**Abstract Title:** Differences in quadriceps muscle layer thickness, (QMLT), between community and low-risk, institutionalized elderly participants: A cross-sectional study

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**Introduction:** Sarcopenia describes the age-associated loss of lean muscle mass. Individuals with sarcopenia have adverse outcomes including disability, poor quality of life and increased mortality. With aging, the likelihood of developing sarcopenia increases. However, there is still no simple bedside diagnostic tool for clinicians to assess lean muscle mass (LMM). Recently, ultrasound muscle measurements, measuring quadriceps muscle layer thickness, (QMLT) have been shown to produce valid, reliable measurements as a surrogate marker to detect muscle depletion.
**Objectives:** To determine if there is a difference in QMLT between community elderly individuals residing in southwestern Ontario age ≥ 65 years compared to low-risk, institutionalized elderly [LTC] of the same age and region.
**Methods:** This is one part of a much larger cross-sectional study whereby 34 LTC residents and 17 community living individuals had their QMLT measured with FUJIFILM SonoSite M turbo ultrasound machine.
**Results:** In LTC the mean QMLT [cm] for **females:** 2.49 ± 0.843 compared to community: 2.57 ± 0.821[p=0.78]. In LTC the mean QMLT [cm] for **males:** 2.79 ± 0.758 compared to community: 3.38 ± 1.02. [p=0.43].
**Conclusion:** It appears as though community individuals may have higher QMLT compared to LTC individuals, although not significant. Further research is needed to validate these findings in a larger sample size and this project is ongoing.
**Significance to the field of Dietetics:** The age-related loss of muscle mass and function represents major socioeconomic and medical issues. As such, health care professionals require easy, reliable ways to detect muscle loss in their patients, to help design optimal nutrition care plan. These nutrition intervention strategies can focus on the identifying adequate intake of calories and protein for the prevention and treatment of patients with sarcopenia, to improve their quality of life.