



個案報告與討論： 巴金森氏病與精神症狀

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臨床案例

個案為77歲的已婚婦女，過去病史為69歲時因右上肢手部僵硬診斷巴金森氏病開始服用抗巴金森氏病藥物，手抖情況隨年紀增大而逐漸惡化，1年半前曾住院並將抗巴金森藥物加重為 Madopar(250mg) 1 tab q4h及Entacapone 1 tab tid，1年前曾短暫出現看到像人的黑影，懷疑先生外遇，症狀一個星期後改善，10個月前因先生中風而搬去與女兒同住，9個月前因行動不便借助輪椅代步，因睡眠問題半夜會起來大聲哭泣，5個月前家人請外勞協助其生活作息，2個月前晚上會將錢放在床上，認為家人偷她的錢，1個月前出現視幻覺及被害妄想，2個星期前症狀加劇及懷疑先生有外遇，入院前1天凌晨時上廁所因外勞動作慢，生氣打了外勞，被家人送至急診並住院接受檢查。

入院後身體檢查、一般的神經學檢查、例行的抽血檢查及甲狀腺功能都沒有發現異常，腦部電腦斷層無急性出血或是

腫塊壓迫，住院後無明顯觀察到憂鬱相關症狀，知能篩檢測驗(CASI)結果不能排除輕度知能障礙的可能性，與神經科醫師討論後停用Entacapone，因無明顯手抖情況逐漸將Madopar (250mg) 1 tab q4h調降為0.5 tab qid，並給予 Quetiapine(25mg) 2 tab hs，精神症狀逐漸改善，遂安排出院。

流行病學

根據多篇橫斷面的研究(cross-sectional study)，追蹤數星期到6個月，巴金森氏病的病人出現視幻覺的盛行率約40%，聽幻覺為0-22%，其他精神症狀為17-72%。一篇以門診病患為主追蹤6年的研究，出現精神症狀的盛行率為33-55%，另一篇以社區病患為主追蹤4年的研究，盛行率為23-56%。一篇追蹤20年的研究結果，出現精神症狀的盛行率為17-74%。而一篇回溯性研究的結果指出，終生的盛行率為50%。

臨床表現及診斷

視幻覺是巴金森氏病患最常出現的精神症狀，出現精神症狀的病人超過90%

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關鍵字：Parkinson's disease, psychosis, hallucinations, delusions



有過視幻覺的經驗，發生時一次持續幾秒鐘到幾分鐘，常常一天出現好幾次，在晚上或是單獨在安靜的環境下容易引發，視幻覺的內容通常為具體的人或是動物，較少是不具生命的物體，出現的內容傾向重複，而聽幻覺的內容很廣，可能從模糊的耳語聲、音樂聲到威脅的話語，聽幻覺較常合併視幻覺，約8%到13%，較少獨立出現，另外觸幻覺、嗅幻覺或是味幻覺較不常見。巴金森氏病常出現視幻覺的情況，跟典型的精神分裂症出現聽幻覺，可以有所區分。至於較輕微的精神症狀包括錯覺、妄想等出現的機會約40%，妄想的形式通常為偏執妄想，懷疑另一伴有外遇或是被遺棄，而誇大、有關身體、被害或是宗教妄想，臨床上較少遇到。

在巴金森氏病所造成精神症狀 (Parkinson's disease-associated

psychosis, PDAP)的診斷上，精神疾病診斷與統計手冊目前沒有訂定相關診斷標準，而美國國家神經學疾病與中風研究院及美國國家精神衛生研究院提出的診斷標準 (NINDS-NIMH criteria) 為：病人必須符合UK Brain Bank裡巴金森氏病的診斷，在臨床出現四種症狀中(錯覺、沒有人在卻感覺到有人在、幻覺、妄想)至少有一種以上，在時間的順序上，精神症狀必須發生在出現巴金森氏病症狀後，且必須持續一個月，此外須把其他因素如路易氏體失智症、短期性精神失常、精神分裂症、情感性精神分裂症、妄想症、物質誘發之精神症狀及內科問題所造成的譫妄等排除(表一)。

