CANCER PREHABILITATION

BUILDING A BUSINESS CASE

MSD
INVENTING FOR LIFE

Job number: GB-NON-03083
September 2020

CONTENTS

Written and prepared by Merck Sharp & Dohme (MSD) with advice and input from Macmillan Cancer Support prehabilitation team, Kathryn Manning – Lead Respiratory Lung Cancer Nurse Specialist, Nottingham University Hospitals and Pamela Rose – Lung Cancer Clinical Nurse Specialist, Beatson West of Scotland Cancer Centre.

All icons within report adapted from royalty free imagery from Noun Project.

FOREWORD

I am delighted to bring you this prehabilitation report to help healthcare staff and services develop prehabilitation to support people with cancer.

Prehabilitation enables people with cancer to prepare for treatment by promoting healthy behaviours and prescribing exercise, nutrition and psychological interventions where appropriate to a person's needs. Prehabilitation should begin as soon after diagnosis or as early in advance of treatment as possible for maximum benefit and should be seen as a continuum such that prehabilitation is part of the rehabilitation pathway.

This document has been developed from the Principles and guidance for prehabilitation within the support and management of people with cancer published by Macmillan Cancer Support, The Royal College of Anaesthetists and the National Institute for Health Research Cancer and Nutrition Collaboration.

The document contains illustrative case studies of how services have developed prehabilitation programmes for people with cancer.

It sets out the key questions and areas for consideration in the development of business cases to develop and include prehabilitation services in cancer services and emphasises the importance of any development having both service and workforce transformation at its heart.

This document will be of interest to healthcare professionals, commissioners, service providers, cancer alliances, health boards, primary care and those involved in service transformation to ensure prehabilitation is understood and included in the development of cancer services as part of the whole cancer pathway.

June Davis
Allied Health Professional Advisor,
Macmillan Cancer Support

This document is designed to provide inspiration and signpost useful information for healthcare professionals in the NHS, leisure industry, voluntary, independent and third sector who want to build a business case for designing cancer prehabilitation services in their region. The report aims to identify tools to help healthcare professionals access what they need at all levels including materials which can help to establish services and can be replicated or drawn from, as needed. Examples of services being piloted around the country at the time of publication will be showcased in order to provide insights and help generate ideas. Examples of research projects will also be included which will contribute to the increasing evidence supporting the rationale for setting up a prehabilitation service.

The core point of reference of the report is the Macmillan Cancer Support Guidance and Principles of Cancer Prehabilitation (2019)[1], as well as relevant NHS and professional strategic advice on the topic as of August 2020.

SECTION 2.

WHAT IS YOUR DEFINITION OF PREHABILITATION?

Prehabilitation has been formally used in different disease areas for a number of years and informally for many more. It promotes healthy behaviours before a treatment to increase the wellbeing and resilience of patients and success of the treatment. Now, its value is becoming increasingly recognised within cancer care and the concept has the support of the NHS.[1,2]

Macmillan Cancer Support carried out a 10 year comprehensive review of existing evidence (2009-2018) supporting prehabilitation.[3,4] Macmillan Cancer Support in collaboration with the Royal College of Anaesthetists and the National Institute for Health Research Cancer and Nutrition Collaboration followed this up in 2019 by publishing principles and guidance for prehabilitation within the support and management of people with cancer.[1] The principles and guidance outline the key principles, highlighting the benefits and giving advice about how to go about starting to implement services within your practice.[1] The guidance, drafted by an extensive multi-disciplinary review process, describes prehabilitation as a mix of improving physical fitness, tailored improvement to nutrition and addressing psychological support and behaviour change.[1] This should be based on a person's individual needs and involve both specialist support from healthcare professionals and guided self-management.

This increasingly firm definition of what prehabilitation for cancer patients means in practice and at what phase it should be introduced in the patient journey helps to define what services could be made available to the benefit of patients' pre-treatment and pre-diagnosis.

Many local practices already use these techniques in their clinics without labelling them as 'prehabilitation' and there are numerous initiatives in the process of developing more formalised services. What is clear is that there is not yet a single model of how these services should look or how they could be set up. Instead, prehabilitative programmes are being developed across the country which could help to guide others when developing their own. By considering what is already happening and seeing what potential resources are available to your practice, you can understand some of the challenges that setting up your own programme might raise, how they can be overcome and what already exists that can be harnessed to help in setting up similar programmes. The initial set up may take some planning and work, however by drawing on what is already out there it is achievable and worth the effort.

SECTION 3.

EVIDENCE TO SUPPORT PREHABILITATION

PERSONAL EMPOWERMENT[1]

Fostering a sense of control and purpose in people who are facing the challenge of cancer treatment, facilitating preparation and improving quality of life.

PHYSICAL AND PSYCHOLOGICAL RESILIENCE[1]

Improving physiological function and psychological wellbeing, thereby improving resilience to the effects of cancer treatments, enhancing the quality of enabling the living of life as fully as possible before, during and after treatment.

LONG TERM HEALTH[1]

Encouraging reflection on the role of healthy lifestyle practices following a cancer diagnosis, promoting positive health behaviour change and thereby impacting long term health.

