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**The prevalence of nutrition risk and
associated risk factors among older
adults recently admitted to age-related
residential care within the Waitemata
District Health Board region.**

A thesis presented in partial fulfilment of the
requirements for the degree of

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Abstract

Background: New Zealand has a rapidly growing ageing population, aligned with the ageing population trend occurring globally. Older adults account for a significant proportion of the government health care expenditure, primarily due to higher needs for disability services and a higher level of care, such as residential care. Malnutrition is multi-factorial and may result in disability and poor health contributing to a significant decline in the independence in older adults. Internationally, previous research has found a high prevalence of malnutrition among older adults in the residential care setting. This study aims to investigate the prevalence of malnutrition and associated risk factors among older adults (aged 64 to 84 years) newly admitted to residential care facilities across the Waitemata District Health Board (WDHB) region.

Methods: A cross-sectional study was undertaken among older adults newly admitted to WDHB residential care facilities. A questionnaire was used to assess participant sociodemographic and health characteristics. Anthropometric and body composition measurements were recorded. Grip strength was measured using a handgrip dynamometer and gait speed was measured by a 2.4m walk test. Nutrition risk was assessed using the Mini Nutritional Assessment- Short Form (MNA-SF), dysphagia risk was determined from the 10-item Eating Assessment Tool (EAT-10) and the Montreal Cognitive Assessment (MoCA) examined cognitive function.

Results: The mean age of participants was 78.7 ± 5.0 years. Of 77 participants, just under half (45.5%) were malnourished with a further 49.4% were at high nutrition risk. Over a third (37.7%) of participants were at dysphagia risk. Malnourished participants were more likely to require daily help prior to admission ($p=0.011$) and have a slower gait speed ($p=0.014$). A higher nutrition risk (lower MNA-SF score) was strongly correlated with a lower BMI ($r=0.274$, $p=0.024$), grip strength ($r=0.368$, $p=0.001$), higher dysphagia risk ($r=-0.248$, $p=0.029$) and higher medication use ($r=-0.213$, $p=0.043$).

Conclusion: Nearly half the participants were malnourished, and over a third were at risk of dysphagia. This study highlights that low BMI, grip strength and higher dysphagia risk and medication use are potential risk factors for malnutrition. Findings highlight the importance of malnutrition and dysphagia screening among older adults upon admission to residential care. This will ensure appropriate diagnosis and treatment for those identified at risk.

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Dedication

I would like to dedicate this thesis to my grandfather (seeya), Ananda Hettige, who has taught me the true meaning of determination and dedication. Although his battle with cancer is not over, he lives every day with courage.

“We cannot direct the winds but we can adjust our sails”

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Abbreviations

ADL Activities of Daily Living

ANSI Australian Nutrition Screening Initiative

ARRC Age-related Residential Care

BIA Bioelectrical Impedance Analysis

BMI Body Mass Index

CC Calf Circumference

Cm Centimetre

DXA Dual- Energy X-Ray Absorptiometry

EAT-10 10- item Eating Assessment Tool

GP General Practitioner

Kg Kilogram

m Metre

MCI Mild Cognitive Impairment

MMSE Mini Mental State Examination

MNA Mini Nutrition Assessment

MNA-SF Mini Nutritional Assessment – Short Form

MoCA Montreal Cognitive Assessment

MST Malnutrition Screening Tool

MUST Malnutrition Universal Screening Tool

NRV Nutrient Reference Value

OECD Organisation for Economic Co-operation and Development

OTC **Over** The Counter

RDI Recommended Daily Intake

SCREEN II Seniors in the Community: Risk Evaluation for Eating and Nutrition, Version II

SD Standard Deviation

SGA Subjective Global Assessment

SNAQ Simplified Nutritional Appetite Questionnaire

WDHB Waitemata District Health Board

WHO World Health Organisation