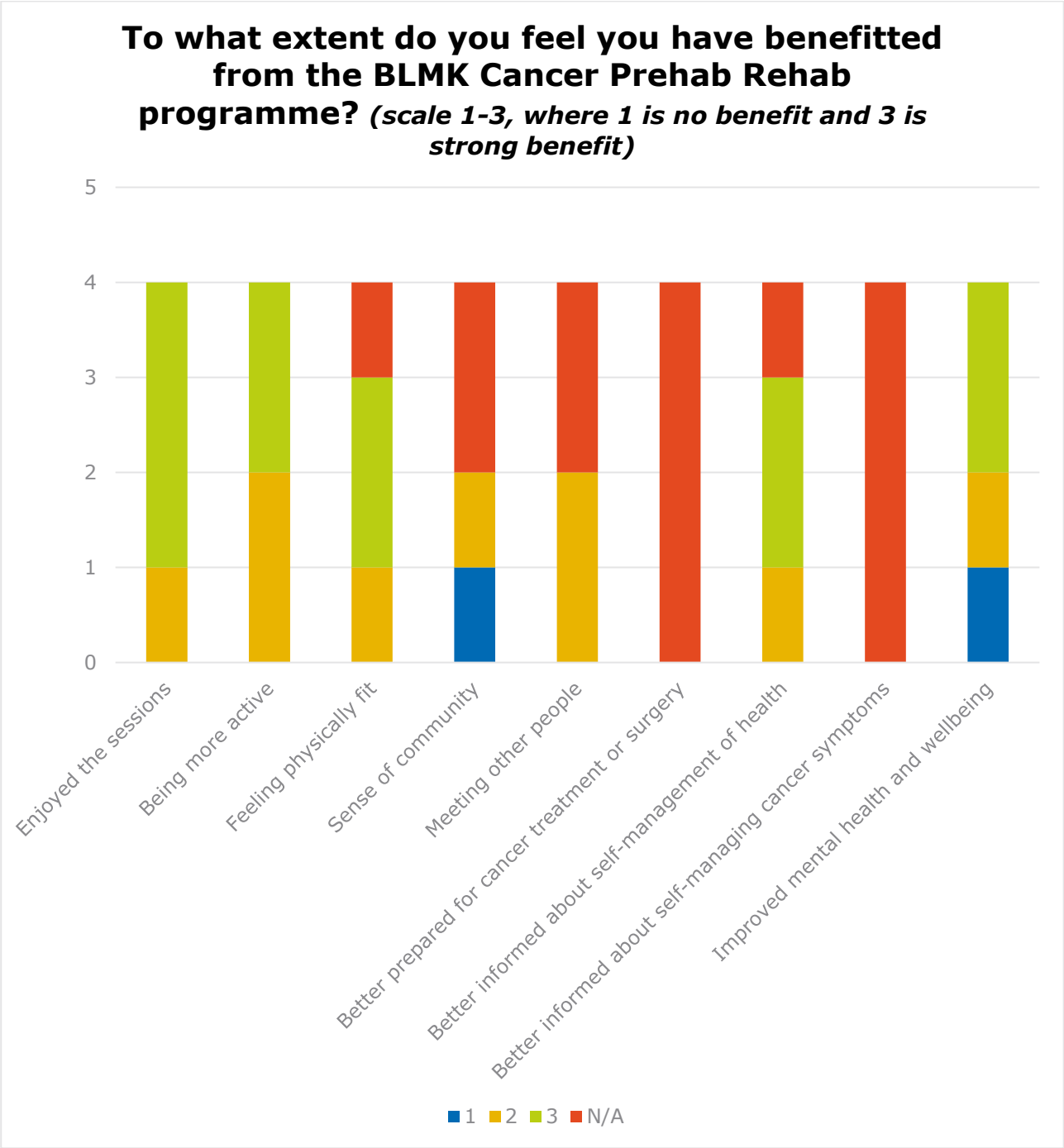

FIGURE 5: PERCEIVED PATIENT BENEFITS OF ATTENDING CANCER (P)REHABILITATION

Clinicians' perspective

All clinicians who had referred patients to Cancer (P)rehabilitation reported benefits of the programme including patients meeting others with a cancer diagnosis, the sense of community and belonging of groups, improved physical fitness and mental wellbeing, improved preparedness for surgery and improved quality of life for patients (Figure 6).

