Optimising Cancer Outcomes in Wales using the Innovative, Pre-Optimisation and Prehabilitation Programme (POP)

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Marathon des Sables
Marathon de Cancer
Continues for weeks, months
For some..........................years
Our Cancer Patients do not just have Cancer symptoms …. 
Affect of Deprivation

• Onset of multi-morbidity occurred 10–15 years earlier in people living in the most deprived areas compared with the most affluent, with socioeconomic deprivation.
What impacts on Cancer Outcomes?

Pre-treatment Risk

Modifiable
- Lifestyle
  - Smoking
  - Alcohol
  - Nutrition
  - Activity

Acquired
- Sarcopenia
- Fitness
- Emotional resilience
- Comorbidity
  - IHD, COPD, AF, anaemia

Innate
- Age
- Gender
- Genetic
- Health literacy

Modifiable Lifestyle

Lifestyle

Health literacy
Surgery is still the main hope a cure for people diagnosed with cancer.
What we Know

• Less ‘fit’ patients are more likely to die
• Less ‘fit’ patients have a more complicated recovery
• Fitness affects outcomes of cancer patients
• Strengthening the inspiratory muscles may improve the rate of recovery and post-operative complications

• ‘Teachable moment’ - opportunity to embed sustained changes in health behaviour
Can prehabilitation make surgery a viable option for a newly diagnosed patient with lung cancer who is initially deemed to be too high of a risk for surgical resection?

1. Are all the people who can have surgery for their cancer being offered surgery?
   a. If not, why not?
2. Are those being offered surgery having the best chance of recovery and survival from their surgical care?
3. Are those patients who cannot have surgery living with the best possible quality of life?
4. Can we change post cancer treatment behaviours with prehab?
Impact of Cancer on Future Health

• Cancer Survivors are more likely to develop cardiovascular disease, diabetes and osteoporosis as well as further second primary cancers
  
  Brown et al, 1993; Travis et al, 2006

• These are linked with behaviours such as smoking, diet and physical activity
  

• Studies have shown that the majority of cancer patients do not change their health behaviour after cancer diagnosis and treatment follow up 2 years
  
Prehabilitation: preparing patients for surgery

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Major surgery is like running a marathon—and both require training

The impact of surgery leads to significant homeostatic disturbance. The surgical stress response is characterised by catabolism and increased oxygen demand. The extent and duration of the stress response is proportionate to the magnitude of surgery and the associated risk of developing postoperative complications.
Cancer prehabilitation is defined as:

“A process on the cancer continuum of care that occurs between the time of cancer diagnosis and the beginning of acute treatment and includes physical, nutritional and psychological assessments

.......and provide interventions that promote physical and psychological health to reduce the incidence and/or severity of future impairments”

Opportunities for Optimisation
When to Start Prehab?

- Mindful that stage migration in some cancers can happen at 54 days so the prehabilitation needs to be timely and not hold up treatment in any way
- 1st point of contact in secondary care - ? Outpatient dept
- Optimise patient whilst diagnostics and decisions being made pre-treatment
- Some patients won’t have a cancer diagnosis but ‘teachable moments’ may improve future health
Opportunities for Optimisation
So what does our POP look like?
Our programme is.....

Unique

person-centred, innovative

and holistic
Background to POP Programme

• Funded awarded via the Cancer Implementation Group April 15
• Circa £380K over 3 years
• Project team in place April 16
• Programme reports via Cancer Implementation group
• National and Local Task and Finish Groups
Our PREHAB clinical model

• Is innovative in timing and composition
• Promotes self management, resilience and adoption of changes to behaviours
• Is an aggregation of clinical and holistic interventions
  – protein loading/ nutritional counselling
  – At home inspiratory muscle training/ home exercise
  – promotion of physical activity using pedometers
  – coping and wellbeing strategies
  – Lifestyle advice
  – Optimisation and screen for comorbidity
Who received Prehab?

1. We aimed to provide the support our patients needed and wanted.

2. All patients were evaluated to understand and be able to respond to their need for:

Nutrition, muscle strength, body composition, sarcopenia, performance status, 6 min walk, frailty, fatigue, HRQoL plus others, emotional status, anaemia and glycaemic control
Results so far

July to date: Aneurin Bevan UHB
Sept to date: Cardiff and Vale UHB
July (physio only) ABMU
Dec to date: Regional ‘prehab’ ABMU/Hywel Dda
170+ patients undergone prehab for suspected lung cancer
2 : 3 female:males
Aged: 73 years (range 54-87)
Risk of Patients

- Smokers: 25% current smokers
  - 90% referred for smoking cessation as part of prehab
- Alcohol: all drinking within recommendations
- Physical Activity: 15% immobile
  No patients exceeding 150mins/week (WHO)

40% COPD: 25% Diabetes 23% HT
24% anaemic 30% - inflammatory: CRP
Outcomes

• All self-reported measures show improvements from baseline to start of cancer treatments.
• Early findings suggest improvements in 6 minute walk, muscle strength, fatigue, and nutrition.
• All participants currently evaluate PREHAB as ‘good’ or ‘excellent’
• We have moved patients from a palliative to a curative care pathway, resulting in improved potential for survival.
• Moreover, for surgical patients, PREHAB reduces time spent in hospital, with fewer admissions to critical care.
• Value based care
Delaying Surgery for Prehab?

• Very controversial due to stage migration of tumours
• We have delayed patients so far for surgery for prehab due to perceived risk
• MDTs changing opinions
• Cancer Standards and waiting times
What do our patients think?

- Timing right
- Programme right
- Acceptable
- Would they change anything?
- Explanation of prehab?
- Recommend to friends and family?

YES
Mr Philip Jones
The big question is –
Can this happen in Primary Care?
Opportunities for Optimisation in primary care

- Presentation in primary care

Diagram showing health/function over time with stages: Diagnosis, Before Treatment, Acute Treatment, Survivorship, with options for PREHAB and REHAB, showing impacts on health/function.
The Bundle Components

1. Review and optimisation of existing co morbidities (register)
2. Anaemia?
3. Smoking?
4. Alcohol?
5. High Blood pressure?
6. AF?
7. Raised blood glucose?/Hba1C
8. Nutrition?
9. Exercise?
Summary

• Pre treatment optimisation in primary care is feasible

• 44% of the patients recruited needed some form of intervention and optimisation at the initial stage in primary care
UK wide Implementation

“Prehab has the potential to impact cancer outcomes more than advances in oncological treatments”

“Really important and exciting area for research and development”
The Cancer Delivery Plan

Cancer Delivery Plan for Wales 2016-2020

The highest standard of care for everyone with cancer

Produced by the Wales Cancer Network
November 2016
Stakeholder Event
National Plan for Prehabilitation and Enhanced Recovery Implementation

- Len Richards CEO Cardiff and Vale UHB taking Lead
- Developing Programme Management Plan
- Implementation Plan
In Summary

• Prehabilitation dramatically benefits patient care and outcomes
• Patients really like it - not a burden as originally perceived
• First time to our knowledge that Prehab has directly influenced survival in cancer care
• Medical colleagues claim that our prehab model has more survival benefit than oncological treatments
• Key now is to maximise benefit further by starting in primary care
• Offers a ‘teachable moment’ for behavioural change
Acknowledgments

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Samuel H. Golter

“There is no profit in curing the body, if in the process, we destroy the soul.”