

## Management of the Frail Older Patients: What Are the Outcomes

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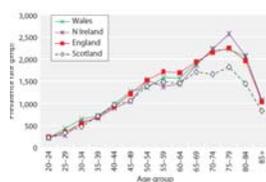
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### Increasing prevalence of "old old" on RRT

RRT prevalence by age (per million age related population)



	75-84 yrs	>85 yrs
2009	5463	1030
2014	6647	1507
	↑ 22%	46%

UK Renal Registry

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### Frailty

Mrs A, 80 years old



Mrs B, 80 years old

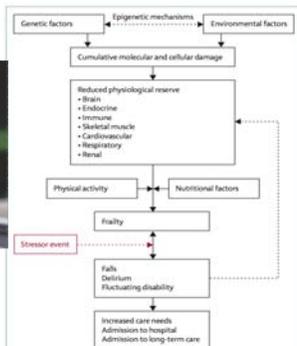


Figure 2: Schematic representation of the pathophysiology of frailty

Clegg et al, Lancet 2012

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### Common clinical presentations of frailty

- **Non-specific:** extreme fatigue, unexplained weight loss and frequent infections
- **Falls:** balance and gait impairment important risk factors and are major features of frailty
- **Delirium:** rapid onset of fluctuating confusion when admitted to hospital. Associated with adverse outcomes and poor survival
- **Fluctuating disability:** day to day instability resulting in good and bad days

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### FEPOD (Frail Elderly Patient Outcomes on Dialysis) Study

- Prospective observational study (Assisted PD vs HD)
- n = 251, age > 60 years
- 48% met criteria for frailty
- Median number of comorbidities = 2
- **Higher treatment satisfaction in PD cohort , at baseline**
- Otherwise no difference in QoL measures , at baseline or during follow up
- Frailty predominantly associated with poor QoL outcomes

Iyasere O et al; CJASN 2016

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### FEPOD: Frailty is principal predictor of outcomes and not dialysis modality (aPD cf HD)

Outcome	Predictor	Multiplicity Adjusted P-value	Effect Size (95% CI)
Illness Intrusion	Age	<0.01	0.98 (0.97 – 0.99)
SF12 PCS	Frailty	<0.01	0.90 (0.88 – 0.93)
SF12 MCS	Frailty	<0.01	0.94 (0.91 – 0.97)
Illness Intrusion	Frailty	<0.01	1.14 (1.09 – 1.24)
Barthel Index	Frailty	<0.01	0.89 (0.86 – 0.93)
Symptom burden	Frailty	<0.01	1.23 (1.13 – 1.33)
Renal Treatment Satisfaction	HD vs PD	0.03	0.93 (0.89 – 0.98)

Iyasere O et al; CJASN 2016

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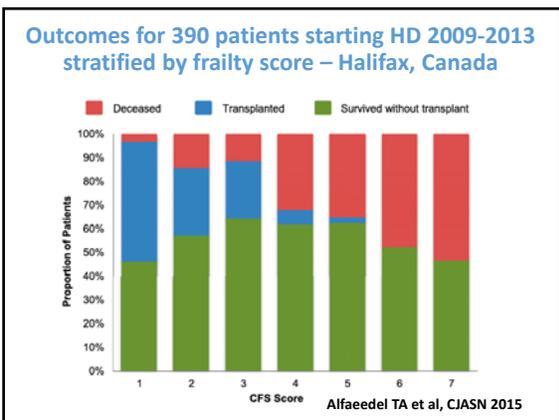
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### Geriatric assessment and follow-up for patients identified as frail

- **Comprehensive geriatric assessment:** formal evaluation of patients using a 'geriatric lens'.
- Conducted over several visits, in home and clinic, by multiprofessional team including nursing, physiotherapy, occupational therapy and social work
- Subsequent support has been shown to reduce hospital admissions, falls and moves into long-term care

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### Impact of frailty on patient management

Frailty aspects	Clinical considerations	Healthcare challenges
<b>Cognitive impairment</b>	<ul style="list-style-type: none"> <li>- Degree of impairment and appropriateness of dialysis</li> <li>- Strategies to limit the impact of dialysis on cognitive impairment</li> </ul>	<ul style="list-style-type: none"> <li>- Incorporation of cognitive assessment into routine nephrological care</li> <li>- Time for complex discussions and advance care planning</li> <li>- Adjustment to dialysis</li> </ul>
<b>Functional impairment</b>	<ul style="list-style-type: none"> <li>- Potential impact of dialysis on functional decline</li> <li>- Dependence and optimal dialysis modality</li> <li>- Exercise as a preventive strategy</li> <li>- Falls and fracture risk</li> <li>- Transport requirements</li> </ul>	<ul style="list-style-type: none"> <li>- Liaison with geriatric teams for assessment, falls clinics and community support</li> <li>- Involvement of rehabilitation teams</li> <li>- Routine use of exercise physiotherapists</li> <li>- Cost of transport</li> </ul>

Brown E A et al, Kidney Int 2017

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**Impact of frailty on patient management**

Frailty aspects	Clinical considerations	Healthcare challenges
<b>Protein Energy Wasting</b>	<ul style="list-style-type: none"> <li>- Prognostic marker for outcomes on dialysis</li> <li>- Ensuring adequate nutritional support</li> </ul>	<ul style="list-style-type: none"> <li>- Regular dietetic review and access to nutritional supplements</li> <li>- Support in community for shopping, preparing food</li> </ul>
<b>Multimorbidity</b>	<ul style="list-style-type: none"> <li>- Dialysis tolerability and time to dialysis recovery</li> <li>- Polypharmacy and risk of adverse reactions</li> </ul>	<ul style="list-style-type: none"> <li>- Adjustment of HD to reduce time to recover</li> <li>- Increased use of PD</li> <li>- Involvement of pharmacists to review medications</li> <li>- Resetting of goals to restrict medications to symptom control</li> </ul>

Brown E A et al, Kidney Int 2017

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**Clinical considerations for dialysis in frail patients: HD**

- Timing of dialysis initiation
- Dosage – incremental, 3/week, more frequent, nocturnal
- Intradialytic hypotension and associated ischaemic problems
- Transport requirements to attend sessions
- Vascular access
- Time to recovery

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**Clinical considerations for dialysis in frail patients: PD**

- Timing of dialysis initiation
- Dosage – incremental or conventional (daily)
- Ability of patient to learn technique
- Need for and availability of assistance to perform dialysis
- Need for social support from family or community

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**Imperial College Healthcare: Integration  
with services for older people in  
community and secondary care**

- Assessment
- Access to
  - Rehabilitation
  - "Hospital at home"
  - Social support in community
  - Rapid discharge planning
- Referral to palliative care support when appropriate
  
- Funded by
  - Imperial College Healthcare Charitable Funds (Jul 15 – Dec 16)
  - British Patient Kidney Association (Jan 17 – Jul 18)

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