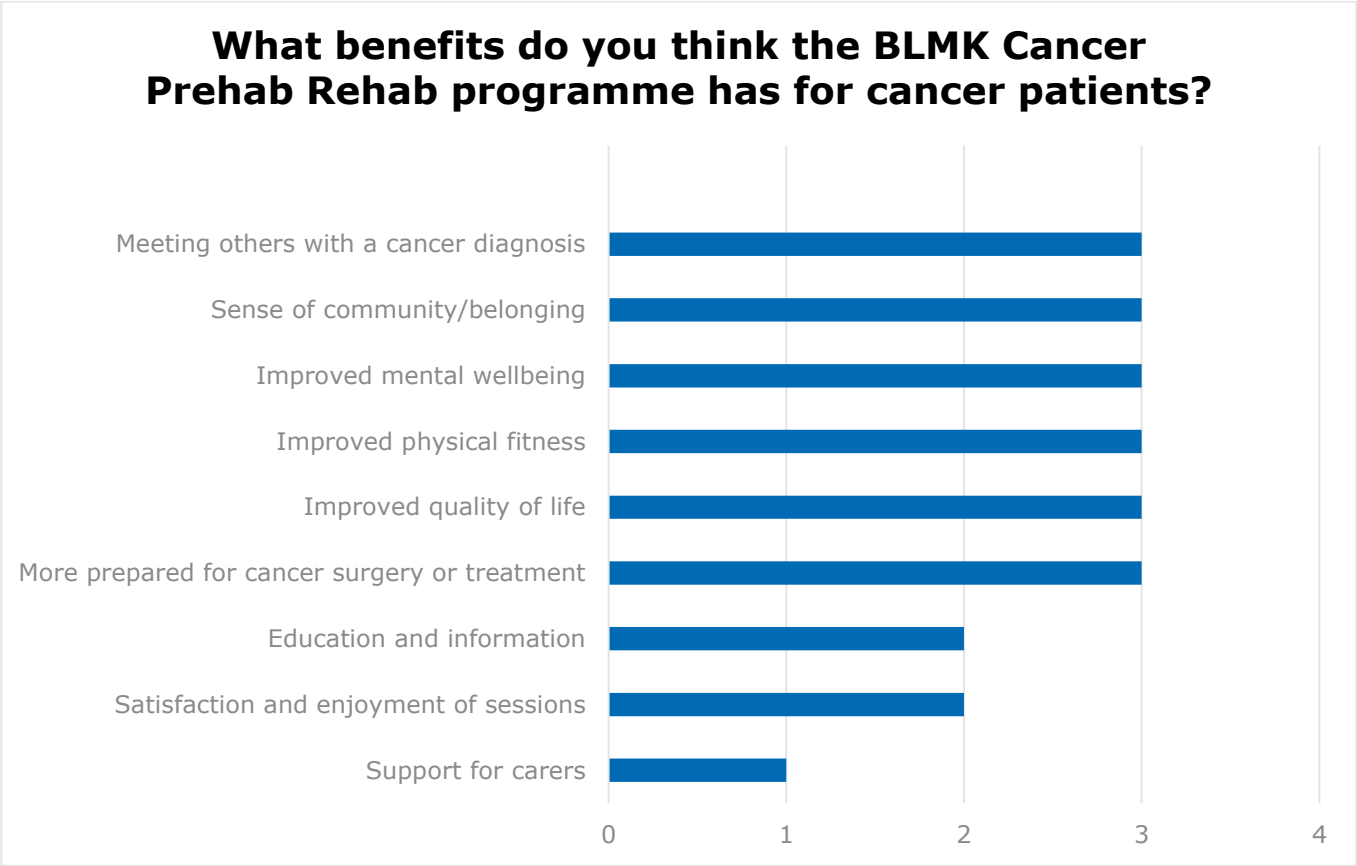

FIGURE 6: CLINICIANS' PERCEIVED PATIENT BENEFITS OF CANCER (P)REHABILITATION

Personal trainers' perspective

Personal trainers identified a number of patient benefits resulting from their participation in the programme, which were organised into the following subthemes: patient empowerment, mental health, physical health and social connection.

Patient empowerment

Some personal trainers reported that patients benefitted from developing a sense of control from attending and engaging with Cancer (P)rehabilitation, which was juxtaposed with the perceived lack of control that some patients may experience when diagnosed with cancer. Patients were reported to feel comfortable asking questions to the personal trainer in a group setting and were reported able to maintain independence.

> *"If they need, we can give them exercises. They can do it at home. And we tell them how to perform that exercises at the gym while we are at the gym to make sure that they understand exactly what they're doing." (PT004)*
>
> *"I think it is that they're, they're in charge of something." (PT001)*

Mental health

All personal trainers reported observing improvements in patients' mental health due to engaging with the Cancer (P)rehabilitation programme. In some instances, mental health benefits were emphasised more than physical benefits. Personal trainers reported noticing positive mindset changes and increased positivity amongst patients. Personal trainers also commented on patients' sense of fulfilment from patients attending the Cancer (P)rehabilitation sessions adding structure to patient's lives, which was reported to have a positive impact on patients' quality of life.

