



An Australian Government Initiative

# The effectiveness, prescription and administration of oral liquid nutritional supplements to people with dementia in residential aged care facilities (RACFs)



May 2008



Translating dementia research into practice



**The effectiveness, prescription and administration of oral liquid nutritional supplements to people with dementia in residential aged care facilities (RACFs).**

**May 2008**

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The Dementia Collaborative Research Centres are an Australian Government funded initiative established to advance Australian research into dementia and the translation of research into clinical practice. The three Centres each focus on a different area of dementia research:

- Assessment and better care outcomes
- Prevention, early intervention and risk reduction
- Consumers, carers and social research

*Models used for illustration purposes only*



# **The effectiveness, prescription and administration of oral liquid nutritional supplements to people with dementia in residential aged care facilities (RACFs)**

## **Abstract**

Oral liquid nutritional supplements (OLNS) are often prescribed and administered as a nutritional maintenance strategy for people with dementia living in residential aged care facilities (RACFs). Adequate nutrition for people with dementia is influenced by a variety of factors related to intake refusal, behavioural aspects of dementia, most notably wandering and pacing, and disease progression, with resultant weight loss issues and nutrition-related morbidity. These issues represent a challenging aspect of health service delivery for nursing, medical and allied health staff working with people with dementia. The aim of this mixed methods research was to investigate and describe the prescription and administration of OLNS for people with dementia living in RACFs over a three month period in 2007.

Retrospective chart audits ( $n=44$ ) were conducted at seven RACFs in New South Wales (NSW) and the Australian Capital Territory (ACT). In addition, focus groups were held with staff ( $n=55$ ) in each of the facilities to determine staff perceptions in relation to the administration of OLNS. The overall findings from the study revealed evidence of inadequate assessment of residents with dementia in RACFs in relation to aspects of nutrition, poor documentation, haphazard monitoring, irregular staff training and inadequate evaluation of residents who are prescribed OLNS. The findings demonstrate a number of inconsistencies in the way OLNS is prescribed and administered across RACFs resulting in an inability to accurately assess the effectiveness of OLNS.

These findings were supported by a systematic review of OLNS related literature that was conducted prior to implementation of the study. No definitive evidence of effectiveness for OLNS was found and inconsistencies in the prescription, administration and benefits of OLNS were highlighted. The systematic literature review findings suggested that OLNS may contribute to improved quality of life for people with dementia after appropriate assessment and that further research into the prescription and administration of OLNS would assist in providing an evidence base for future practice.

# **The Effectiveness, Prescription and Administration of Oral Liquid Nutritional Supplements for People with Dementia in Residential Aged Care Facilities (RACFs)**

## **Key Words**

Oral liquid nutritional supplements, dementia, residential aged care, nursing home

## **Acronyms used**

ACT – Australian Capital Territory

DCRC – Dementia Collaborative Research Centre

NSW – New South Wales

OLNS – oral liquid nutritional supplement

QUT – Queensland University of Technology

RACF – residential aged care facility

RN – registered nurse

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## 1. Background

In the context of an ageing population, known prevalence and the anticipated increasing burden of disease associated with dementia, the Australian Government has recognised dementia as a priority area for health care research and service delivery <sup>[1]</sup>. Accordingly, an investigation into the prescription and administration of OLNS for people with dementia and suspected nutritional deficiency was identified as one of several areas for dementia-related research between the Dementia Collaborative Research Centre (DCRC) in Brisbane and Hammond Care in Sydney.

Dementia is a broad term used to define several progressive, debilitating conditions that causes a progressive physical and cognitive decline in a person's functioning. As part of this decline the ability to feed oneself and the ability to chew or swallow can diminish <sup>[2]</sup>, <sup>[3]</sup>. Additional explicit dementia behaviours, such as intake refusal and, wandering and pacing, can lead to malnutrition in the person with dementia. These issues result in considerable challenges to carers and health care providers.

The prevalence of malnutrition among people with dementia living in RACFs has previously been recognised <sup>[4]</sup> and is estimated to affect between 17% and 65% of long term care residents <sup>[5]</sup>. Malnutrition may be due in part to the nature of dementia and to the difficulties associated with administration of nutritional intake resulting in under nutrition and weight loss. For example people with dementia may have problems using utensils or remembering to eat<sup>[3]</sup>. Furthermore olfactory dysfunction may effect food intake <sup>[3]</sup>. To optimise nutrient intake, residents may be prescribed OLNS, which are nutrient dense drinks that may be consumed more readily by a person with dementia who may be unable or unwilling to eat enough nutritious food to meet their basic daily requirements, including the increased caloric requirement of people with dementia who wander or pace.