Prehabilitation is part of a continuum to rehabilitation. The benefits of prehabilitation include better long-term outcomes, resilience and personal empowerment. Some tangible outcomes include reducing length of stay in hospital, improving cardiorespiratory fitness, enhancing recovery following treatment, improving nutritional status, reducing post-treatment complications, improving aspects of neuro-cognitive function and providing a teachable moment to enable smoking and alcohol cessation.[1] Prehabilitation can also provide an opportunity to educate patients about performance status and what this assessment can mean for them.

Lung cancer patients need to be given every opportunity to access treatment. Some patients assume the sicker and more fragile they look, the more quickly they'll be treated. If they're offered a wheelchair to go to an appointment, they'll accept – not realising what this could mean.

Kathryn Manning, Lead Respiratory Lung Cancer Nurse Specialist, Nottingham University Hospitals.

For some patients prehabilitation can empower them by making them eligible for increased treatment options. For others and their families, the self-administered elements of prehabilitation offer an opportunity to do something practical for themselves and gain some control in the face of being thrust into the new world of cancer treatment.[1] Some patients and their carers and family may also hold misconceptions about the benefits of physical exercise and nutrition when facing the challenge of cancer treatment and may intentionally lower the levels of physical exercise that patients may otherwise be able to manage. It is also the case that many cancer patients also have other chronic co-morbid conditions (for example, COPD or diabetes) that are holding back their overall fitness. Prehabilitation is an opportunity to medically assess co-morbidities and understand if there are any opportunities to optimally manage in a way that improves their ability to participate in a prehabilitation programme.[5]

With newer treatments more people are surviving longer with more advanced stages of cancer.[6] Lung cancer is a key area of interest as it has one of the lowest survival outcomes of any cancer and has a high symptom burden.[6] As a result, physical fitness before starting treatment is frequently low.[7] Lung cancer is a prime example where newer treatments and surgical techniques are showing real promise in extending life while also improving quality of life.[6,8] Prehabilitation may offer an opportunity to optimise patients' physical condition, reduce incidence and severity of current disabilities and side-effect related complications, as well as open up additional treatment options.[1]

The National Lung Cancer Audit (NLCA) 2020 report includes a recommendation to improve Non-Small Cell Lung Cancer (NSCLC) systemic anticancer therapy rates. The audit quality improvement toolkit includes a clear recommendation to improve patient access to dietetic support, physical activity and smoking cessation, as well as ensuring patients' general health is maintained or improved between diagnosis and treatment by providing specialist palliative care.[9]

Many of the components needed for setting up prehabilitation already exist within Trusts. The challenges are to identify where these services sit and how to harness and co-ordinate them. This report will show you how to put a case forward to your management team to secure financial commitment to prehabilitation and the resources needed to establish it. The report will provide examples of current practice within the NHS which can provide insights when making a case, as well as helping to plan the services.

Pamela Rose, Lung Cancer Nurse Specialist, the Beatson West of Scotland Cancer Care, Glasgow shares how she helped establish a service and measure effectiveness:

The prehabilitation clinic was launched by the lung team at the Beatson with the aim of increasing patients' suitability for available treatment options, to reduce treatment toxicities and improve treatment outcomes in those receiving a radical radiotherapy with or without chemotherapy. We began with the aim of supporting all lung cancer patients but when the clinic got up and running, we realised we didn't have capacity to see all of them so decided to focus on only those receiving 20 fractions of radiotherapy, with or without chemotherapy.

The prehabilitation team consists of a lung CNS, physiotherapists funded through a Macmillan physical activity project and a smoking cessation officer. The clinic runs weekly and patients are allocated an hour-long appointment slot two to three weeks before starting treatment. As it is a new service, I was keen to ensure that the data collected would not only be relevant to the patient but also measurable. The areas I chose to focus on were the nutritional and holistic needs of patients.

Reduced appetite and weight loss can be prevalent throughout a patient's journey with malnutrition commonly associated with poorer outcomes and reduced quality of life. For patients receiving thoracic radiotherapy the risk of malnutrition can be greater due to the effects of oesophagitis. So, using the Malnutrition Universal Screening Tool (MUST) to record a patient's weight and risk of malnutrition seemed sensible.[10] A food first approach is recommended and at prehabilitation we discuss with patients the importance of maintaining their intake during treatment to improve symptoms such as fatigue and to aid recovery. I provide written information including an Eating to Feel Better leaflet and nourishing drinks leaflet and high calorie snack list.[11] We record the patients' MUST score at each time point. If their score continues to increase, they are issued with nutritional supplements and a referral to their local community dietician is made.

Patient-reported outcome measures can improve communication between the patient and healthcare provider, monitor progress and improve quality of life and standards of care, so I opted to use the Functional Assessment of Cancer Therapy – Lung (FACT-L) questionnaire.[12] Not only does it explore the holistic needs of the patient from their perspective but it is also a validated tool; it is used in clinical trials and sensitive to changes in quality of life. It allows me to focus on what matters most to each patient, tailor their care to their needs whilst monitoring their progress.

At clinic, we also obtain routine bloods and observations, monitor the patients distress score and Patient-Reported Karnofsky Status.[13] During the consultation I talk the patient through what to expect from treatment, answer any questions they may have, provide symptom management, psychological support, self-management information, signposting or onward referrals to suitable services.

