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An investigation of nutrition risk among hospitalised adults of advanced age admitted to the AT&R wards at North Shore and Waitakere Hospitals

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Abstract

Background: In line with the global trend of an ageing population, the number and proportion of New Zealanders aged 65 years and older is increasing. Those of advanced age (85 years and older) make up the fastest-growing demographic group within the aging population. In coming years it is projected almost a quarter of older adults in New Zealand will be aged 85 years and older. Advanced age adults are at an increased risk of poor nutrition status. Optimising nutritional wellbeing in advanced age is important as nutrition risk has been associated with longer hospital admissions, loss of independence due to disability and the need for a higher level of care.

Aim: The aim of this study was to establish the prevalence of nutrition risk among adults of advanced age (85 years and older) recently admitted to the Admission, Treatment and Rehabilitation (AT&R) wards at North Shore and Waitakere Hospitals.

Method: Participants were recruited into this cross-sectional study within five days of admission to the AT&R wards at North Shore and Waitakere Hospitals. Sociodemographic and health characteristics were established using an interviewer administered questionnaire. Anthropometric measures including body mass, muscle mass, and muscle strength were also taken. Nutrition risk was assessed using a validated screening tool, the Mini Nutritional Assessment-Short Form (MNA-SF). The validated 10-item Eating Assessment Tool was used to assess dysphagia risk and the validated Montreal Cognitive Assessment was used to determine level of cognition. Data were analysed using descriptive statistics. Pearson Chi-Square and Fisher's Exact tests were used to examine differences between MNA-SF nutrition status groups. A p-value<0.05 was considered statistically significant.

Results: Of the 88 participants, 43.2% were at high risk of malnutrition and 28.4% were malnourished. The majority of malnourished participants were widowed (64.0%), received the pension as their only source of income (76.0%), were taking more than five medications (76.0%), wore dentures (64%), had below normal cognitive function (92.3%), received regular support services (72.0%), and required daily help (76.0%). Participants who were malnourished were significantly more likely to be at risk of

dysphagia (52.0%, p=0.015,). The MNA-SF score was positively correlated with body mass index (r=0.484, p<0.001); grip strength in the dominant hand (r=0.250, p=0.026), and negatively correlated with dysphagia risk score (r=-0.383, p<0.001).

Conclusion: Nutrition risk and malnutrition is highly prevalent among hospitalised adults of advanced age. Ensuring routine nutrition screening is carried out on admission to an AT&R ward is an important first step to identify those at nutrition risk. These findings also highlight the importance of screening for dysphagia risk alongside nutrition risk among advanced age adults. Screening on admission to hospital can help to identify those in need of further assessment and can help to shape the interventions to improve nutrition status.

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Dedication

This thesis is dedicated to my brother Andrew who taught me to never give up and inspired me to do great things.

I love you buddy.