A preliminary literature review highlighted inconsistencies in the prescription, administration and benefits of OLNS for residents with dementia in RACFs and suggested that there is no strong evidence base for OLNS and no formalised guidelines available to staff in RACFs thus pre-empting a more comprehensive systematic literature review prior to implementation of the study. The aims of the systematic literature review were to identify the factors associated with the prescription and administration of OLNS for people with dementia living in RACFs including assessment of the effectiveness of OLNS, resident responses to the administration of OLNS and staff perceptions and management of OLNS.

The systematic literature review concluded that further research was required into the prescription, administration and effectiveness of OLNS. No definitive evidence of effectiveness for OLNS was found. Findings did suggest that if administered with care and assistance and prescribed after investigation of the reasons for weight loss and/or poor oral intake, OLNS may play a role in maintaining protein and energy intake. Consequently, it can be inferred that OLNS may contribute to the promotion of optimal functioning in persons with dementia who live in residential aged care <sup>[6]</sup>.

To further investigate and identify factors associated with the prescription and administration of OLNS for people with dementia living in RACFs, a mixed method study was conducted. The broad aims of the study were to investigate:

- reasons for prescribing or initiating OLNS use;
- the benefits (in terms of mortality, morbidity, patient comfort and maintaining adequate hydration and weight);
- degree of wastage; and
- residents' responses to the administration of OLNS.

Ethical approval for the study was sought and obtained from the Queensland University of Technology Human Research Ethics Office: Protocol number 0700000617, dated 29<sup>th</sup> August 2007.

## **2. Method**

### **2.1. Participating Facilities**

Ten residential aged care facilities (RACFs) were approached and invited to participate in the study. The selection of RACFs was based on their involvement in previous projects with Hammond Care and representativeness of a residential facility caring for residents with dementia. Although all RACFs initially agreed to participate in the research, various facility-specific circumstances meant that seven RACFs finally participated in both the retrospective chart audits and focus groups. Due to logistical, geographical and resource constraints, only the state of NSW and the ACT were represented in the study. The participating facilities included three from the ACT, three from the Sydney metropolitan area of NSW and one from the south coast of NSW. The facilities that were invited to participate were representative of Australian RACFs in terms of size and ownership. They included facilities that were owned by private providers as well as charitable, not for profit providers. Some facilities were stand alone while others were administered under the umbrella of a larger group provider. The size of the facilities ranged from 60 to 141 residential beds.

Initial telephone contact was made with the manager of each facility to provide an explanation of the study aims and protocol and to gain verbal permission to conduct the study. A letter of Introduction (Appendix 1), a Participant Information Sheet (Appendix 2) and a copy of the ethics approval were subsequently mailed to the manager of each facility who had provided verbal agreement to participate. Ongoing communication with each RACF manager was established via telephone or email to provide further clarification as required and to arrange mutually convenient times to conduct the study. Written consent for access to resident charts for auditing purposes and to conduct focus groups was obtained from each facility manager (Appendix 3).

## **2.2. Design**

This study employed mixed methodology with quantitative data collected via retrospective chart audits and qualitative data collected via focus group interviews. The two methods were used sequentially, with the chart audits undertaken before the focus groups. All data was collected by one researcher to ensure a consistent approach to both the chart audits and focus groups. Guidelines were prepared for use in the chart audits (Appendix 4) and a list of questions was developed as a prompt for focus groups prior to commencement of the study (Appendix 5).

## **2.3. Procedure: Chart Audits**

### **2.3.1. Inclusion criteria**

Charts were included in the audit where the resident had a diagnosis of dementia and was prescribed or ordered OLNS.

### **2.3.2. Instruments**

The charts were audited using the clinical audit tool, a tool developed specifically for the study based on criteria from an existing validated audit tool<sup>[7]</sup>. The clinical audit tool was reviewed by a steering committee of experts from within the dementia specific health care field prior to implementation of the study. The clinical audit tool was designed to investigate the following issues around the effectiveness, prescription and administration of OLNS:

1. documentation of OLNS orders;
2. reasons for commencement ;
3. personnel initiating orders;
4. nutritional measures used to assess a resident on OLNS;
5. time of administration;
6. evidence of family involvement in decision to commence OLNS;
7. types and quantities of OLNS which are administered;
8. how soon after admission OLNS are initiated;
9. wastage levels;
10. resident's reaction to the OLNS; and
11. how OLNS use is evaluated.

