

Proposal for DfE (formerly DEL) scholarships for the academic year 2018/19

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Title: Exploring cardiac cachexia in advanced heart failure

Background: Cardiac cachexia is associated with increased mortality and morbidity¹, and is often characterised by reduced response to treatments and poor quality of life². Previous qualitative studies on cancer cachexia demonstrated how it has dire implications for patients and families, extending beyond physical, psychological, social and emotional issues³. Cardiac cachexia was defined as weight loss of at least 5% in ≤ 12 months or BMI $< 20\text{kg/m}^2$ plus three of the following five criteria: Decreased muscle strength, fatigue, anorexia, low fat-free mass index, abnormal biochemistry (low albumen $< 32\text{g/L}$, raised inflammatory markers $\text{CRP} > 5\text{mg/L}$, anaemia $\text{Hb} < 120\text{g/L}$)⁴. In a recent retrospective review of patients who attended a regional heart failure clinic, 37% (n=235) could be considered at immediate risk of cardiac cachexia.

Aim: To explore cardiac cachexia in advanced heart failure

Objectives:

1. To evaluate the prevalence of cardiac cachexia according to the criteria outlined⁴ in a sample of patients with NYHA Class III – IV heart failure
2. To explore the experience of cardiac cachexia from the perspective of patients and their caregivers

Methods: A mixed methods approach will be employed incorporating three phases. **Phase One:** Based on size of current databases a convenience sample of 357 patients with advanced heart failure (NYHA III & IV), will be recruited from the Heart Failure service at Belfast & South Eastern Health & Social Care Trusts over a twelve-month period. Eligible patients will be identified by the Cardiology Consultant or Heart Failure Nurse and invited to participate. Informed consent will be obtained before patients are requested to complete a number of validated questionnaires; Fatigue (MFI)⁵, quality of life (EuroQol 5D)⁶ and an anorexia assessment⁷. Measurements will be taken of patient's muscle mass⁸ and routine biochemical & haematology results over the preceding six months recorded. Data will be analysed and a purposive sample of patients identified with cardiac cachexia invited to participate in **Phase 2:** Informed consent will be obtained from patients (n=12) and their carers (n=12) before semi-structured interviews conducted to explore their understanding of cardiac cachexia and its impact on their daily life. Data will be thematically analysed using a content analysis approach, to identify the salient features of this condition in preparation for further work in the area. The research team are experienced in exploratory work involving this patient population and their carers⁹.

Expected outcomes: Cardiac cachexia is a debilitating condition associated with an extremely poor outcome. Early identification of patients at risk of cardiac cachexia and the development of appropriate interventions to improve their quality of life are urgently needed. The outcome from this study will help to inform current clinical practice, policy and education.

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