> *"Structure and there's a reason to get up and get out of bed. Get your clothes on, come out in public….Routine having some routine, especially if it is a working age person that otherwise you know all of a sudden they've got five days at home." (PT003)*
>
> *"The biggest one [benefit] that I've found with the with the clients that work with me is definitely an improvement in mental health." (PT005)*

Physical health

Perhaps unsurprisingly, personal trainers reported observing physical health benefits to patients who participated in the Cancer (P)rehabilitation programme. One trainer commented that they considered the programme to be as important as the cancer treatment itself, saying:

> *"Exercise is part of the medicine…this is medicine. This is like your radio or chemo. You need this like you need nutrition." (PT003)*

Trainers reported that patients were able to identify physical health benefits of the programme, which were most noticeable in their strength and flexibility, along with their ability to complete activities of daily living.

> *"If they've got more movement in the arm and they've gained more strength and you say to them, 'Oh, hey, you know, actually I can lift that kettle a bit easier now' and things like that. So I would say physically their day-to-day what we call activities for daily living that seems to make an impact. So actually things for their daily day day-to-day lives, they sort of comment on, 'That's made that a lot easier.'" (PT001)*
>
> *"…they start saying, oh, I'm walking better, I'm able to lean down and come back up without any struggles." (PT004)*

Most trainers reported patients accessing the rehabilitation elements of the programme following cancer treatment. However, one trainer reported that some patients had not initiated

treatment and so benefitted from talking to others and getting physically stronger in preparation for treatment (PT003).

Another personal trainer (PT005) reported improvements in how one patient managed their other pre-existing health conditions, such as hypertension, and diabetes. However, whilst one trainer reported conducting fitness tests over time (PT004), none of the personal trainers reported objectively measuring the patients' improvement in physical or mental health regularly.

Social connections

Trainers highlighted the importance of social connection resulting from the programme, which trainers perceived to be as important as the physical and mental health benefits for patients.

> *"They can compare their experiences or if you had this, if you had that and it's and it's actually quite nice to watch because again, they're just, 'Ah, it's not just me' sort of thing. So the social side I think is massive as well." (PT001)*

Trainers discussed how patients gained insight and understanding into their diagnoses and treatment and learned what to expect from other patients. Personal trainers reported how the programme supported the development of new relationships between patients, as well as bringing a sense of light-heartedness and "good fun" to patients.

Trainers reported that patients appreciated being able to talk to others and retaining their identity outside of and beyond a cancer diagnosis.

> *"They come along and…they're not identified by their diagnosis. They're still a person. They're not. Oh my gosh, I've got cancer. They're still Jill, Allen, whoever, you know, we don't. And then there's someone there for them to talk to." (PT003)*

Trainers reported how patients kept each other accountable and committed to the Cancer (P)rehabilitation programme by "*checking up*" on each other and arranging social gatherings outside of the planned training sessions.

> *"So there's others either asking me or asking each other* Whats-Apping each other. It just builds a community." *(PT003)*

What is the acceptability, usability, and user experience of the Cancer (P)rehabilitation programme?

In this section, barriers and enablers to engagement are discussed. Barriers to engagement incorporates: health-related barriers and patient identity. Enablers to engagement include the: delivery environment, personal trainers are accommodating, and patient commitment.

Barriers to engagement

All trainers reported health-related barriers to engagement for participants. Data were categorised into sub-themes of physical health and mental health related barriers.

Physical health

Trainers noted that participants were sometimes unable to attend the programme or individual sessions due to physical health difficulties, often related to cancer or the treatment of cancer itself. Personal trainers particularly noted fatigue as a barrier to engagement.

> *"But I can see that as they get older or if they're not feeling very well. I mean some of them won't want to drive if they're not feeling well either or." (PT003)*

One personal trainer commented on the numerous medical appointments patients often needed to attend as part of their cancer journey and understood that this can be tiring for patients.

> *"Sometimes they're actually like I can't make it more than once a week because I'm here there and everywhere with, you know, blood tests and appointments and chemo and bits and pieces so." (PT001)*

Mental health

In addition to physical health barriers, trainers reported that cancer patients faced barriers resulting from their mental health. This was perceived as considerable by some personal trainers, and at times was more of a barrier to overcome than physical health.

> *"Sometimes, if the anxiety is too great, that is one of the things that can prevent them to come. So mostly social anxiety, not access or proximity of public transports, or nobody to assist them coming." (PT004)*

Personal trainers demonstrated a deep understanding of these barriers and were committed to managing such barriers by remaining flexible and empathetic.

Patient identity

Some trainers reported that barriers to engagement can present when patients do not align their identity with other patients attending the training sessions. One personal trainer (PT003) suggested that this was age-related and noted later that the dominant age of patients attending the programme was '*slightly older*'.

