

## CONFERENCE ABSTRACT

# Exploring the Coordination of Care for People with Multimorbidities and their Support Networks using Social Network Analysis: A Research Protocol

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**Introduction:** Multimorbidity is the presence of two or more chronic conditions within one individual. Continuity of care and appropriate treatment decisions are essential for these individuals in order to avoid adverse outcomes and preventable healthcare costs. People with multimorbidity (PMMs) can have multiple treatment options and/or require multiple services concurrently, which often is exacerbated by fragmented health systems organised to deliver episodic care for single conditions (“disease silos”). Thus, achieving effective integrated care is a particularly complex task for this population. Yet research to date on how care is coordinated for PMMs has been limited, and extant research tend to focus on formal care delivery and seldom accounts for the “hidden” informal care provided by families and communities. There is a need for research that examines how access to care for this population is shaped by clinician-to-clinician and peer-to-peer interactions and how formal and informal care can be integrated.

**Aims:** We aim to gain a better understanding of how care is coordinated for PMMs both formally and informally, and how this influences their access to health services. Study objectives include:

1. Illuminate the clinical and social support networks that PMMs have with their healthcare providers and with their families and communities; and identify key individuals that broker care for PMMs within these networks;
2. Identify barriers and facilitators that influence PMMs’ access to formal healthcare services
3. Evaluate the extent to which PMMs’ clinical and social support networks influence their health service utilisation patterns and health outcomes. An hypothesis is that good PMM care coordination results in better access to services, which may manifest as increased healthcare use compared to those with poor care coordination.

**Methods:** Social network analysis (SNA) is chosen as it facilitates the exploration of social interactions on care coordination:

1. Ego-centric SNA. will be performed on a sample of PMMs receiving formal care from a collaborating hospital. Profiles of PMM are being developed based on analysing combinations

of chronic illnesses that are most prevalent in Ireland that were captured within "The Irish Longitudinal Study on Ageing" (\_TILDA\_) datasets. Social support data on PMMs will be collected via a researcher-administered network survey, and respondent-driven sampling will be used to recruit members of PMMs' informal support networks for data on interactions with formal healthcare providers in accessing care for PMMs.

2. Socio-centric SNA. will be performed on a sample of clinicians responsible for the formal care of the PPMs recruited in the study. The survey will ascertain the type and frequency of interactions they have with other clinical and social care team members also involved in caring for the PMM cohort. Key individuals involved in coordinating formal care for the PMMs will be identified, along with any gaps that exist in the spectrum of formal care for PMMs, and any barriers/ facilitators that impinge on integrated care delivery for PMMs. The survey for these clinical support networks will be based on adapting an instrument already trialled in a number of social network studies conducted in Irish health and social care settings.

The SNA measures on the existence and structures of PPMs' support networks will then be correlated with the level and type of health service utilisation by these individuals to determine whether better care coordination may lead to better access and more service use.

**Results:** Visual displays (sociograms) will summarise the structure of the PMMs' support networks. A number of relevant SNA metrics for both ego- and network-level analysis will also be reported, along with measures capturing the respondents' self-reported barriers and facilitators to accessing care across clinical domains. Results from testing hypotheses relating PMMs' clinical and social support networks with their health service utilisation patterns and health outcomes will be reported.

**Discussion:** Behaviours in and outside healthcare settings have been shown to play a key role on health outcomes and on financing healthcare. This research protocol outlines a study employing network research methodologies that will contribute to the evidence base on chronic disease management not only for people with multi-morbidities, but also on the general literature on integrated care and on formal and informal health organisation.

**Conclusions:** This study is one of the first studies of its kind to utilise network research methodologies to explore the coordination and integration of care for people with multi-morbidities. Data from this study will add to our knowledge and understanding about how care is currently organised for and by PMMs, and will inform strategies for developing integrative care models for this population.

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**Keywords:** service coordination; multimorbidity; integrated care; social network analysis; health service utilisation

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