病理生理

表一 巴金森氏病引起精神症狀(PDAP)診斷標準

診斷標準
A. 臨床症狀 以下症狀至少符合一項以上： - 錯覺 (Illusions) - 沒有人在卻感覺到有人在 (False sense of presence) - 幻覺 (Hallucinations) - 妄想 (Delusions)
B. 初步診斷 符合UK Brain Bank裡巴金森氏病的診斷
C. 出現精神症狀的時序 合乎A的精神症狀發生在出現巴金森氏病相關症狀後
D. 症狀持續時間 合乎A的精神症狀反覆出現或持續一個月
E. 排除其他的原因 排除路易氏體失智症、精神分裂症、情感性精神分裂症、妄想症及內科問題所造成的譫妄等其他原因

資料來源：參考資料2



表二 抗巴金森氏病藥物造成精神症狀的可能性

抗巴金森氏病藥物	常用藥物	機會由高至低
抗膽鹼藥物	Trihexyphenidyl (Artame) Biperiden (Akineton)	
B型單胺酶抑制劑 (MAO-B inhibitor)	Selegiline	
N-methyl-D-aspartate glutamate 接受器拮抗劑	Amantadine	
多巴胺促進劑 (dopamine agonist)	Pramipexole (Mirapex) Ropinirole (Requip)	
Catechol-O-methyltransferase (COMT)抑制劑	Entacapone (Comtan)	
左多巴 + 脫羧酶抑制劑 (levodopa + decarboxylase inhibitor)	Levodopa 100mg + carbidopa 25mg (Sinemet) Levodopa 100mg + benserazide 25mg (Madopar)	

資料來源：參考資料3

巴金森氏病主要是多巴胺不足所引起，而精神疾病則是認為多巴胺過多，因此治療巴金森氏病若藥物過量時，可能產生精神症狀。現在也有人認為精神症狀跟巴金森氏病本身疾病進展有關，然而致病機轉尚未了解，推測可能與神經化學物質如多巴胺、血清素及乙醯膽鹼出現異常、腦部顳葉及頂葉皮質病變、視覺功能退化、睡眠調節異常及抗巴金森氏病藥物有關，確切的機轉需要未來更多的研究才能夠釐清。

危險因子

1. 藥物因素

在早期的臨床經驗及針對巴金森氏病的研究認為左多巴(Levodopa)可能跟病人出現精神症狀有所關連，後來發現與每

天使用左多巴的劑量無關。一篇研究認為所有抗巴金森氏病藥物都有可能會出現精神症狀，但是使用某幾種藥時出現機會較高(表二)。近年有兩篇綜合分析研究(Stowe RL et al, Baker WL et al)顯示使用多巴胺促進劑比左多巴或是安慰劑，更容易出現精神症狀。

2. 認知功能受損

巴金森氏病的病人罹患失智症的盛行率近30%，約一般人的4到6倍，其中發病年齡較晚者及家族史有失智症者，有較高機會有失智症，失智症大都發生於疾病的晚期，超過10年以上的病人有75%以上有失智症。常用評估老人失智相關量表為簡易智能評估(Mini-Mental Status Examination)、認知能力篩選工具(Cognitive Abilities Screening Instrument,



CASI)及臨床失智評估量表(Clinical Dementia Rating, CDR)。

對於巴金森氏病的病人，評估其認知功能，常用的篩檢測驗為簡易智能評估及劍橋認知量表(Cambridge Cognitive Examination)，兩種測驗有相似的敏感性(95% vs 98%)，但劍橋認知量表比簡易智能評估更具特異性(94% vs 77%)，證據等級為level B(結論來自一個隨機臨床試驗或多個非隨機臨床試驗)。在一篇收集八個縱貫性、總共近一千四百人的研究顯示，25.8%巴金森氏病的病人有輕度認知障礙(mild cognitive impairment)。當認知功能受損時，容易出現精神症狀，而本身一開始簡易智能評估所測的分數就比較低時，之後出現精神症狀的機會也較高。