### **2.3.3. Process**

Chart audits were conducted at a pre-arranged time convenient to each facility. Prior to the visit each facility manager identified the charts of ten residents who met the inclusion criteria and were suitable for auditing. Where a facility had fewer than ten residents who met the inclusion criteria only that number of charts could be audited.

### **2.4. Data Analysis**

The data was entered into an Excel spreadsheet. Frequencies were collated and the aggregated results calculated for responses across the 11 areas of investigation. Final results were reviewed by two independent researchers.

## **3. Results: Chart Audit**

In all, 44 chart audits were conducted across seven RACFs over a three month period. The residents who met the eligibility criteria and whose charts were included in the study ranged in age from 64 to 100 years ( $M = 84$  years).

### **3.1. Documentation of OLNS Orders**

Kitchen charts were the most common source of documentation ( $n=26$ ), followed by nursing care plans ( $n=24$ ) and progress notes ( $n=16$ ). Other sources of documentation included dietician notes ( $n=9$ ), speech pathology/Medical Officer notes ( $n=9$ ) and medication charts ( $n=5$ ). A small number of orders were documented on other forms including fluid charts, handover sheets, admission notes or assessment forms.

There were 100 documentations of OLNS in the 44 audited charts with duplication of orders identified in several charts ( $n=23$ ). Evidence of OLNS could not be found in two charts despite staff verifying that OLNS was administered. Similarly, in some audited charts there was no evidence of orders in the progress notes ( $n=6$ ) and in a further finding documentation for OLNS was displayed on a kitchen chart with no evidence of the orders in the resident's charts or current care plans ( $n=3$ ).

### **3.2. Reasons for Commencement of OLNS**

Reduced appetite ( $n=28$ ) and weight loss ( $n=27$ ) were the most common reasons for commencement of OLNS documented in the residents' charts. Other reasons included family request ( $n=1$ ), reluctance to eat ( $n=2$ ), wound treatment ( $n=2$ ), wandering away from food ( $n=1$ ), refusal to eat ( $n=1$ ), unable to self-feed ( $n=2$ ), low albumin ( $n=2$ ), and low Haemoglobin (Hb) ( $n=1$ ). In one of the two charts noting that the resident was unable

to self-feed no other reason for commencement was given. Some residents had multiple reasons identified for commencement of OLNS ( $n=21$ ).

### **3.3. Personnel Initiating Orders for OLNS**

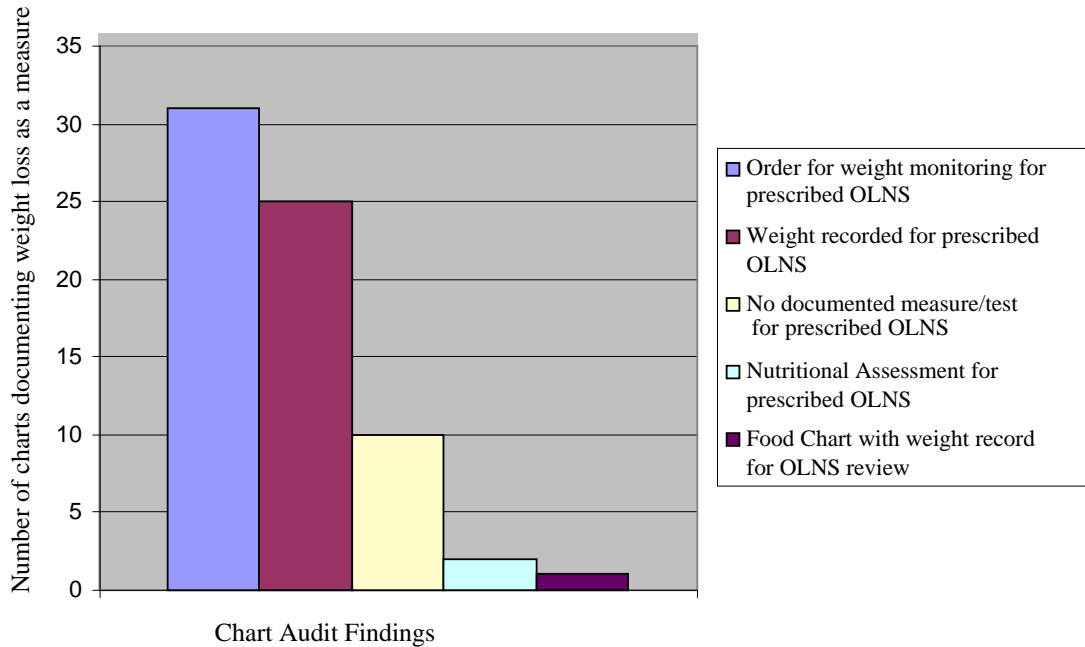
The majority of OLNS orders were initiated by Registered Nurses (RNs) ( $n=32$ ) and care staff ( $n=20$ ). Dieticians were responsible for initiating orders for OLNS in less than one third of charts audited ( $n=13$ ). A small number of orders for OLNS were initiated by medical officers ( $n=5$ ), family members ( $n=2$ ) and a speech pathologist ( $n=1$ ).