Physiotherapy is usually reactive to changes in the patient's function ability rather than being proactive and tends to be available to inpatients or in the community rather than a hospital outpatient setting. Although the benefits of exercise are well known it is not routinely offered as part of the standard care lung cancer patients receive. At the prehabilitation clinic, the physiotherapists assess a patient's functional ability and exercise level. They work with each patient to set personalised goals. For some, who are quite fit and active, this may be to maintain their level of activity during treatment. For others, who are frailer, it may be to improve their functional activity. Each patient is given a personalised exercise prescription with exercises they can do at home. The physiotherapists supply walking aids, if required, and refer to services such as community and pulmonary rehabilitation. Outcomes are monitored using the 30 second sit to stand test and Godin Leisure time questionnaire and support continues throughout and after treatment.[14,15]

Like physiotherapy, smoking cessation is a service mostly associated with inpatients and the community rather than the outpatient setting, however for lung cancer patients, it has both immediate and long-term health benefits. All patients who are current smokers or within six weeks of stopping meet with our smoking cessation officer to discuss the options available to them to help them stop or stay off smoking. For those who accept smoking cessation they agree a quit date or target, are given a prescription for nicotine replacement therapy or drugs used for smoking cessation and receive weekly telephone support for 12 weeks.

Thanks to the measurement processes in place, we are already seeing tangible benefits from the prehabilitation clinic. It's really worth thinking about how you could set something up based on what is available to you. My advice is:

- Don't reinvent the wheel, you don't always need a business case or funding to provide prehabilitation
- Select validated tools – patient reported outcome measures help the patient identify their needs and can also generate evidence to show the effectiveness of the service
- Think about what self-management information is available to empower the patient to manage their needs
- Access other services such as walking groups and exercise classes

Select validated tools – patient-reported outcome measures help the patient identify their needs and can also generate evidence to show the effectiveness of the service.

Pamela Rose, Lung Cancer Clinical Nurse Specialist, Beatson West of Scotland Cancer Centre

SECTION 4.

BUILDING A BUSINESS CASE TO HELP SECURE THE RIGHT SUPPORT

Delivering meaningful prehabiliative support involves changing the conversations had with patients, the time to tailor and show what they need to do, and providing high quality patient information on the resources available through the NHS or local community at the right moment in the care pathway to maximise uptake.[1] This means health service managers need to understand how prehabilitation can work in their setting, the value it will add and what is required, which will include time, resources and often working across organisational boundaries both in a Trust and wider local health and public sector organisations. Therefore, some planning is necessary before making the initial approach to senior management.

The HM treasury developed a five-case model to help identify areas to consider when creating a business case/ persuasive argument to change public service.[16]

Creating a clear and strong structure for your case is key (see table below for guidance), as is understanding your audience and their needs/ interests. It is important to show how your proposal links to local, regional and national priorities and constraints, with clear evidence through research examples and case studies to show the positive impacts it can bring. Costs and benefits of the proposed services should be clear and well considered, and financial constraints where additional funding would be needed should be well-articulated. It is a good time for healthcare professionals such as nurses, allied healthcare professionals (AHPs) and medical staff to apply for extra support because the current move towards more integrated health and social care means this is a good time to try to influence decisions.

Structure	What to include
Case for change	• What is the issue you want to address? • What impact is this having on inequalities, experience of people living with cancer, clinical outcomes, workforce capacity, finance and performance, for example?
Options appraisal	• What responses were considered (if more than one) and how was a preferred option reached? • Evidence from elsewhere or from a pilot (make sure this is relevant to your central idea, avoid 'scope creep') • Be clear about how your proposal links to wider health and care strategy
Describing your approach	• High level description, aims and timescales
Measuring benefit	• Benefits (financial, clinical and holistic experience) thinking about: - Individual/person living with cancer - Workforce - System/financial
Resource requirements	• How existing workforce will be supported through the approach • What new roles are required and how will these be sustained?
Risk	• What risks have been identified and how will these be mitigated?

The Nursing Times recently translated the Treasury's model into an article that made it relevant for nurses and AHPs writing in context of health service improvement proposals to clearly explain how to develop a business case and gain support for investment and change.[17] For many, putting together a business case can seem complicated with the need for specialist expertise. The article gives strategic recommendations and practical tips to help write thorough and convincing business cases and shows that the process may take time, but it is achievable.[17] The evidence to support many of the checklist questions below can be found in the Macmillan Cancer Support Guidance and Principles document:[1]

Business case checklist (developed by British Association of Dermatologists)**:**[18]

- Is the need for the service clearly stated?
- How does it contribute to NHS policy and priorities?
- How does it contribute to the Trust's objectives and plans?
- Are the benefits clearly stated?
- Is it clear how the benefits will be realised?
- Are the demand, capacity and income forecasts robust?
- Are the capital and revenue costs robust?
- Is it clear why the preferred option has been selected?
- Is the project affordable?
- Are the risks and plans to mitigate them explicitly stated?
- Do the main stakeholders support the project?
- Does the team have the capacity and capability to deliver it?