3. 年紀和罹患巴金森氏病的時間長短

根據多變量變異數分析的研究指出，罹患巴金森氏病的時間長短才是決定是否出現精神症狀的獨立預測因子，時間越久越容易有精神症狀，而非與巴金森氏病發病時年齡有關。據一篇回溯性研究發現，出現精神症狀時，好發在疾病的中後段(以剛發病為0，死亡時為100%，大概落在60-80%)。

4. 疾病的嚴重度

評估巴金森氏病的嚴重程度常使用UPDRS巴金森氏病症狀衡量表(Unified Parkinson Disease Rating Scale)及The Hoehn and Yahr Stages，當疾病嚴重度越

嚴重時，出現精神症狀的機會就越高。

5. 睡眠障礙

睡眠時若有逼真的夢(vivid dream，可清楚記得夢的細節)或是夢魘(nightmare)，可能伴隨視幻覺及精神症狀。當快速動眼期睡眠行為異常(REM sleep behavior disorder，對夢境做出身體反應，拳打腳踢，吼叫，而正常人在快速動眼期時，肌肉呈現無力狀態，不會對夢境做出身體反應)，會增加認知障礙的機率，也可能出現視幻覺及精神症狀。而日間過度嗜睡的人也較易出現精神症狀。

6. 視覺因素

巴金森氏病的病人可能因眼球運動不正常，導致視力障礙，當視力變差時，出現視幻覺的機會增加。

7. 憂鬱

憂鬱是巴金森氏病的病人常伴隨的症狀，大約有50%的病人有憂鬱的情形，而憂鬱也與巴金森氏病本身的嚴重程度及失智症有關。評估巴金森氏病的病人是否有憂鬱，常用的篩檢測驗為貝克憂鬱量表(Beck Depression Inventory-I)及漢氏憂鬱量表(Hamilton Depression Rating Scale)，證據等級為level B，而對於憂鬱嚴重度之變化敏感度較佳的Montgomery Asberg Depression Rating Scale, MADRS)，證據等級為level C(結論



來自專家意見或是個案研究)。當有嚴重的憂鬱症時，較易併發精神症狀(major depressive disorder with psychotic features)。

8. 自律神經機能障礙

自律神經機能障礙可能會出現的症狀為頭暈、頭痛、記憶力差、口乾、肩頸痠痛、胸悶、心悸、喘不過氣、腸胃病及睡眠的障礙，根據一篇回溯性的研究，當有自律神經機能障礙時，也容易有精神症狀。

9. 基因

當家族有相關的失智症方面的遺傳史時，出現精神症狀的機會也較高。另外在調控膽囊收縮素(Cholecystokinin，一種神經傳導物質)或是調控其受器的基因，與出現視幻覺也有關連性。

治療

在治療方面，所有抗巴金森氏病藥物其副作用都可能產生精神症狀，若剛使用藥物或藥物調高劑量時出現精神症狀，應考慮藥物所引起，治療的方式可調降藥物的劑量，或換其他藥物。根據研究，使用左多巴加脫酸酶抑制劑跟其他抗巴金森氏病的藥物相比，較少出現精神症狀，因此選擇藥物時可優先考慮。若精神症狀在嘗試上述方法都無效時，可再加上抗精神藥物。

在抗精神藥物的選擇上(表三)，根據美國神經病學學會的指引，Quetiapine是巴金森氏病病人出現精神症狀的首選用藥，其治療效果不錯，而且產生錐體外症候群的副作用機會較低，建議起始劑量為每天12.5mg，每4到7天增加12.5mg，維持劑量為25-150mg。第二選擇藥物為Clozapine，建議起始劑量為每天6.25mg，每4到7天增加6.25mg，維持劑量為6.25-50mg，其治療效果佳，產生錐體外症候群的副作用機會也較低，但須注意有

表三 巴金森氏病的抗精神病藥物比較

抗精神病藥物	劑量(mg/d)	藥效	出現錐體外症狀的可能性
Aripiprazole	1-10	中	中到高
Clozapine	6.25-50	高	低
Olanzapine	2.5-10	低	高
Quetiapine	25-150	中到低	低
Risperidone	0.5-1.5	中	中
Ziprasidone	目前研究資料有限		