> *"It almost is that you get lump in the elderly together with the young is great in some ways, but can be difficult if you've got any health condition diagnosis and you feel like you don't want to identify as that." (PT003)*

Personal trainers responded to this by trying to minimise the impact of this barrier, for example one personal trainer created an additional group that was not defined by diagnosis.

> *"We have a general group which is not specifically for cancer patients because we found that cancer patients don't want to be in an exercise group with just cancer patients because they find it quite morbid. So they'd rather be put in a general group where not everybody knows that they have cancer or have had cancer." (PT005)*

Similarly, other personal trainers reported that many patients who attended the Cancer (P)rehabilitation classes also had multiple other conditions besides a diagnosis of cancer (PT001; PT003; PT004).

Enablers to engagement

Delivery environment

The physical environment was identified as being relevant to patients' engagement, with some trainers reporting that patients often enjoyed the ability to attend sessions face-to-face.

PT001 reported that patients preferred the fact that the sessions were not hospital-based, meaning they could distance themselves from their cancer journey for the duration of the programme. However, trainers discussed the difficulties of remaining non-clinical in a cancer diagnosis and treatment context.

> "…the [local council] want to offer so much and care so much about the community, but they don't want to become clinical…but there's so much crossover that, that's really hard." *(PT003)*

There were mixed views on this topic. Another trainer felt that a more holistic 'one-stop shop' approach, where trainers could operate from the local hospital and have more visibility to clinicians and patients may be beneficial in the provision of holistic, integrated care (PT005).

Flexibility and accommodation of personal trainers

Personal trainers reported accommodating individual patient's needs and they perceived this to enable patients to engage with the sessions, as well as improving patients' experience of the sessions. Trainers reported accommodating carers to attend the sessions free of charge or at the same subsidised rate as the patient themselves. One trainer reported actively encouraging carers and family members to participate in training sessions alongside their family member.

> *"I've got a couple of ladies where their daughters come with them. And sometimes the daughters join in. I don't charge them. They try and pay, but I don't charge them if they join in or they'll just sit and play on their phones in the background whilst there." (PT003)*

Two trainers reported applying a flexible approach to accommodate cancer symptoms and symptoms of other health care conditions. This included considering the start time of sessions to account for the fatigue that some cancer patients experience, as well as re-arranging sessions where the patient feels unwell or cannot attend for a different reason to ensure that any health-related barriers were minimised.

> *"Oh, I do them so I don't have set sessions. I run it to suit when the client wants to come up…" (PT001)*
>
> *"We offer for the we offer twelve week programmes and on that 12 weeks is sometimes it can be a bit more sometimes they start by themselves or in the meantime they have any health issues that they are not able to come." (PT004)*

Trainers worked flexibly to ensure that sessions were organised or re-organised around such appointments for individual patients and made significant efforts to ensure that any sessions were rearranged or organised flexibly to maximise participation.

Patient commitment and accountability

Personal trainers reported that patients were committed to attending training sessions. One trainer reported that patient commitment to attending sessions resulted in part due to the rapport built with the trainer themselves, and the role of the trainer holding their clients to account (PT005). Another trainer attributed patient commitment to the social connection established between participants in the session group (PT001). Trainers reported that some patients needed additional support to attend the programme at times, but once patients recognised some of the benefits, their commitment increased.

> *"…some of them we tried to book them straight away because we see that they need a little bit extra support and motivation and accountability to start doing some exercise so yeah. But mostly yeah, they come quite regular to classes." (PT004)*

What might the possible reasons be for the high attrition of personal trainers involved in delivering Cancer (P)rehabilitation?

Four key themes were identified from the data when exploring possible reasons for high attrition of personal trainers: emotional burden and lack of emotional support, financial security, training and continued professional development, and characteristics of the personal trainer.

Emotional burden and lack of emotional support

A strong theme was the emotional burden and subsequent lack of emotional support available to personal trainers linked to delivering the programme to cancer patients. Trainers reported feeling emotionally drained and needing to play the role of an (untrained) counsellor or psychologist within their trainer role.

> *"…working with any patients with various conditions, especially if they're terminal, that's putting, does tend to put quite a lot large emotional load where you're not only an exercise practitioner, you're basically a bit of a psychologist as well." (PT005)*

One personal trainer (PT003) reported a sense of inevitability of this as part of their work in general, but three out of four personal trainers interviewed reported there was no access to formal emotional support and thought this could be improved. As a result, personal trainers described using informal routes to seek support, such as via discussions with partners and friends, and participating in exercise.

> *"I've got, I mean, me and my friend who both she's a nurse and PT now…we'll just offload onto each other and just go, 'Do you want to go for a run? Blah' and then…but nothing, nothing official." (PT003)*

Only two personal trainers explicitly referenced grief or sadness related to the loss of a patient and did not discuss this in great detail (PT003; PT005). One personal trainer discussed how they sometimes feel that despite doing all they can within the remit of their role, they can be left feelings as though they have not done enough, which can be emotionally difficult.