4.1. UNDERSTANDING THE LOCAL, REGIONAL AND NATIONAL PRIORITIES

To help support a case for giving time and resource to building prehabilitation within a practice, there are already numerous examples of how prehabilitation principles fit with national and regional priorities.

NHS LUNG CANCER DEFINED STANDARDS OF CARE[19]

The Lung Cancer Diagnostics Standards of Care developed by the Lung Cancer Clinical Expert Group and led by Professor David Baldwin recommend that the first assessment of a patient with suspected lung cancer should be when prehabilitative care is started. The Standards of Care note the pillars of prehabilitation are:

- Offer smoking cessation
- Encourage physical activity
- Prevent and manage malnutrition

NHS LONG TERM PLAN (LTP)[20]

Delivering prehabilitation as part of cancer pathways aligns with several of the key priorities in the NHS Long Term Plan, personalised care and shared decision-making programmes, the NHS England Commissioning Guidance for Rehabilitation and other relevant policies in the devolved nations, including:[1,20,21]

- Providing the opportunity to deliver 'out of hospital care' and integrated care to those with cancer from diagnosis onwards and support them before and during their treatment
- Supporting prevention by promoting health and wellbeing and reducing risk factors which can predispose people to cancer and other long-term conditions
- Giving people the ability to be fitter as they face treatment for cancer and throughout the pathway
- Using technology and digitally enabled care to support people to self-manage their health and wellbeing

NHS PEOPLE PLAN[22]

The NHS interim People Plan has been published to complement the NHS Long Term Plan and many of its aims, particularly in its section 'Delivering 21st Century Care' by setting out plans to support the LTP's implementation with the support of an appropriate workforce.[22] The plan proposes a more multidisciplinary way of working across the workforce, emphasising the need to continue developing a pipeline of AHPs in order to deliver new service models set out in the LTP. It calls for the encouragement of extended practice and for the skills of professionals to be used in new settings and in new team structures.[22] Prehabilitation as a concept plays very well to those goals.

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE (NICE)[23,24]

Prehabilitation is discussed in the 2014 guidance that NICE issued on behavioural changes. A series of recommendations is set out on how to support behavioural change and specifically talks about prehabilitative interventions. The guidance highlights the importance of a person-centred approach, noting that the intensity of support required will vary according to individual needs. It notes that professionals should support behaviour change and must work collaboratively with the patient to achieve any change. Conversations must consider a person's needs, their social, cultural and economic context, motivation and skills. It also requires identification of potential barriers the person may face in initiating a change and maintaining that behaviour.[23]

In 2019, NICE published a health and social care directorate quality and standards briefing paper which suggested that prehabilitation could be important for patients with borderline fitness to help them become suitable to be considered for surgery.[24]

FOUR UK NATIONS PLANS[25,26,27,28]

Regionally, Wales and England are most aligned with the provision of prehabilitation in cancer care. Prehabilitation is explicitly mentioned in the Cancer Delivery Plan for Wales 2016-2020.[25] Preventative rehabilitation is discussed in England's World Class Cancer Outcomes 2016 policy citing several of the measures associated with prehabilitation.[26]

Scotland's policy 'Beating Cancer' discusses the benefits and support that can be given post treatment to promote healthy lifestyles and optimise recovery.[27]

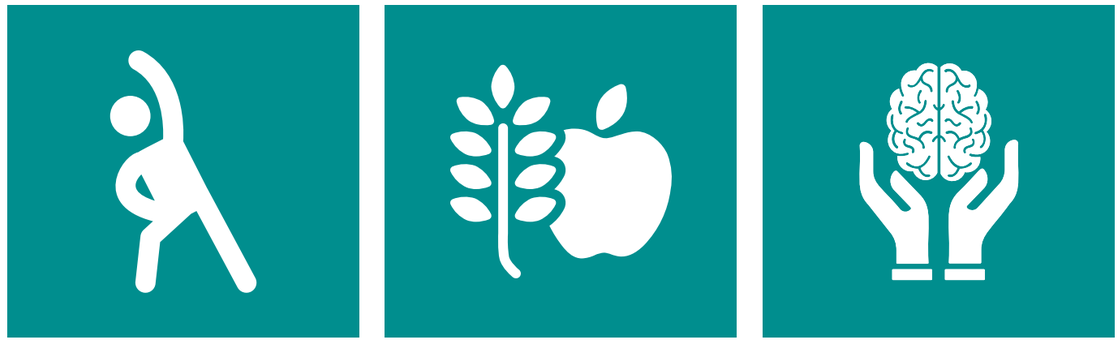
Northern Ireland's Department of Health is currently in process of a comprehensive 10 year strategy for cancer that is in scope and consultation during 2020.[28]

It is important to understand your local priorities, what is important in your area and within your clinic. Talking to members of your team, looking at information about your hospital and any communications from senior management will help to become familiar with what are key areas of focus in order to shape your application to have increased appeal to senior management.

SECTION 5.