資料來源：參考資料8



小於1%的機率會發生致命性顆粒性白血球減少的可能性，因此在服藥的前18週，每週需做白血球檢驗，之後每個月追蹤一次。

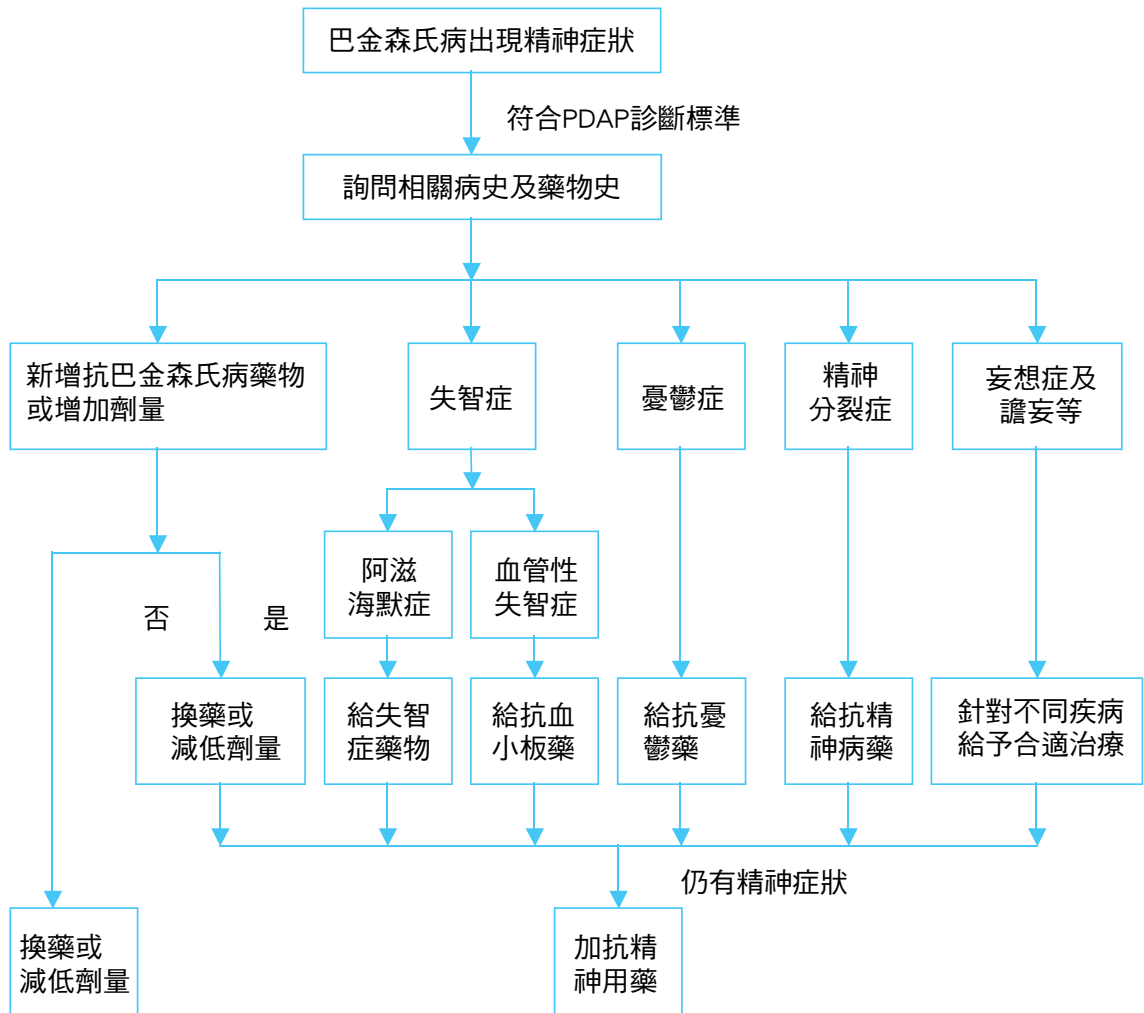
另外根據幾篇研究指出，治療巴金森氏病合併精神症狀及行為問題時，使用乙醯膽鹼抑制劑如 Donepezil 或 Rivastigmine，能夠有效治療，減輕症狀。美國食品藥物管理局目前只允