### **3.4. Nutritional Tests/Measures**

Chart audit results for nutritional tests/measures utilised across RACFs are displayed in Figure 1. In a large number of the 44 charts audited, weight monitoring was documented as the measure of nutritional assessment for OLNS ( $n=31$ ), however there was a discrepancy between the order for weight monitoring and actual recorded weight ( $n=25$ ), as illustrated. There was no evidence of nutritional tests/measures after prescription for OLNS in ten charts. Two charts utilised a nutritional assessment as a measurement for prescribed OLNS. A food chart which included a fortnightly order for weight monitoring was used in another chart; however in that chart weight was recorded once only. Several residents receiving OLNS had no record of weight monitoring in the previous 12 months despite weight loss being identified as the reason for commencing OLNS ( $n=7$ ).

In addition, the charts reflected a wide variation in the frequency of weight monitoring as a measure of nutritional assessment. For example, weights were recorded on admission only ( $n=1$ ), once only ( $n=7$ ), fortnightly ( $n=2$ ), monthly ( $n=11$ ), approximately quarterly ( $n=10$ ), bi-annually ( $n=2$ ) or every two years ( $n=1$ ) or there was no record of weight found on audit ( $n=10$ ).

Figure 1: Results of Nutritional Test/Measure for OLNS



### 3.5. Administration Times of OLNS

The most common time of day for administration of OLNS was meal times ( $n=36$ ). Other times for administration of OLNS included medication rounds ( $n=5$ ), between or with meals ( $n=3$ ), supper time ( $n=1$ ) or a documented time of administration could not be found ( $n=2$ ). One chart noted that OLNS was to be administered when the resident was most receptive.

### 3.6. Family Involvement in the Decision for OLNS

Most charts contained some comments to suggest that residents' family or representatives had been engaged in a discussion about the resident's overall care ( $n=31$ ). In several charts nutrition had been noted as discussed ( $n=5$ ), however it was unclear if this discussion was specific to OLNS or general nutrition. A small number of case conferences were utilised as a method of involving families in discussion that included OLNS ( $n=5$ ).

### 3.7. Types and Quantities of OLN's used across RACFs

Several brands of OLN's were used by the seven facilities involved in the study. As illustrated in Table 1, the most common brands used were 2 Cal and Sustagen. In two charts Sustagen was interchangeable with Ensure. Other brands were EPD, Fortisip, Cubitan, Novasource and Sustagen. Five of the RACFs used more than one of these products and some residents received more than one type of OLN's ( $n=10$ ). Most residents' charts specified the quantity of OLN's prescribed ( $n=32$ ).

Table 1: Types of OLN's across RACFs.