BREAKING DOWN PREHABILITATION

Macmillan Cancer Support's definition of prehabilitation focuses on three main areas of a patient's wellbeing to get them ready for treatment and its effects:



Ideally, physical activity, nutrition and psychological support are applied together as the three key areas of prehabilitation. Macmillan Cancer Support's guidance and comprehensive evidence review provides a detailed description of the evidence for each of these, but stated very briefly these are:

PHYSICAL ACTIVITY:[1]

- Evidence indicates that improving fitness levels and being physically active after a cancer diagnosis is associated with increased survival time and reduced risk of disease progression.
  - o Poor cardiorespiratory fitness after a cancer diagnosis is associated with a higher prevalence of acute and chronic treatment-related toxicities such as cardiovascular morbidity, poorer health-related quality of life, fatigue and increased risk of all-cause and cancer specific mortality.

NUTRITION:[1]

- Research shows that people who have been identified as having nutritional needs, particularly being underweight and weight losing have an increased risk of poorer outcomes. Evidence also shows that patients with cancer are at particularly high risk of malnutrition because both the disease and its treatments threaten their nutritional status.

MENTAL HEALTH:[1]

- Numerous studies in different areas of health and cancer types continue to link depression and distress with poorer outcomes and even increased death.
- There is also research into ongoing risk of suicide after cancer diagnosis and treatment which suggests that people diagnosed with cancer have higher rates of suicide than the general public, especially following diagnoses of lung, stomach and head and neck cancer.

Appropriately targeted interventions aimed at improving physical and/or mental health (exercise, nutrition and psychological interventions) along with behaviour change are safe, accepted and welcomed by people with cancer and promote quality of life.

A growing body of evidence also suggests that targeted interventions may reduce side effects of treatment. As well as the patient benefit, exploring the role prehabilitation can have on reducing healthcare professional time dedicated to side-effect management could be a valuable research goal for piloting a service.

5.1. ANALYSIS OF EXISTING RESOURCES

Before starting to build a case for new investment, a comprehensive audit should be carried out to understand what already exists in the practice/hospital, what you can access and what you need. There may be resources and people outside your immediate team to help and the needs and capabilities of the services for each clinic will vary depending on what already exists and is often linked to the size of the practice/hospital. For example, existing physiotherapy departments may be operating on a reactive model of care to help correct functional problems that patients are experiencing and may welcome the opportunity to work with colleagues to be proactive in offering support that prevents problems happening. The below list outlines the key questions to ask.

Questions to help with audit:

- What is currently in place for physical, nutritional and psychological care?
- How could these be adapted to support prehabilitation and optimise patients for treatment?
- How effective are the current services?
- Are there service improvement tools available to self-evaluate prehabilitation services?
- Is there a service which looks to improve patients' health and wellbeing in advance of treatment whether surgery/ radiotherapy or systemic anti-cancer therapies?
- Who do you already have? What are their skills, knowledge and expertise? How could they support prehabilitation?

This allows members of the team to understand what else is being asked of a patient, agree what is realistic and how to assess if the plan is effectively improving the patient's wellbeing as they move from diagnosis through treatment.

5.2. WORKFORCE

The most significant challenge for most teams is getting the right workforce on board who can give the necessary level of commitment. It is great to have lots of professionals to call on but that isn't always possible and is dependent on the local workforce. A core team thinking about and leading on delivering prehabilitation in a region would consist of someone in charge of the patient's overall health within a cancer pathway – plus healthcare professionals who have expertise in each of the three components of physical fitness, diet/ nutrition and psychological support. The practice may have access to additional people both within the health service and wider public service/community, including a combination of registered and unregistered professionals such as occupational therapists, rehabilitation workers, fitness instructors, healthcare assistants and other volunteers.

All Lung Cancer Nurse Specialists should have completed the level two psychological skills for cancer care staff, making them well-placed to offer the psychological support that can make a big difference to patients' mental wellbeing.

Kathryn Manning, Lead Respiratory Lung Cancer Nurse Specialist, Nottingham University Hospitals.

5.3. SOURCES FOR IDENTIFYING ADDITIONAL SUPPORT

Some of the resources needed to set up a prehabilitation service may already be in existence within your hospital. However, understanding the local context is not only important to help target your business case to your senior managers but it can also provide opportunities to tie into existing resources.

Social prescribing, sometimes referred to as community referral, is a means of enabling GPs, nurses and other primary care professionals to refer people to a range of local, non-clinical services to address their needs in a holistic way and support them to take greater control of their health. Examples include volunteering, befriending, healthy eating advice and a range of sports. These activities are typically provided by voluntary and community sector organisations.

Community and primary care mental health services have been set up by the NHS and are a new community-based offer, giving access to psychological therapies, improved physical healthcare, personalised and trauma informed care and medicines management.

Smoking cessation clinics are already set up and running in many practices across the country and are supported by the NHS Stop Smoking Service. By offering behavioural support the NHS estimates quadruple the chance of success for patients giving up smoking.

Other available resources including local patient services, dietitians, support services or Cancer Research UK advice on food, exercise and wellbeing.

By accessing the services available in your area can significantly reduce workload and the demands on practice resources.

5.4. IMPORTANCE OF INDIVIDUALISATION AND TIMEPOINTS

Don't reinvent the wheel. Think about what self-management information is available to empower the patient and access other services that already exist in the community.