> *"In terms of what's the need, the needs are and even though they are sent to us, we do the most that we can. But sometimes it's not enough." (PT004)*

Training and professional development

Personal trainers spoke positively about the Level 4 Cancer (P)rehabilitation training course. They felt it was informative and provided a safe space to ask questions and improve

understanding. However, several personal trainers felt that the real learning took place in practice, with one trainer likening the process to learning to drive.

> *"You learn to pass your test and then you learn to drive. So you, you've got the information and it's so much information it's, it's quite overwhelming and then you've got somebody sat in front of you in that exact situation and then you fully go ah, now I know what you mean." (PT001)*

When asked what improvements could be made to the training, several trainers articulated that it may be beneficial for potential Level 4 trainers to 'test the water' by providing opportunities for application to the real-world.

> *"I think just making it truer to life…I guess the more real lived experience of meeting people prehab rehab before you go out and do it, talking to Macmillan nurses, even just an online chat with them as part of your course." (PT003)*

There was a desire amongst all personal trainers interviewed for continuing professional development in Cancer (P)rehabilitation and to remain informed of recent evidence which may affect or improve their practices and delivery of the programme following completion of the training, such as regular refresher training.

> *"…it's always good to maintain a contact to make sure that we still up to date in terms of treatments and any information. Or any discoveries that been done that can improve literally all of the service that we can provide for all of the clients to make sure that they have the best experience." (PT004)*

Financial security

Three of the four personal trainers interviewed highlighted financial security as a possible reason for attrition amongst trainers. Trainers reported there had been no remuneration or recognition for the training they had undertaken by their respective employers.

> *"In terms of my salary hasn't changed by implementing the cancer rehab scheme. I've gained nothing out of it. It's just because I wanted to do it." (PT001)*

One personal trainer reported that for trainers who are self-employed, there is an additional associated loss of earnings when attending the Level 4 Cancer (P)rehabilitation course, even if the course fee is subsidised:

> *"I think that is the other thing for a lot of trainers, if we are self-employed, we're then taking a three day hit of wages to sit and do a training course for three days. So it's almost double whammy that you're losing." (PT003)*

Characteristics of the personal trainers

Some personal trainers reported that their experience level may impact on the likelihood of them moving onto new employment, with early career personal trainers being less likely to remain for extended periods in the role.

> *"I think potentially targeting more experienced PTs as well, so not the ones in their early years where they may not stick with it, but ones that have been going for quite a long time and have already done exercise referral…" (PT003)*

Personal trainers discussed the complexity of the patient cohort and that this may be daunting for less experienced trainers.

> *"…they might be going through, say, breast cancer for example. But one might have osteoarthritis with it. One might have dodgy knees, one might have asthma. So you've got to then take that into consideration as well." (PT001)*

All of the personal trainers interviewed demonstrated complete dedication to the programme and to their patients. Trainers articulated the highest levels of respect and admiration for patients accessing Cancer (P)rehabilitation.

> *"I find it astounding anyway, that cancer referral patients just have this completely different mindset. They, they're going through this horrendous journey and they're coming in with the biggest smile on their face. And you would think they've just won the lottery. Their positivity is astounding sometimes and it's actually quite humbling. So they come in in, in quite amazingly good mood, which understandably, if they didn't, you would kind of completely appreciate….It's hard to explain." (PT001)*

Identifying a suitable digital innovation

Personal trainers unanimously agreed that a digital innovation, specifically an app, would increase the reach of the service for patients and improve access to the service for potentially underserved groups. Combined themes arising from both interviews with personal trainers and the clinician and patient survey data about what a digital app should include are described below in Table 5.

TABLE 5. THEMES FOR INCLUSION IN A DIGITAL APP

Topic area	Examples
Physical health and exercise	Exercise programmes
Nutritional and diet	Diet/menu/meal plans
Mental health	Awareness, support, guidance, help, motivational support
Social	Forums/chat function
Location-specific signposting to services and support	Local Specialist Nurses contact information Access to professional medical information
Cancer-specific education/knowledge hub	Symptom education and awareness Guidance and signposting for seeking treatment, advice and support. Suggestions for self-help and management

Innovation horizon scan

The majority of patients who completed the survey (58.7%) reported being interested in a digital innovation which could deliver Cancer (P)rehabilitation across BLMK. Eight out of the nine clinicians who responded to the survey, along with all personal trainers, supported the delivery of Cancer (P)rehabilitation via a digital innovation.

A horizon scan was conducted at Health Innovation East to identify suitable digital innovations. The horizon scan provided three tiers of results:

Tier 1: Health Innovation East' 'top tier' search – innovations are known well by the company and due diligence has been completed (detailed).