02/05/1989 - 18/01/2012

Table of Contents

ABSTRACT ..... **i**

ACKNOWLEDGEMENTS ..... **iii**

DEDICATION ..... **iv**

TABLE OF CONTENTS ..... **v**

LIST OF TABLES ..... **ix**

LIST OF FIGURES ..... **x**

LIST OF APPENDICES ..... **xi**

ABBREVIATIONS ..... **xii**

CHAPTER 1.0 INTRODUCTION **1**

1.1 BACKGROUND **1**

1.2 PURPOSE OF THE STUDY **4**

1.3 AIM AND OBJECTIVES **4**

1.3.1 AIM 4

1.3.2 OBJECTIVES 4

1.4 THESIS STRUCTURE **5**

1.5 RESEARCHERS' CONTRIBUTIONS **5**

CHAPTER 2.0 LITERATURE REVIEW **6**

2.1 AGEING IN NEW ZEALAND **6**

2.1.1 AGEING IN THE WAITEMATA DISTRICT HEALTH BOARD CATCHMENT 7

2.1.2 HEALTH CARE SERVICE AND COST IMPLICATIONS 8

2.1.3 HEALTH OF OLDER PEOPLE STRATEGY 9

2.2 HEALTH OF OLDER ADULTS **10**

2.2.1 CHRONIC DISEASE 10

2.2.2 BODY COMPOSITION CHANGES WITH AGE 12

2.2.2.1 SARCOPENIA 12

2.2.2.1.1 MEASURING MUSCLE MASS 14

2.2.2.1.2 MEASURING MUSCLE STRENGTH 15

2.2.2.2 FALLS, RELATED FRACTURES AND OSTEOPOROSIS 16

2.2.3 MENTAL HEALTH 18
2.2.3.1 MOOD AND ANXIETY DISORDERS 18
2.2.3.2 COGNITIVE CHANGES WITH AGE 19
2.2.3.2.1 DEMENTIA 20
2.2.3.2.2 MEASURING LEVEL OF COGNITION 20
2.2.4 PERCEIVED STATE OF HEALTH 22
2.3 NUTRITIONAL HEALTH OF OLDER ADULTS 22
2.3.1 NUTRITIONAL REQUIREMENTS OF OLDER ADULTS 23
2.3.1.1 ENERGY 23
2.3.1.2 MACRONUTRIENTS 24
2.3.1.2.1 PROTEIN 24
2.3.1.2.2 FAT 25
2.3.1.2.3 CARBOHYDRATE 25
2.3.1.3 MICRONUTRIENTS 26
2.3.1.3.1 IRON 26
2.3.1.3.2 ZINC 26
2.3.1.3.3 SELENIUM 27
2.3.1.3.4 CALCIUM 28
2.3.1.3.5 VITAMIN D 28
2.3.1.3.6 VITAMIN C 29
2.3.2 MALNUTRITION 29
2.3.2.1 OVER-NUTRITION 29
2.3.2.2 UNDER-NUTRITION 30
2.3.3 NUTRITION SCREENING AND TOOLS 31
2.3.3.1 THE MINI NUTRITIONAL ASSESSMENT 32
2.3.3.1.1 THE MINI NUTRITIONAL ASSESSMENT-SHORT FORM 32
2.3.4 NUTRITION RISK IN HOSPITALISED OLDER ADULTS 33
2.3.5 PREVALENCE OF NUTRITION RISK IN NEW ZEALAND 34
2.4 FACTORS AFFECTING THE NUTRITION STATUS OF OLDER ADULTS 38
2.4.1 SOCIODEMOGRAPHIC INFLUENCES 39
2.4.1.1 MARITAL STATUS AND LIVING ARRANGEMENT 39
2.4.1.2 SOURCED INCOME 40

2.4.1.3 EDUCATION LEVEL 41
2.4.2 HEALTH INFLUENCES 41
2.4.2.1 POLYPHARMACY 41
2.4.2.2 ORAL HEALTH 42
2.4.2.3 SWALLOWING IMPAIRMENT 43
2.4.2.3.1 SCREENING FOR DYSPHAGIA 44
2.4.2.4 SENSORY CHANGES 45
2.5 SUMMARY 45

CHAPTER 3.0 METHODS 47

3.1 STUDY DESIGN 47
3.2 ETHICS APPROVAL 47
3.3 SETTING 47
3.4 PARTICIPANTS 47
3.4.1 PARTICIPANT RECRUITMENT 48
3.5 ANTHROPOMETRIC MEASURES 49
3.5.1 WEIGHT 49
3.5.2 HEIGHT 49
3.5.3 BODY MASS INDEX 50
3.5.4 MUSCLE MASS 50
3.5.5 MUSCLE STRENGTH 51
3.6 QUESTIONNAIRE 51
3.6.1 DEMOGRAPHIC CHARACTERISTICS 51
3.6.2 MINI NUTRITIONAL ASSESSMENT-SHORT FORM 53
3.6.3 10-ITEM EATING ASSESSMENT TOOL 53
3.6.4 MONTREAL COGNITIVE ASSESSMENT 54
3.7 STATISTICAL ANALYSIS 54

CHAPTER 4.0 RESULTS 55

4.1 PARTICIPANT SOCIODEMOGRAPHIC CHARACTERISTICS 55
4.2 PARTICIPANT ANTHROPOMETRIC CHARACTERISTICS 56
4.3 PARTICIPANT HEALTH CHARACTERISTICS 57