Pamela Rose, Lung Cancer Clinical Nurse Specialist, Beatson West of Scotland Cancer Centre

For an individual prehabilitation programme to be successful it is essential to create a personalised prehabilitation care plan (PPCP) based on the patient's and their carers' involvement. This is to make sure whatever is planned fits with the patient's lifestyle and that the carers/ family/ relatives are on board to give the best chance of the patient complying. The patient has an active role in prehabilitation and should be given the opportunity to be empowered to play a role in managing their own health and wellbeing. The success of the prehabilitation interventions also depends on the motivation and capabilities of the patient. Continuous assessment throughout the programme is important to make sure they are adapted as necessary according to how well a patient is responding and adhering to the programme.

Many patients with cancer are often not very active and may be resistant or find any changes to their routine hard to fit in with their daily life. The plan also needs to be realistic – physical activity, however small, helps reach the goal but images of younger people undertaking gym exercise is likely to be a turn-off for these patients. This is where skilled AHPs are vital and it is very important to build any effective PPCP with the patient and their carers to make sure there is buy-in straight away.

Kathryn Manning, Lung Cancer Nurse Specialist, Nottingham Hospital Trust, shares her experience of prehabilitation:

Lung Cancer Nurse Specialists (LCNSs) are in an ideal position to be able to care for patients in a holistic way, ensuring that all their care needs are addressed from referral to diagnosis, through treatment and survivorship, and including end of life care. Promoting healthy behaviours and enhancing a patient's functional capacity before starting treatment – prehabilitation – is something we've always done in the Nottingham Hospital Trust. The better people feel from the outset, the more prepared they are for their cancer journey. This includes prehabilitation and also symptom management, such as managing any pain or discomfort. It's really important that patients see the benefits of physical and mental wellbeing on their potential outcomes and we spend time from pre-diagnosis onwards to help them understand this.

The three main areas we look at are:

- How active a patient is
- What their diet is like
- Their mental wellbeing and resilience

We discuss smoking cessation, encourage oral intake (eating and drinking), gentle exercise and offer psychological support towards positive mental health and acknowledge patients' anxieties. We find it is crucial to tailor care to the patient and their likely treatment rather than adopting a 'one size fits all' approach. We learn a bit about each patient's lifestyle so we can understand how any changes could fit in with their routines. We want to make sure that what we suggest isn't overwhelming or unfeasible. The changes don't need to be big – walking up and down stairs rather than taking the lift, having one less sugar in hot drinks, making sure to get out for a short walk everyday – but these changes can make a real difference. There are also several members of the team who have been trained to give psychological support. We talk to patients to understand how they are feeling, if they are worried about what they'll be able to do in the future or about treatment. We can help to answer some of their questions, try to relieve some anxiety and help them find extra support if needed.

We also explain about performance status score – what it is, how it's decided and what it can mean. Patients need to understand that this score influences what treatments we think they'll be able to undergo and benefit from. If patients are shown performance status guidelines (fitness for treatment) they can become partners with the healthcare professionals, making informed choices about changes to their lifestyles. Lung cancer patients need to be given every opportunity to access treatment. Some patients assume that the sicker and more fragile they look, the more quickly they'll be treated. If they're offered a wheelchair to go to an appointment they'll accept, not realising what this could mean. Families and carers tend to wrap them in cotton wool, wanting to protect them against any further harm. But this can have the opposite effect. As healthcare professionals, we need to be confident that the patient will be strong enough to follow the treatment regimen recommended and it will improve their overall outcome.

Pre-diagnosis is one of the best times to talk to patients about building their strength. We know from scans if a patient is likely to have lung cancer, but the patient will not have been given a final diagnosis. They are usually in a good frame of mind to take onboard advice and make small lifestyle changes that could help their long-term outlook. We try to make sure a family member or carer is also at the meeting so they can help support these changes, as well as letting us know how well the patient is managing to keep to them.
The next time we often get to see patients is at diagnosis. We try to schedule some time to talk to patients to go through what the doctor has told them, answer questions they forgot to ask or didn't feel comfortable to ask and generally help them to take in what they've been told. This can also offer an opportunity to check-in and see how patients are getting on. We can find out if there are any difficulties with the changes we've suggested and make any revisions needed to make the changes more manageable. By this point, we have normally built up a good rapport with patients and they are happy to pick up the phone and call if they have any questions, creating the dialogue we need to be able to check regularly how they are getting on.

By looking at the time points when patients are already in contact with healthcare professionals you can decide which are the most important moments. A cancer diagnosis is often a catalyst for evaluating lifestyle choices, including exercise levels and diet and can provide the most valuable teachable moment. You can also decide whether the above time points are enough for each individual patient or if you need to organise additional points of contact to prevent them being overwhelmed by information.

SECTION 6.

WORKING TOGETHER TO GATHER EVIDENCE AND INSIGHTS

Prehabilitation services for people living with cancer are developing across the UK and the number of services mean that there is an ever-growing multi-professional community of expert providers. At this point in time this is still very much a field where people are still learning and there is no exact model to follow. There are also gaps in the primary evidence that needs to be filled to fully embed this into long-term NHS practice. If you are piloting a model, thinking of a research question you can help answer and getting some solid Quality Assurance measures in place from the start is important.