Tier 2: Health Innovation East' 'top tier' search plus a review of Health Innovation network resources and previously conducted scans (less detailed).

Tier 3: Wider scoping horizon scan using CBInsights (limited detail).

The horizon scan retrieved seven validated solutions (tier 1), five solutions from the Health Innovation Network scan (tier 2) and 46 solutions from the CBInsights scan.

From the results of the first and second tier scan, the following innovations most closely aligned with the horizon scan brief:

- **KiActiv Health** (tier one)
- **EXI Therapeutics** (tier two)
- **Quest Prehab** (tier two)

Eleven solutions were identified via CBInsights which also aligned with the horizon scan brief, however they are websites for either national or local organisations which offer support services and do not offer a digital solution for delivering cancer (p)rehabilitation. The following three results meet the brief and offer digital solutions:

- **Get Me Back** (Breast cancer only)
- **Boutros Bear** (Designed for employers and employees)
- **Perci Heath** (Includes a multidisciplinary team in addition to the brief)

Please review the Horizon Scan spreadsheet for further details on each digital solution.

Discussion

This evaluation set out to assess how cancer patients engage with the Cancer (P)rehabilitation service in BLMK and the programme's impact on patients' outcomes and quality of life. The evaluation also set out to assess the acceptability, usability and experience of the Cancer (P)rehabilitation programme to patients, clinicians and personal trainers and sought to explore the high attrition amongst personal trainers trained to deliver the programme. Findings from the evaluation were intended to assess whether there could be a role for a digital innovation to support delivery of Cancer (P)rehabilitation and whether the programme could be improved.

The personal trainer interview data and the patient and clinician survey data demonstrated that the Cancer (P)rehabilitation programme in BLMK is perceived positively by patients, clinicians and personal trainers, for those that are aware of the provision. A variety of benefits were identified, which were not limited to physical health. Personal trainers emphasised the impact of the programme on patient's mental health and observed social benefits to patients. The benefits of the programme were reported unanimously amongst all participant groups. That said, the evaluation clearly identified a lack of awareness of the programme amongst both patients and clinicians. Furthermore, the survey data illustrated that some clinicians may act as 'gatekeepers' to the service depending on how they perceived patients' willingness and readiness to engage with the programme. Personal trainers reported that it was possible for patients to self-refer into the programme but this was not a common referral route and most referrals came via the cancer services at local hospitals.

Interview data from personal trainers suggested that patients who attend the Cancer (P)rehabilitation sessions may be older or have more complex health conditions. Whilst trainers made significant efforts to ensure that sessions were accessible to all, it was noted by some that how the patient perceives themselves compared to others attending the session may be a barrier to engagement. This finding was also reflected in the small amount of aggregated provider data received (Appendix 4), which highlights the small numbers attending the sessions and the older age range of patients (i.e. >50 years). It is possible that those engaging with Cancer (P)rehabilitation in BLMK are those who feel their health is more complex or they feel they require more support. However, these findings should be interpreted with caution as the demographics of survey respondents are not representative and the numbers of survey respondents engaged with the Cancer (P)rehabilitation programme were too small to infer robust conclusions.

Data from patients, clinicians and personal trainers indicated that there is a strong appetite for digital innovation and whilst interview data from personal trainers highlighted the need for

face-to-face provision to continue, it was agreed that a digital approach, such as an app, could provide a solution to increase access to Cancer (P)rehabilitation and complement existing services, potentially allowing a wider patient population to benefit. The innovation horizon scan identified a number of suitable innovations which aligned with the specification identified by patients, clinicians and personal trainers.

Limitations

It was not possible to conduct inferential statistics or to draw comparisons between survey respondents who had engaged with Cancer (P)rehabilitation and those who had not, due to paucity of survey data available for people who were actually aware of the programme and had previously engaged in it.

Demographic analysis of the survey responses indicated that respondents were largely based in Milton Keynes which, given the lack of Cancer (P)rehabilitation provision in Milton Keynes at the time of survey distribution, may explain why the service was not better known about or engaged with.

Recommendations

Several recommendations were identified as part of this evaluation, however the Evaluation Team recognise these may be outside of the remit of the commissioner to influence.

1. Increase access to the service for more patients

Interviews with personal trainers suggested that for patients aware of the service, access was generally good, and significant efforts had been made to reduce identified or potential barriers. However, the location of the venue(s) may be problematic at times for some patients, with considerable distance to travel in some cases. For patients without access to a car, or the financial means to travel by taxi, this may become a barrier to some patients accessing the service.

The survey identified that there is a general lack of awareness across both clinicians and patients of the service. Potential methods to increase awareness of the service could include the use of social media channels and/or a digital app, discussed in more detail in the next section. Having buy-in from key stakeholders is essential to promote the service throughout the system.