許Rivastigmine使用於巴金森氏病合併輕度到中度的失智症。迄今並無指引明確指出，在巴金森氏病患者出現精神症狀時，可使用乙醯膽鹼抑制劑。

預後

年紀大、日常功能退化及失智症等是巴金森氏病患者去安養機構的因素。發

圖一 巴金森氏病出現精神症狀治療流程圖





病時的年紀、目前年齡、疾病的嚴重程度及失智症等會影響巴金森氏病患者的死亡率。當病人出現精神症狀時，也會增加去安養機構的機會及死亡率。

結論

臨床上當病人出現精神症狀時，應先排除瞻妄症，包括進行理學檢查、神經學檢查、實驗室檢驗，必要時安排影像學檢查。而巴金森氏病患者一生會出現精神症狀的機會高達50%，當有精神症狀時，應仔細詢問病史，最近是否有新增藥物或是調整藥物劑量，另外對於常見的憂鬱、認知及精神症狀需要釐清先後順序及症狀的嚴重性，整體評估可能造成精神症狀的原因，如懷疑抗巴金森氏病藥物引起的精神症狀，應考慮換藥或是調降劑量，診斷失智症時應加上失智症相關藥物，有血管性失智症時加上抗血小板類藥物如Aspirin，有憂鬱症給予抗憂鬱藥，有睡眠問題時應考慮造成影響睡眠的因素，當上述原因經治療後仍無效果時，則考慮加抗精神用藥(圖一)。總而言之，針對造成病人精神症狀的原因加以鑑別診斷，並做適當的處理，才能給病人最佳的治療。

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ORIGINAL RESEARCH

The presence of malnutrition in community-living older adults receiving home nursing services

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Abstract

Aim: To determine the extent of malnutrition and malnutrition risk among community-living older people (aged 65 years and over) who are receiving care from a metropolitan home nursing service in Victoria, Australia.

Method: Over a 3-month period (May–July 2009), 235 clients aged 65 years and over from a community nursing service providing home nursing care were assessed for malnutrition using the Mini Nutritional Assessment (MNA[®], Nestle, Vevey, Switzerland).

Results: Thirty-four per cent (34.5%) of clients were identified as being at risk of malnutrition, while 8.1% were found to be malnourished. There was no significant relationship between nutrition risk and gender, country of birth or living arrangements.

Conclusion: Malnutrition and nutrition risk was found to be an issue among this sample of community-living older adults who were receiving home nursing care in Victoria, Australia. In this study, just over 40% of the participants were either at risk of malnutrition or malnourished, which highlights the vulnerability of this group of older people and the need for routine nutrition screening and a targeted intervention program to address nutrition issues.

Key words: ageing, community health, malnutrition, nutrition screening, nutritional status.

Introduction

Malnutrition is a significant clinical and public health issue throughout the world and may be particularly prevalent in elderly people living in the community.^{1–3} Although the extent of malnutrition in the community, including Australia, is not well known, it is widely accepted among health professionals that malnutrition has significant health, social and economic implications.^{1,4–9}

In a recent review of 21 studies in which malnutrition in community-living older adults was assessed using the Mini Nutritional Assessment tool (MNA[®]), prevalence rates that ranged from 0 to 8% and from 8 to 76% of older adults were deemed to be at risk of malnutrition.¹⁰ A further 25 studies using samples of elderly people receiving outpatient and home-based health-care services detected malnutrition prevalence rates ranging from 0 to 30% with risk of malnutrition being 8–65%. Studies conducted in Australia using the MNA[®] reported that 20–30% of elderly clients living in

the community were malnourished.^{7,11} In a study using a sample of older people receiving domiciliary care, a prevalence rate of 4.8% was found while 38.4% of this population was at risk of malnutrition.⁵

