

**Research Grant Application**  
Family Medicine Resident

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PGY1, North Memorial Family Medicine Residency

**Research question/hypothesis**

What is the prevalence of loneliness in an urban, underserved medical clinic?

What demographic and medical differences are there between patients identified as lonely compared to patients who are not lonely?

**Description**

Loneliness and social isolation are predictors of poor health and premature mortality. This research project seeks to (1) estimate the prevalence of loneliness in an urban, underserved family medicine residency clinic (Broadway Family Medicine Clinic, located in North Minneapolis) and (2) examine differences in demographic and health characteristics between patients identified as lonely compared to patients who are not identified as lonely.

**Mentor**

Jason Ricco, MD

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**Importance to family medicine**

The WHO has identified social isolation as a major determinant of poor health outcomes. Early research has shown that being socially connected is associated with a **50% reduced risk of early death**, and this magnitude on mortality is at least as strong as well known health risk factors such as smoking and obesity. The health effects of social isolation are great, but most of the research examining loneliness in relation to health outcomes has been conducted in older, predominantly white populations. Little is known about the prevalence of loneliness in underserved populations. As family physicians, we should seek to better understand social isolation as it relates to our patients' overall wellbeing.

**Methodology**

(Remove this text. Consult with your family physician research mentor before completing the sections noted below.)

**Research design** – Retrospective chart review**Setting** – Broadway Family Medicine (BFM) Residency Clinic**Sample size** – N = 340

**Justification** – BFM has a patient panel of ~6800 patients; therefore we are looking to estimate prevalence of loneliness in about 5% of the population. This sample size will give us 80% power to detect a small significant difference and 99% power to detect a medium- sized significant difference on demographic and health indicators between the lonely and not lonely groups.

**Data collection process** – At BFM, we are currently screening consecutive adult patients for loneliness using the 3-item UCLA Loneliness scale. Patients with scores  $\geq 6$  are considered “lonely” and are being recruited for a community health worker (CHW) intervention to decrease social isolation and loneliness (funded by UCare Grant to Dr. Ricco). We will obtain baseline data through chart abstraction on both groups at the time of screening. We are interested in a variety of demographic and health variables, including, but not limited to: sex, age, racial/ethnic group, marital status, chronic health conditions, BMI, blood pressure, Hemoglobin A1C, PHQ-9, smoking status, and number and type of medical contacts.

**Analysis** – Prevalence of loneliness will be estimated using a point estimate with a 95% confidence interval. We will also stratify the sample by different demographic characteristics (e.g., age, sex, racial/ethnic category) to examine whether the prevalence of loneliness differs by group. We will use t-tests, chi-square, and logistic regression analyses to examine demographic and health characteristic differences between groups.

**Limitations** – Data will all be gathered by retrospective chart review which may have missing data or data that have not been accurately captured by previous health professionals. Analyses will only show associations with loneliness and will not be able to determine causality.

**Collaborators**

Michelle Sherman, PhD, LP, ABPP

Stephanie Hooker, PhD, LP, MPH

LaTrese VanBuren, CHW

**Budget (up to \$3,000)**

The budget from this grant will pay a research assistant to assist in conducting the retrospective chart review and to enter the data into REDCap. Dr. Hooker (collaborator) has agreed to assist Dr. Stadem with data analysis.

**\$3000:** Part time Research assistant salary

**Timeline****Ongoing:** Screening**Jan 2019:** Hire Research Assistant**Jan- Feb 2019:** Conduct chart review**Mar-Apr 2019:** Data analysis and interpretation**May-Jun 2019:** Prepare manuscripts and abstracts for presentation**March 2020:** Present at MAFP Research and Innovation Forum**July 2020:** Present at AAFP National Conference (if accepted)**IRB/HIPAA compliance**

We have applied for and received IRB approval from the University of Minnesota. All collected patient data will be stored in a secure in REDcap database. After data collection, records will be deidentified.