Organisations like Macmillan Cancer Support, the National Institute of Health Research and National Cancer Research Institute are all putting effort into health research and gathering evidence for prehabilitation. Additionally, there is a growing set of trials and centres of excellence starting to appear around the country from whom you may seek advice locally. Some of these are listed in the Macmillan Cancer Support's Guidance.

PREHABILITATION IN PRACTICE[1]

map of some prehabilitation services and evaluations for people living with cancer across the UK

1. **Lung cancer Prehab programme**
   Barts Thorax Centre, Barts Health NHS Trust Centre, Barts Health NHS Trust
2. **Prehabilitation offered based on referral**
   Royal Marsden NHS Foundation Trust
   www.royalmarsden.nhs.uk/your-care/living-and-beyond-cancer
3. **PREPARE programme**
   Imperial College Healthcare NHS Trust
   www.imperial.nhs.uk/our-services/cancer-services/oesophago-gastric-cancer/prepare-programme
4. **Kent and Medway prehabilitation service**
   Medway NHS Foundation Trust
   www.medway.nhs.uk/news/prehabilitation-preparing-patients-for-surgery/80593
5. **WESFIT – Wessex fit 4 cancer surgery trial**
   University Hospital Southampton NHS Foundation Trust
   http://wesfit.org.uk
6. **Prehabilitation services**
   Bristol
   http://www.uhbristol.nhs.uk/patients-and-visitors/your-hospitals/bristol-royal-infirmary/what-we-do/uppergi/prehab
7. **Pre-optimisation and prehabilitation programme (POP)**
   Wales
8. **PREPARE ABC**
   Norwich
   www.uea.ac.uk/prepare-abc
9. **Aintree prehabilitation service**
   Aintree University Hospital NHS Foundation Trust
   www.csp.org.uk/frontline/article/cancer-prehab-fit-surgery
10. **ERAS + and Prehab4cancer Greater Manchester**
    GM Cancer NHS Foundation Trust
    www.gmactive.co.uk/prehab4cancer/
11. **PREPWELL** South Tees Hospitals NHS Foundation Trust
    www.southtees.nhs.uk/services/prepwell-project/
12. **NIPI** Newcastle Upon Tyne Hospitals NHS Foundation Trust
13. **Prehabilitation in colorectal patients**
    Glasgow
14. **Prehabilitation in prostate cancer**
    Belfast Hospital NHS Trust
    www.csp.org.uk/news/2016-09-29-belfast-physios-use-prehab-improve-quality-life-men-prostate-cancer

It is important and valuable for other healthcare professionals considering setting up prehabilitation services to share your experiences, successes and things to learn from.

SECTION 7.
SUSTAINABILITY

It may be necessary and possible to secure extra funding from outside sources to allow for the start up or sustained running of services. There are a number of NHS programmes which give access to funding if you can show that your request meets the criteria – given the current need for more evidence, research grants may be one. The National Institute of Health Research (NIHR) AHP and Nursing Research Fund is one example to consider applying for in order to carry out pilot projects or gather further insights. The NIHR also offers a clinical academic research internship which provides funds to develop hypotheses and further skills.[29]

SECTION 8.
CONCLUSION

The benefits of prehabilitation are widely recognised and have been shown to fit with many of the national and regional priorities and policies in the United Kingdom. This report has brought together resources and examples to help develop a clear and persuasive argument for gaining commitment from senior management. It also shows that there is no defined scope for prehabilitation activities and benefits to patient outcomes are being seen at all levels and scales, across the country. Therefore, size does not have to be a barrier to building services with numerous examples already existing which can give insights and suggestions about how to implement different scales and levels of programmes. There is considerable support and enthusiasm for making prehabilitation part of every cancer patient's care pathway. Setting up services may require some initial investment of time but there is lots of help around. By talking to colleagues in other disciplines and making new connections you can gather insights and identify resources to help establish the right service for your practice.

For the latest information on prehabilitation, contact the Macmillan Cancer Support prehabilitation team at:

Tel: 0808 808 00 00

Email: CancerPrehabilitation@macmillan.org.uk

Web: www.macmillan.org.uk/about-us/health-professionals/resources/practical-tools-for professionals/prehabilitation.html

If you have questions or comments about this document and the issues raised, the MSD Policy & Communications team can be contacted via email at: oncologyexternalaf@msd.com