A knowledge of the prevalence of malnutrition in the community is important as research has shown that the health complications associated with malnutrition lead to increased general practitioner visits, admissions to hospital, prolonged hospital stays, early admission to nursing home and a 30% increase in the incidence of mortality within 1 year.^{1,4–12} Malnutrition in older people is also associated with increased health-care costs.⁴ Although there is little research on the cost of malnutrition to the community, Lipski stated at a presentation at the 2005 Committee on Nutrition for Older Australian conference, that for 'every dollar spent on better nutrition for the elderly, \$5 is saved in health care costs'.⁶

A large metropolitan community nursing service in Victoria, Australia was interested in identifying the malnutrition rate among its client group to determine whether any further action is needed to be undertaken to improve the quality of nursing care in relation to nutrition. Therefore, a study was conducted to determine the extent of malnutrition and nutrition risk using the MNA^{®13} among a sample of community-living older adults receiving home nursing services in Victoria, Australia.

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Method

This exploratory study of malnutrition rates employed a descriptive cross-sectional design. Ethical approval was obtained for this study from the Royal District Nursing Service Research Ethics Committee.

Study participants were from a community nursing service located in metropolitan Melbourne in Victoria, Australia. This service predominately provides care to older people in the community that fits the profile of nutritionally vulnerable older adults susceptible to fluctuations in nutrition status.

Sixty per cent of clients admitted to this service were aged over 60 years and had a number of comorbidities. Their living arrangements varied, with some clients living alone, others living with their spouse or other family. The majority of clients received a pension (income less than \$30 000) from the Commonwealth Government or Department of Veterans Affairs (DVA).

Clients of the community nursing service were recruited by nursing staff throughout the Greater Melbourne metropolitan area from May to July 2009. On admission to the nursing service, the assessment nurse identified clients who met the eligibility criteria. Eligible clients included those aged 65 years and over, clients newly admitted to the nursing service and funded by the Home and Community Care (HACC) or DVA programs. All clients sign a consent form for treatment (including assessment) on admission to the service.

Clients currently undergo a nutrition assessment when they are admitted to the service; however, for the purposes of this study, the MNA[®] replaced this nutrition assessment. Only clients with complete assessments were included in the study.

Before the study commenced, an Accredited Practising Dietitian (APD) provided nursing staff with scales and tape measures to take anthropometric measurements, a resource kit and education on using the screening and assessment tool.

The MNA[®] was used to assess the nutrition risk of study participants. It is a valid and reliable tool specifically developed to identify older people who are suffering from malnutrition or at risk of malnutrition. The MNA[®] detects the risk of malnutrition before severe changes in weight or serum proteins occur and can be used in a variety of health-care settings including the community.¹³

The tool assesses issues specific to ageing such as functionality, depression, and dementia as well as anthropometric measures, social situation and food patterns. It is comprised of 18 questions, 6 screening questions and 12 assessment questions.

Part 1 (MNA[®]-SF screening tool) is designed to detect a decline in food intake or weight in the past 3 months, psychological stress or acute disease, current mobility and neuropsychological problems, and body mass index (BMI). After consultation with an APD and a review of the literature, BMI categories in accordance with the recommendations from the Australian Nutrition Screening Initiative were used to

Body mass index (BMI kg/m ²)	
< 22	underweight
22 – 26.9	healthy weight
27 – 29.9	overweight
> 30	obese

Figure 1 BMI ranges for older adults (Source: Miller M, Thomas J, Cameron I *et al.* BMI: a simple, rapid and clinically meaningful index of undernutrition in the oldest old? *Br J Nutr* 2009; **101**: 1300–305).

describe whether the participants were underweight, overweight or a healthy weight (see Figure 1).¹⁴ Weight and height were recorded in kilograms (kg) and metres (m), respectively.

A screening score of 12–14 signifies normal nutrition status and no need for further assessment, while a score of 11 or lower indicates 'possible malnutrition', and requires the assessment tool (part 2) to be completed. Part 2 of the MNA[®] assesses polypharmacy, pressure ulcers, food and fluid intake and eating ability, living situation, perception of own nutrition and health status, and mid-arm and calf circumferences. A malnutrition indicator score of ≥ 24 indicates a well-nourished person. A score of 17–23.5 indicates 'risk of malnutrition' and a score of <17 indicates malnutrition.

