Introducing Frailty Scoring into Pre-Operative Assessment.

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INTRODUCTION:

The pre-assessment clinic at the Royal Glamorgan Hospital sees approximately 70 patients a week pass through its nurse-led clinic. Frailty is a clinically recognizable state of increased vulnerability due to decline across multiple physiologic systems. It is also an important risk factor for the development of postoperative complications and increased length of stay (1), and provides a possible area for targeted, pre-operative optimisation.

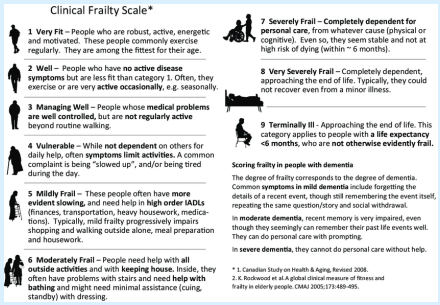
AIMS:

1. Identify a suitable frailty assessment tool for use in pre-operative assessment
2. Develop a clinical pathway for patients identified to be at high risk
3. Implement existing materials from RCoA to improve prehabilitation of patients

METHODS:

- An initial literature review identified various systems of identifying and scoring frailty and so I carried out an options appraisal to identify which is most appropriate.

- The Rockwood Clinical Frailty Scale was implemented as a screening tool with those scoring ≥6 then completing an Edmonton Frailty Questionnaire.


Clinical Frailty Scale*

1 **Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 **Well** – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.

3 **Managing Well** – People whose **medical problems are well controlled,** but are **not regularly active** beyond routine walking.

4 **Vulnerable** – While **not dependent** on others for daily help, often **symptoms limit activities.** A common complaint is being "slowed up", and/or being tired during the day.

5 **Mildly Frail** – These people often have **more evident slowing,** and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 **Moderately Frail** – People need help with **all outside activities** and with **keeping house.** Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.

7 **Severely Frail – Completely dependent for personal care,** from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 **Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9 **Terminally Ill** - Approaching the end of life. This category applies to people with a **life expectancy <6 months,** who are **not otherwise evidently frail.**

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia,** recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia,** they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

Figure 1: Rockwood Clinical Frailty Scale

- Data on age, ASA grade and Body Mass Index was recorded for all patients attending the clinic to aid identification of trends surrounding frailty scoring.

RESULTS:

Over a 3-week-period we frailty scored 169 patients and identified 5 patients who scored ≥6 on the Rockwood Clinical Frailty Scale and then went on to complete an Edmonton Frailty Questionnaire.

With an average age of 59, 88% of the patients were awaiting surgery under the specialty of General Surgery, Gynaecology or Orthopaedics.

Rockwood 6 – Moderately Frail
- 2 patients
- Average Edmonton = 9.5
  - Moderate Frailty

Rockwood 7 – Severely Frail
Completely dependent for personal care
- 3 patients
- Average Edmonton = 12.5
  - Severe Frailty

There was a positive correlation between Rockwood and both Age/ASA grade. However, frailty is not just seen in elderly patients and in fact one patient who had a Rockwood score of 7 was aged 26.

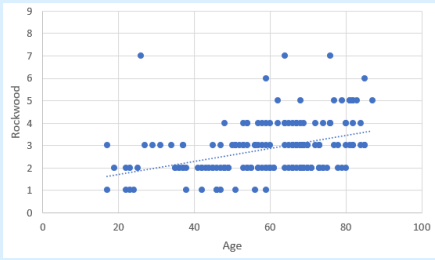


Figure 2: Correlation between Rockwood score and age

The average BMI of all patients was 32 meaning that the average patient to pass through the clinic is clinically obese. There was no correlation between Rockwood score and BMI.

DISCUSSION:

Frailty is an important risk factor for the development of postoperative complications and data has shown that as frailty index increases, a stepwise increase in morbidity and mortality is observed across all specialties (2). With an increasingly sedentary population, frailty may become more widespread in younger age groups.

Prehabilitation has been identified as a beneficial intervention for patients who are at high risk of surgical complications. Various studies mainly in GI cancer surgery have demonstrated the benefits of exercise based prehabilitation. Twice-weekly cardiovascular strengthening classes for four weeks led to a higher level of mobility at point of critical care discharge and shorter hospital length of stay in oesophagectomy and total gastrectomy patients (3).

Frailty scoring and prehabilitation is established at Addenbrooke's hospital, Cambridge (4). All patients aged ≥65 are screened for frailty using the Rockwood Clinical Frailty Scale and those who score >4 are referred to the PRIME clinic. Here patients are able to talk with an anaesthetist, geriatrician, physiotherapist and occupational therapist and so far they have achieved their aim of keeping the length of stay for frail patients the same as non-frail patients.

CONCLUSIONS AND RECOMMENDATIONS:

We have identified 5 patients over 3 weeks who would be suitable for a potential 'High Risk Clinic.' In its first phase, this will involve a face-to-face discussion with an anaesthetist to discuss perioperative risks and to identify any opportunities for optimisation.

Using the RCoA's 'Fitter, Better, Sooner' toolkit, we have produced a patient information board and now display optimisation videos in the waiting area.

Figure 3: New patient information board in the waiting area

A 'High Risk Clinic' should be established to provide individualised and targeted advice on how to optimise high risk patients in the peri-operative period.

Pre-Assessment Consultation

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Rockwood Clinical Frailty Score of ≥6

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Edmonton Questionnaire to identify modifiable risk factors

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Patient referred to 'High Risk Clinic'

ACKNOWLEDGMENTS:

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