Survey data and qualitative data suggested that younger patients, specifically those aged less than 45 years of age, may not have equitable access to the service, due to (mis)conceptions of the target audience of the programme. This may also be due to working status, session scheduling in working hours, and caring responsibilities. A digital innovation may be more accessible for delivering Cancer (P)rehabilitation to a younger population.

2. Ensure consistent and regular data collection and evaluation to measure impact

Some personal trainers reported collecting some ad-hoc impact data and patient feedback. The available data from providers was also scarce, incomplete or inconsistent. To evaluate the longer term impacts of the Cancer (P)rehabilitation programme it is recommended that efforts are made to collect consistent baseline data and patient feedback regularly to identify impacts, trends and challenges.

3. Provide formal emotional support mechanisms to personal trainers

Interviews with personal trainers highlighted the lack of emotional support in a context where there is an emotional burden for personal trainers. It is recommended that implementation of formal support system for personal trainers could provide an emotionally and confidential safe space.

4. Continuing professional development and financial recognition for personal trainers

A number of recommendations to support personal trainer retention have been identified through interview data. Personal trainers highlighted a need for continuing professional development, such as attending a refresher course to deliver the best possible service for patients.

Personal trainers also noted that despite the additional skills they had developed, there had been no financial remuneration for this and therefore consideration of this may support retention of Level 4 Cancer (P)rehabilitation personal trainers.

5. Use of a digital innovation or app to increase the reach of the service for patients and improve access for potentially underserved groups.

Interviews with personal trainers and the survey data showed that there is support for the use of a digital innovation in delivering Cancer (P)rehabilitation. The innovation horizon scan identified six possible solutions which met the brief. Incorporation of a digital innovation or app to complement the existing service delivery of Cancer (P)rehabilitation programme would

increase the reach of the service for patients and improve access for currently underserved groups.

6. Further engagement with diverse communities is needed to explore barriers and enablers of engaging with Cancer (P)rehabilitation.

The survey did not achieve a representative sample of eligible patients within the BLMK integrated care system. Further work is needed to explore the awareness and engagement of Cancer (P)rehabilitation with diverse communities so that the service can meet all cancer patients' needs across BLMK.

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Appendix 1 – Participant information sheet

PT Participant Information Sheet Interviews V3_FINAL_221024

Participant Information Sheet for interviews with personal trainers: Bedfordshire, Luton and Milton Keynes (BLMK) Cancer Rehabilitation Programme Evaluation

Introduction

You are invited to take part in an interview, which feeds into a wider evaluation of the Cancer (P)rehabilitation programme in Bedfordshire, Luton and Milton Keynes (BLMK). If you agree to participate, we would like to interview you about your experiences and feedback of the Cancer (P)rehab programme. Before you decide whether to take part, it is important for you to understand why this project is being conducted and what it will involve. Please read the following information carefully. Please do not hesitate to contact us if you have questions or want more information.

What is the purpose of the interview?

BLMK Integrated Care Board (ICB) is interested in understanding how the Cancer (P)rehab programme is being used and engaged with across BLMK, and what impact the programme has on patients' quality of life. As part of this evaluation, we would specifically like to understand trainers' experiences of delivering the Cancer (P)rehab programme and how trainers could be best supported in their role.

Who is conducting this evaluation?

Health Innovation East, in collaboration with BLMK Integrated Care Board (ICB), is conducting this evaluation. Either Ellice Parkinson or Natasha Baron from the Evaluation team at Health Innovation East will conduct the interview.

Why are you being invited to an interview?

You are being invited to take part because you received Level 4 Cancer Rehabilitation training, you are a personal trainer, and you have experience of providing Cancer Rehabilitation care to cancer patients in BLMK.

What will happen if I agree to take part?

A member of the Health Innovation East team will contact you via email to invite you to take part in an interview. If you decide to take part, you will be asked to complete an electronic consent form and a member of the team will contact you to arrange an interview at your convenience. We will conduct and record the interview using Microsoft Teams. Interviews will last approximately 45 minutes and will take no longer than one hour. If you would prefer an interview face-to-face, please let us know.

Do I have to take part? Can I withdraw once I have started?

Taking part is voluntary. You will be free to leave the interview at any time without judgment or having to give a reason. You can choose not to answer questions without explanation or can take a break at any time. If you decide not to take part in the interview or stop the interview early, it will not affect your employment. After consenting to take part in the evaluation, you have the right to withdraw from the evaluation at any point. If you withdraw from the evaluation, we will be able to remove your data up until the point of analysis. Once we have begun analysis, your de-identified data will be combined with that of other participants and withdrawal of your data would not be possible. You can withdraw from the evaluation by emailing Ellice Parkinson (ellice.parkinson@healthinnovationeast.co.uk) or Natasha Baron (natasha.baron@healthinnovationeast.co.uk).