Participant's demographic and socioeconomic data were extracted from the electronic client database of the community nursing service.

The Statistical Package for the Social Sciences (SPSS) Version 17 (SPSS Inc., Chicago, IL, USA) was used to check and analyse the study data in accordance with the study objectives. Frequencies were reported for gender, financial status, country of birth, language spoken, living arrangements and the categorised malnutrition indicator score. Descriptive statistics including mean, range and standard deviation were reported for age, weight and BMI. An independent sample *t*-test was used to compare mean malnutrition indicator score and age group. Chi-square tests were used to compare categorised malnutrition indicator score and gender, financial status, country of birth and living arrangements. An alpha value of 0.05 was chosen to report levels of significance.

Results

During the recruitment period, 250 clients consented to undergo MNA[®] screening for malnutrition risk. Fifteen forms were incomplete, leaving a total sample of 235 participants.

The demographic characteristics of the sample are presented in Table 1. The age of participants ranged from 65 to 100 with a mean age of 82 (SD = 7.0), and there were similar proportions of males (47.2%) and females (52.8%) in the sample. All participants were receiving a pension. The

Table 1 Comparison of participant demographic characteristics and MNA[®] groups

Variable	<i>n</i> ^(a)			P-value
	(At risk and malnourished/No risk)	At risk and malnourished	No risk	
Age (mean, SD)	99/134	82.4 (7.2)	82.0 (7.0)	0.62
Gender (male/female, %)	99/134	40.4/59.6	52.2/47.8	0.08
Country of birth (Australia/other, %)	92/123	68.5/31.5	58.5/41.5	0.15
Living arrangements (family/alone, %)	88/121	54.5/45.5	48.8/51.2	0.48

^(a) Sample size varies from 209 to 233 due to missing data for some variables.

Table 2 Comparison of group characteristics based on MNA[®] score classifications

Variable	<i>n</i> ^(a)			P-value
	(At risk and malnourished/No risk)	At risk and malnourished (Mean, SD)	No risk (Mean, SD)	
Height (cm)	97/133	155.8 (24.6)	159.4 (22.0)	0.24
Weight (kg)	95/133	59.2 (18.5)	72.1 (17.9)	0.01
BMI (mean, SD)	100/135	24.3 (5.0)	27.8 (5.4)	0.001
MAC (cm)	96/130	24.8 (6.4)	28.0 (7.2)	0.01

^(a) Sample size varies from 208 to 234 due to missing data for some variables.

BMI, body mass index; MAC, mid-arm circumference.

majority of the clients were born in Australia (62.8%) and just under half were living alone (48.8%).

Participant weights ranged from 31.8 to 135 kg. The mean BMI was 26.4 kg/m² (SD = 5.5) with a range of 13.2–45.0 kg/m². Nineteen per cent (19.1%) of participants were classified as underweight, 41.3% as healthy weight, 17.0% overweight and 22.6% as obese.

The proportion of participants identified as well nourished, at risk of malnutrition or malnourished is outlined in Figure 2. Just over a third of participants (34.5%) were at risk of malnutrition, 8.1% were identified as malnourished and 57.4% had no or low nutrition risk.

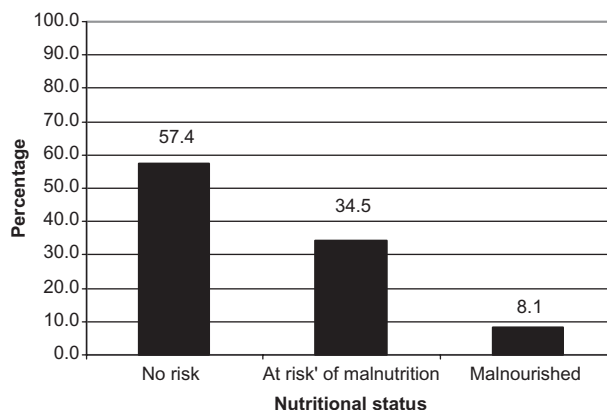
Further analyses comparing malnourished clients and those at risk of malnutrition with clients who were not at risk were carried out to see if there was a relationship with any demographic characteristics.

