Measuring Factors that Influence Nurse Practitioner (NP) Activities and the Implications for Optimizing NP Patient Panel Size in Primary Healthcare (PHC) Settings
Project Summary

Project Aim: This project seeks to optimize patient panel size for NPs in PHC and inform planning and future evaluations of team performance in Ontario by improving understanding of how organizational, NP and patient characteristics influence NP activities in PHC settings and the barriers and facilitators to optimizing NP patient panel size.

Importance of Study:
➢ Determine factors that influence patient panel size
➢ Inform understanding of effective interprofessional team functioning
➢ Inform efficient human resource planning
➢ Identify factors that influence timely access to high quality patient care
➢ Use real-time measures of NP activities to inform how patient panel size is determined for NP practice

Objectives and Methods:

1) Update our scoping review regarding NP patient panel size and determine the relevance and applicability of scoping review findings for the Ontario context. We will present scoping review findings to key informants to determine implications that are relevant for the Ontario context.

2) Identify and compare organizational and NP factors influencing NP time spent in patient care and other work-related activities across a range of geographic locations and delivery models in Ontario (i.e., Family Health Teams, Aboriginal Health Access Centres, Community Health Centres, and NP-Led Clinics). The clinic lead in each PHC practice setting (n=8) will complete a short survey regarding organizational structures and processes that may influence NP activities and patient panel size. The participating NPs in each site will complete a short survey to determine characteristics that may influence their activities and panel size.

3) Measure the time NPs spend in patient care and other work-related activities. All patients receiving care from these NPs during a 5-consecutive day observation period (that reflects a typical work week) are eligible to participate (n=480). After informed patient and NP consent, a trained assessor will use a standardized form to observe and record these NPs' work activities in one-minute increments. NP activities will be grouped into role components.

4) Determine patient factors that influence NP activities and panel size for those patients cared for by the NP. Consenting patients (n=480) will complete a brief 'waiting room' survey to develop a profile of the patients being cared for by the NP within the practice setting and patient factors that may influence NP patient panel size.

5) Identify perceptions of barriers and facilitators to optimizing NP patient panel size in Ontario. Individual interviews (30 to 45 minutes) will be conducted with the participating NPs (n=16) and the lead physician (n=8), administrator (n=8), and office manager/receptionist (n=8) from each setting.

6) Integrate findings to identify implications for optimizing NP activity and panel size. Findings from the organizational and NP surveys, time and motion studies, patient characteristics, and interviews will be integrated to formulate recommendations for optimizing NP activity and patient panel size to maintain and further promote quality patient care in Ontario.

7) Build capacity in conducting research that informs optimal health human resource planning and the effective use of PHC NP roles in Ontario. We will sponsor one Ontario-based postdoctoral fellow and one Ontario-based graduate student to participate in the research; through their work on the project, they will also develop their own research (e.g., graduate student thesis). The fellow and graduate student will be active members of the team, intricately involved with processes and activities related to research and knowledge translation throughout the project.

Design: A descriptive, multiple case study design using mixed methods.

Ethics Approval: Research ethics board approval has been received from Dalhousie University, McMaster University, Université de Montréal and the University of Ottawa.

Settings: Eight cases consisting of two different practices within each of the four practice models (NP-Led Clinics, Aboriginal Health Access Centres, Family Health Teams, and Community Health Centres).

Data Collection at Participating Sites: As described above, data collection tools include brief surveys, 30 to 45 minute interviews, and observation to collect time-motion data regarding NPs' activities for 5 consecutive days in a typical work week.

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