4.4 PARTICIPANT SOCIAL SUPPORT CHARACTERISTICS 60

4.5 DYSPHAGIA RISK STATUS 60

4.6 NUTRITION RISK STATUS 61

4.7 FACTORS RELATED TO NUTRITION RISK 63

CHAPTER 5.0 DISCUSSION 67

CHAPTER 6.0 CONCLUSION 77

6.1 SUMMARY OF THE STUDY 77

6.2 CONCLUSION 78

6.3 STRENGTHS 78

6.4 LIMITATIONS 79

6.5 RECOMMENDATIONS FOR FUTURE STUDIES 81

REFERENCES 82

APPENDICIES 116

List of Tables

TABLE 1.1 Researchers' Contributions **5**

TABLE 2.1 Objectives of the Health of Older People Strategy (Ministry of Health, 2003) **10**

TABLE 2.2 Nutrition Screening Tools for Hospitalised Older Adults **36**

TABLE 2.3 Prevalence of Nutrition Risk among Older Adults in New Zealand **38**

TABLE 3.1 WHO International BMI Classification **50**

TABLE 4.1 Participant Sociodemographic Characteristics **55**

TABLE 4.2 Participant Anthropometric Characteristics **57**

TABLE 4.3 Health Conditions Experienced by Participants **57**

TABLE 4.4 Prescribed Medications Taken by Participants **58**

TABLE 4.5 Dental Status of Participants **59**

TABLE 4.6 Cognitive Function of Participants Determined by the MoCA **60**

TABLE 4.7 Support Services Received by Participants **60**

TABLE 4.8 Daily Help Required by Participants **60**

TABLE 4.9 Dysphagia Risk Status of Participants Determined by the EAT-10 ..... **61**

TABLE 4.10 Nutrition Risk Status of Participants Determined by the MNA-SF **61**

TABLE 4.11 MNA-SF Questionnaire Item Scores **63**

TABLE 4.12 Nutrition Risk Status and Participant Sociodemographic, Health, and Support Service Risk Factors **64**

TABLE 4.13 One-Way ANOVA Comparison of Nutrition Risk Status and Participant Characteristics **66**

TABLE 4.14 Correlations between Nutrition Risk Status and Participant Characteristics **66**

List of Figures

FIGURE 2.1 New Zealand Population Aged 65 Years and Older, 1981-2068
(Statistics New Zealand, 2015) **6**

FIGURE 2.2 Factors Affecting the Nutrition Status of Older Adults
(Ministry of Health, 2013)..... **39**

FIGURE 4.1 Dyspgahia Risk Status Represented by Nutrition Risk Status **65**

List of Appendices

APPENDIX A Information Sheet **116**

APPENDIX B Consent Form **118**

APPENDIX C Demographics Questionnaire **119**

APPENDIX D Mini Nutritional Assessment-Short Form **124**

APPENDIX E 10-Item Eating Assessment Tool **125**

APPENDIX F Montreal Cognitive Assessment Form **126**

Abbreviations

AMDR	Acceptable Macronutrient Distribution Range
ANOVA	Analysis of Variance
ANSI	Australian Nutrition Screening Initiative
AT&R	Admission, Treatment & Rehabilitation
BIA	Bioelectrical Impedance Analysis
BMI	Body Mass Index
CC	Calf Circumference
Cm	Centimetre
CT	Computed Tomography
DHB	District Health Board
DXA	Dual-Energy X-Ray Absorptiometry
EAT-10	10-Item Eating Assessment Tool
GI	Gastrointestinal
GP	General Practitioner
Kg	Kilogram
2008/09 NZANS	2008/09 New Zealand Adult Nutrition Survey
m	Metre
MMSE	Mini Mental State Examination
MNA	Mini Nutritional Assessment
MNA-SF	Mini Nutritional Assessment-Short Form

MoCA	Montreal Cognitive Assessment
MRI	Magnetic Resonance Imaging
NRV	Nutrient Reference Value
RDI	Recommended Daily Intake
SCREEN II	Seniors in the Community: Risk Evaluation for Eating and Nutrition, Version II
SD	Standard Deviation
WDHB	Waitemata District Health Board
WHO	World Health Organisation