The results of independent sample *t*-tests (for interval data) and χ^2 procedure (for categorical data) comparing demographic characteristics with the clients' level of nutrition risk showed no significant differences for age, gender, country of birth or living arrangements ($P > 0.05$) (see Table 1).

T-test analyses revealed that clients with no risk of malnutrition weighed significantly more and had higher BMI and mid-arm circumference scores compared with the malnourished/at risk of malnutrition group ($P < 0.05$) (see Table 2).

Discussion

This study used the MNA[®] to identify the presence of malnutrition in a sample of community-living older people

**Figure 2** Malnutrition and risk of malnutrition among 235 community-living older people receiving home nursing care.

(≥65 years) receiving community home nursing services in Victoria, Australia. The extent of malnutrition identified in the study sample (8.1%) was higher than that found in a similar population (4.8%) in an Australian study by Visvanthan *et al.*,⁵ but was similar to the 9% malnutrition rate reported by Guigoz in a review of the MNA[®] literature.¹³ Similar proportions of nutrition risk were observed in this study (34.5%), Visvanthan *et al.*'s Australian study (38.4%)⁵ and a recent New Zealand study by Watson *et al.* (31%).¹⁵

The sample included in this study and the Visvanthan *et al.*'s study⁵ were similar in that they included frail older people as described above who were receiving home nursing care and not 'well' people. However, Visvanthan's participants had been receiving an intervention which could

explain the lower malnutrition rate. In comparison, similar numbers of respondents in both studies were at nutrition risk.

The ongoing demand for community health services and the commensurate financial burden on the health-care system associated with malnutrition is not known, nor can it be quantified as malnourished older people are not always recognised.¹⁶ Consequently, community nursing services providing home care need to ensure that nutrition is a priority in care provision.

Targeting malnutrition among older individuals living in the community needs an integrated approach from community health agencies, and policy direction and support from government. Health agencies and government have a role in supporting and prioritising malnutrition screening, treatment and prevention by making it a national health priority.

As a starting point, health organisations providing care to older adults in the community need to adopt or develop nutrition policies to not only identify malnutrition but also support the provision of appropriate care to treat malnutrition. Any policies need to address the inclusion of a validated nutrition screening and assessment tool such as the MNA[®] as part of the health assessment. A number of organisations including the Dietitians Association of Australia¹⁶ and National Institute for Health and Clinical Excellence¹⁷ have developed evidence-based practice guidelines that provide health professionals with comprehensive frameworks to address nutrition issues in older people across the continuum of care through an integrated approach to nutrition care. Using these types of guidelines means that organisations can more rapidly introduce evidence-based nutrition care.

Bates *et al.* emphasised that ‘Malnutrition is not a consequence of ageing and it should not be allowed to persist as though it were a “normal” process’.¹⁸ Community nurses are ideally situated to identify nutrition issues among this population group as they are at the forefront of client care in the home. They have an important role to play in the provision and monitoring of basic nutrition interventions as part of an interdisciplinary team with direction and guidance from a dietitian and/or a dietitian-led program.

The main limitation of the study was that the sample only reflected one community nursing service in Victoria. As the population being examined was receiving community nursing services, the results may not be relevant to the total population of community-living older people in Victoria or Australia. A nationwide malnutrition prevalence study is recommended to truly understand the extent of the problem in community-living older people.

Like other studies reported in the literature, this study identified the presence of malnutrition and malnutrition risk in a sample of older adults living in the community, and receiving care from a home nursing service. The findings from this study contribute to the body of evidence that suggests that the prevalence of malnutrition in the community is a problem that needs to be addressed. The need to screen nutrition status and monitor older people living in the community has been demonstrated; however, support

through nutrition interventions also needs to follow. Therefore, it is the responsibility of health agencies and government to ensure that nutrition programs are available to address identified nutrition issues.

At the local level, organisations providing care to people in the community can develop programs to address the nutrition needs of the populations they service. These programs need to be based on government policy and guidelines developed by relevant national and international organisations. This will ensure that better health outcomes are achieved, thus helping to reduce the burden caused by malnutrition on the health-care system.

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