What are the possible disadvantages of taking part?

Aside from giving up some of your time, we do not expect that there will be any risks or costs associated with taking part in this interview.

What are the possible benefits of taking part?

Your participation in this project will help improve understanding of how the Cancer (P)rehab programme is engaged with across BLMK, and what impact the programme has on patients' quality of life. It is unlikely that you will benefit directly because of participating in this evaluation. However, we anticipate that the findings of this evaluation will help to inform insights, recommendations, and future developments of the BLMK Cancer Rehabilitation Programme, which may affect you in the future.

What will happen to the information provided by me?

With your permission, using Microsoft Teams we will video-record and transcribe the interview. After the interview, a member of the project team will convert the recording into an audio file for storage and analysis. The audio recording and transcript will be de-identified and stored on Health Innovation East's OneDrive secure data storage space. Transcripts and recordings will be deleted after the publication of the final report. Only the evaluation team will have access to the files. All other data will be stored for a maximum of six years after the project has ended, and in accordance with the General Data Protection Regulations (GDPR) of 2018 and Health Innovation East's data management policies. We will not include names of individuals or any identifying details in any transcripts or reports to avoid identification of participants.

We will report the evaluation findings to BLMK ICB and may publish them on the Health Innovation East website. If possible, we may also publish them more widely, but they will not identify you.

Who do I contact if I have any questions?

If you would like further information or would like to discuss any details personally, please contact Ellice Parkinson using the details below:

Phone: 01223 661500 Ext.202

Email: ellice.parkinson@healthinnovationeast.co.uk.

If you have a concern about any aspect of this project or would like to make a formal complaint, please email Dr Judith Fynn (Judith.fynn@healthinnovationeast.co.uk).

The Data Protection Officer at Health Innovation East is Sarah Tantin (sarah@informationgovernanceservices.com).

I want to take part – what do I do next?

Once you have confirmed with us that you are happy to participate, you will need to complete a consent form prior to your interview. This can be found here: https://surveys.eahsn.org/zs/9uCGYv.

Please keep this Participant Information Sheet for your information.

Appendix 2 – Interview topic guide

Interview topic guide for personal trainers

SECTION 1: Demographics

1. What is your role and where are you based?
2. What led you to take up the training for Level 4 Cancer Rehabilitation training?
3. **How long** have you been delivering Cancer Rehabilitation training?
4. **How many** Cancer Rehabilitation training sessions do you usually deliver per week?
5. How do you receive referrals? Who do they come from?
6. What capacity do you have for new referrals?
7. What is your understanding of the difference between cancer prehab versus cancer rehab?
8. What training do you provide for patients?

SECTION 2: Patient Experience

9. Do you have people who routinely attend your sessions?
10. What **benefits** do you think the programme has for patients?
11. What **enables** patients to engage with the Cancer (P)rehab in your centre?
12. What **prevents** patients from engaging with the cancer rehabilitation training at your centre?

SECTION 3: Provider/trainer experience

13. What **enables** you to deliver Cancer (P)rehab training to patients?
14. And is there anything that **prevents** you from being able to deliver Cancer (P)rehab training to patients?

15. How have you found the **training** you received?

16. How have you found the **support** you received?

17. Would you like any **additional support** to fulfil your role delivering Cancer (P)rehab?

18. In what ways do you think the BLMK Cancer Rehabilitation Programme could be **improved**?

SECTION 4: Digital Innovation

19. Do you think a digital app or innovation could support the Cancer (P)rehab programme to reach more people in BLMK?

20. What things should a digital app or innovation consider for people living with cancer in BLMK?

21. Is there **anything else** you would like to add which we haven't already discussed?

Appendix 3 – Survey respondent (patients) demographics

Sex	
Male	16
Female	32
Prefer not to say	0
Age (years)	
18-24	0
25-34	0
35-44	1
45-54	6
55-64	13
65-74	14
75-84	14
85+	0
Prefer not to say	0
Ethnicity	
White	44
Mixed or multiple ethnic groups	1
Asian or Asian British	2
Black, African, Caribbean or Black British	0
Other ethnic group	1
Prefer not to say	0

Appendix 4 – Training provider data

	Data collected since:	No. of referrals received	No. of referrals accepted	No. of people attending sessions	No. of sessions attended	No. of people who dropped-out	No. of DNAs	Patient demographics	Age	Gender	Ethnicity
Training provider 1	Sep-21	5	1	1	12	0	0		50-59	F	White British
Training provider 2	Feb-23	12	12	93	247	1	2		50-79	2M, 9F	White British and White South African
Training provider 3	Feb-24	124	-		-	-	-		-	-	-