The **Malnutrition Pathway**

CASE STUDY SERIES:

FRAIL WITH SARCOPENIA RISK AND REDUCED APPETITE

This case study illustrates how the **Assessing Frailty, Sarcopenia and Malnutrition** pathway guides assessment, intervention, and monitoring for patients at risk.

Omar, 80, male - presents to GP due to increasing fatigue, loose clothing and eating less

Social History:

- Lives alone (bereaved 5 years ago)
- Retired 5 years ago (was a postman)
- Has two supportive sons who live locally, who encouraged him to seek help
- Sons now helping Omar with some of the household chores as the house was becoming unkempt
- Mobilises with a walking stick albeit with increasing difficulty

Medical History:

- Increasing fatigue, making it harder for him to look after himself and the house
- Other diagnoses include:
    - Heart failure
    - CKD 3
    - Prediabetes
    - Hypertension
    - Osteoarthritis
    - Prostate cancer (stable on androgen deprivation therapy)
    - Gastro-oesophageal reflux
    - Depression

Medications:

- Omeprazole
- Calcium and vitamin D
- Bisoprolol
- Furosemide
- Sertraline
- Goserelin (hormonal therapy)

Nutritional Status:

- Height: 5'8" (1.73m)
- Weight 6 months ago: 79kg
- Weight today: 71kg (23.7kg/m^2, representing a 10.2% weight loss)
- Gradual decrease in food intake

STEP 1: Identify individuals with potential frailty

Relevant factors:

- Unplanned weight loss
- Reduced mobility
- Easily fatigued
- Advanced age
- Social isolation
- Polypharmacy
- Heart failure
- Cancer (on androgen deprivation therapy)

Due to the presence of risk factors, the 'Assessing Frailty, Sarcopenia and Malnutrition' pathway is commenced to determine degree of frailty and opportunities for optimised management

STEP 2: SARC-F questionnaire

Strength, Assistance with walking, Rising from a chair, Climbing stairs and Falls (SARC-F) Questionnaire:

- A lot of difficulty lifting and carrying 10lbs – Score 2
- Some difficulty walking across a room – Score 1
- A lot of difficulty transferring from chair or bed – Score 2
- A lot of difficulty climbing stairs – Score 2
- No falls in the past year – Score 0

Total = 7 (high risk of sarcopenia)

STEP 3: Explore risk factors for malnutrition

Experiences fatigue and low energy levels

- Reduced appetite with significant weight loss
- No dysphagia

Due to significant concerns, MUST is completed as well as a more detailed nutritional assessment:

MUST

- BMI: 23.7 kg/m² - Score 0
- Unplanned weight loss: 10% over 6 months - Score 2
- Acute disease effect: 0 (rarely applies outside hospital)
- **Total MUST score: 2 (high risk)**

More detailed nutritional assessment:

- Reports having somewhat of an appetite but then quickly feeling full - early satiety
- Has loose-fitting dentures which can make it harder to chew food
- Food doesn't taste like it used to and has gone off various foods. Inspection of the tongue reveals oral thrush.

Becoming increasingly constipated over the last few months, now opening his bowels every 2-3 days instead of daily like he used to. Ongoing low mood.

Interpretation: high risk of malnutrition with multiple exacerbating factors.

STEP 4: Determine frailty status (CFS)

Clinical Frailty Scale (CFS):

- **Score of 6** – increasingly dependent on others, difficulty looking after the house and declining mobility

STEP 5: Classify frailty and determine interventions

Classification:

- Frail
- At risk of sarcopenia
- At high risk of malnutrition

Interpretation: sarcopenia and malnutrition are likely to be contributing towards physical decline. Treatment of these factors may prevent further progression of frailty.

Comprehensive Geriatric Assessment (CGA) was undertaken due to clinical concern about the rate of frailty progression – five domains were assessed:

1. Medical assessment – polypharmacy with potential contributors to fatigue and appetite decline (bisoprolol, furosemide; possible under-treated depression.
2. Functional assessment – struggling with ADLs, increasingly relying on furniture, walking stick used but still struggling, fatigue impacting day-today function.
3. Psychological/cognitive assessment – low mood, possible lack of motivation linking to social withdrawal. No obvious red flags for dementia.
4. Social/environmental assessment – Lives alone with limited day-to-day support, assistance from sons only intermittent – socially isolated.
5. Nutritional assessment – as described in STEP 3 above.

This CGA supported the decision to coordinate a comprehensive MDT plan.

STEP 6: Take action

- High-protein, nutrient-dense diet encouraged; provided Your Guide to Making the Most of Your Food.
- Little-and-often eating pattern recommended for early satiety
- High-protein, low-volume ONS twice daily; taken between meals. Samples sent and son fed back with preferred flavours for prescription. Provided ONS advice leaflet
- Treat oral thrush and start PRN laxatives for constipation
- To seek dental advice regarding loose dentures

Referrals made to:

- Practice Pharmacist – for structured medication review, focussing on frailty management
- Community Dietitians – due to high MUST score
- Occupational Therapists – for home/environmental support
- Physiotherapists – for assessment of suitable and personalised physical interventions to manage frailty
- Social Prescriber for support with loneliness

Outcomes:

At 12 weeks:

- Weight increased by 1.5kg
- Appetite improved following resolution of constipation and thrush
- Attending 'strength and balance' classes in addition to hydrotherapy - feeling stronger and more mobile
- Coping well at home with less frequent help required by sons
- Seen by Community Dietitians who have weaned him down to one serving of ONS per day alongside a high-calorie, high protein diet