REFERENCES

1. Macmillan Cancer Support. 2019. Prehabilitation for people with cancer. Available online at: www.macmillan.org.uk/_images/prehabilitation-guidance-for-people-with-cancer_tcm9-353994.pdf. Accessed September 2020.
2. NHS Calderdale and Huddersfield. Prehabilitation. Available online at: www.cht.nhs.uk/services/clinical-services/oncology/information-support/prehabilitation. Accessed September 2020.
3. Macmillan Cancer Support. 2017. Prehabilitation evidence and insight review. Available online at: www.macmillan.org.uk/_images/prehabilitation-evidence-and-insight-review_tcm9-335025.pdf. Accessed September 2020..
4. Macmillan Cancer Support. Prehabilitation Comprehensive Evidence Review. Available online at: www.macmillan.org.uk/_images/prehabilitation-comprehensive-evidence-review_tcm9-354105.xlsx. Accessed September 2020.
5. Dutkowska, AE and Antczak, A. 2016. Comorbidities in lung cancer. Pneumonol Alergol; 84: 186 – 192
6. Mazieres, J et al. 2015. Perception of lung cancer among the general population and comparison with other cancers. Journal of Thoracic Oncology. Volume 10, issue 3, P420-P425.
7. Michaels, C. 2016. The importance of exercise in lung cancer treatment. Transl Lung Cancer Res: 5(3): 235-238.
8. Jones, G and Baldwin, D. 2018. Recent advances in the management of lung cancer. Clin Med. 1: 18(Suppl 2): s41-s46.
9. Royal College of Physicians, National Lung Cancer Audit (NLCA). Quality Impovement Toolkit for Lung Cancer Services. Available online at: https://nlcastorage.blob.core.windows.net/misc/AR_2019_QIToolkit.pdf. Accessed September 2020.
10. BAPEN. Malnutrition Universal Screening Tool. Available online at: www.bapen.org.uk/pdfs/must/must_full.pdf. Accessed September 2020.
11. NHS Greater Glasgow and Clyde. Eat better feel better Leaflet. Available online at: www.communitypharmacy.scot.nhs.uk/media/2046/nhsggc-eating-to-feel-better-leaflet.pdf. Accessed September 2020.
12. FACT-L Questionnaire for patients with lung cancer. Available online at: www.facit.org/FACITOrg/Questionnaires. Accessed September 2020.
13. Karnofsky Performance Status Scale. Available online at: www.mdcalc.com/karnofsky-performance-status-scale. Accessed September 2020..
14. 30 Second Sit to Stand Test. Available online at: www.sralab.org/rehabilitation-measures/30-second-sit-stand-test. Accessed September 2020.
15. Oncology Nursing Society. Godin Leisure time Questionnaire. Available online at: www.ons.org/sites/default/files/Godin%20Leisure-Time%20Exercise%20Questionnaire_070815.pdf. Accessed September 2020.
16. HM Treasury. 2018. Guide to developing the project business case. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/749086/Project_Business_Case_2018.pdf. Accessed September 2020..
17. Nursing Times. How to write a robust case for service development. 2017. Available online at: www.nursingtimes.net/roles/specialist-nurses/how-to-write-a-robust-business-case-for-service-development-19-06-2017/. Accessed September 2020.
18. British Association of Dermatologists. Writing a Business Case. Available online at: www.bad.org.uk/healthcare-professionals/clinical-services/writing-a-business-case. Accessed September 2020.
19. Lung Cancer Clinical Expert Group. Standards of Care for Lung Cancer. Available online at: https://www.roycastle.org/for-healthcare-professionals/clinical-expert-group/. Accessed September 2020.
20. NHS. 2019. The NHS Long Term Plan. Available online at: www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf. Accessed September 2020.
21. NHS. 2016. Commissioning Guide for Rehabilitation. Available online at: www.england.nhs.uk/wp-content/uploads/2016/04/rehabilitation-comms-guid-16-17.pdf. Accessed September 2020.
22. NHS. 2019. Interim NHS People Plan. Available online at: www.longtermplan.nhs.uk/wp-content/uploads/2019/05/Interim-NHS-People-Plan_June2019.pdf. Accessed September 2020.
23. National Institute for Health and Care Excellence. 2014. Behavioural change: Individual approaches. Available online at: www.nice.org.uk/guidance/ph49/resources/behaviour-change-individual-approaches-pdf-1996366337989. Accessed September 2020.
24. National Institute for Health and Care Excellence. 2016. Health and social care directorate quality standards and indicators briefing paper. Available online at: www.nice.org.uk/guidance/qs17/documents/briefing-paper-2. Accessed September 2020.
25. Wales Cancer Network. 2016. Cancer delivery plan for Wales 2016-2020. Available online at: www.walescanet.wales.nhs.uk/sitesplus/documents/1113/161114cancerplanen.pdf. Accessed September 2020.
26. NHS 2017. Achieving world-class cancer outcomes: A strategy for England 2015-2020. Available online at: www.england.nhs.uk/cancer/strategy/achieving-world-class-cancer-outcomes-progress-report-2016-2020/. Accessed September 2020.
27. Scottish Government. 2020. Beating Cancer: Ambition and Action (2016) update: achievements, new action and testing change. Available online at: www.gov.scot/publications/beating-cancer-ambition-action-2016-update-achievements-new-action-testing-change/pages/new-actions-and-tests-of-change/. Accessed September 2020.
28. Northern Ireland Assembly. Cancer: Northern Ireland. 2017. Research and Information Service Research Paper. Available online at: www.niassembly.gov.uk/globalassets/documents/raise/publications/2017-2022/2017/health/3217.pdf. Accessed September 2020.
29. National Institute of Health Research. Pilot Internship Programme to create Research Envoys. Available online at: www.nihr.ac.uk/documents/pilot-internship-programme-to-create-research-envoys/21947. Accessed September 2020.

Merck Sharp & Dohme (UK) Limited
Registered Office: 120 Moorgate, London
EC2M 6UR, United Kingdom
Registered in England No. 233687