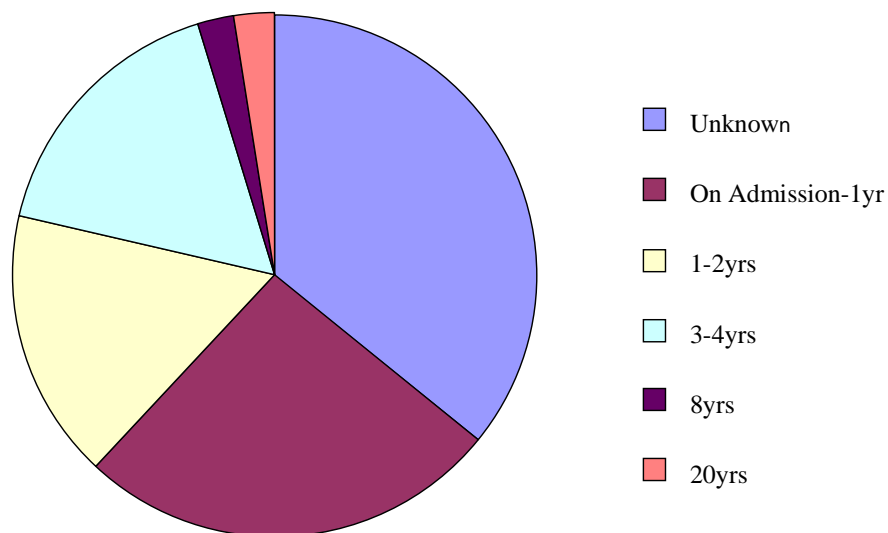
OLN's Type	Frequency of OLN's type across RACF's	Range of Quantities prescribed per type	Range of Administration times (not always recorded)
2 Cal	11	60-80mls	TDS <sup>1</sup>
Sustagen	11	200mls or 1 cup	Daily, BD <sup>2</sup> , TDS <sup>1</sup> or PRN <sup>3</sup>
EPD	10	200mls	TDS <sup>1</sup>
Ensure	6	1 cup	BD <sup>2</sup> or not recorded
Fortisip	6	60mls, 100mls, 200mls	Daily, TDS <sup>1</sup> , PRN <sup>3</sup>
Cubitan	1	60mls	PRN <sup>3</sup>
Unknown	1	60mls	PRN <sup>3</sup>
Novasource	1	80mls	TDS <sup>1</sup>

<sup>1</sup> TDS = three times per day, <sup>2</sup> BD = twice daily, <sup>3</sup> PRN = as required

### 3.8. OLN's Commencement in Relation to Admission Date

The information on time of commencement on OLN's in relation to the resident's date of admission could not be determined from a number of charts due to poor documentation ( $n=15$ ). Several residents were ordered or prescribed OLN's on admission or within one year ( $n=11$ ), others commenced on OLN's between one and two years ( $n=7$ ), or from three to four years ( $n=7$ ). One resident was prescribed OLN's eight years from time of admission and one resident commenced on OLN's twenty years after admission. The data is represented in Figure 2.

Figure 2: Time of Commencement on OLNS Post Admission to RACF



### 3.9. Wastage

44 charts were audited to establish recorded wastage levels of OLNS. There was no evidence of wastage levels documented and therefore no reliable tracking of waste recorded.

### 3.10. Residents' Reactions to OLNS

The residents' reaction to OLNS was not always documented in the charts or the reaction documented could not be specifically linked to the OLNS. Nine charts contained no specific comments relating to OLNS or nutrition. Some comments recorded in care plans and progress notes were positive while others were less so. Documented comments considered as positive included those related to tolerance ( $n=7$ ) or observed enjoyment of the OLNS ( $n=8$ ) and a negative reaction was inferred if there was notation that the resident was resistive or refused OLNS ( $n=9$ ). General comments that were documented related to level of assistance required or family involvement in the administration of OLNS.

### 3.11. Review/Evaluation of OLNS

In most charts the care plan was used as a form of nutritional evaluation ( $n=34$ ) although it was not clear whether any care plan changes were made as a result of objective measures that evaluated resident nutritional status other than weight monitoring. Completed evaluations were not always evident ( $n=4$ ). An example of this would be four charts

documenting that a resident was ordered OLNS for weight loss without supporting documentation of weight monitoring.

Care plans were reviewed monthly ( $n=7$ ), bi-monthly ( $n=6$ ), three monthly ( $n=21$ ) or at unspecified times ( $n= 8$ ). Nutritional care plans were utilised as a form of evaluation in four charts and these were reviewed three monthly. A dietician assessment was noted as a method of review/evaluation in a further three charts. Some follow-up evaluation comments by both nursing staff and dieticians were observed in progress notes ( $n=6$ ).

## **4. Procedure: Focus Groups**

### **4.1. Participants**

A total of 55 staff at seven RACFs participated in focus groups conducted at each facility. Participants were approached by their facility manager and were asked to participate on a voluntary basis and in paid work time. Participation numbers ranged from four to ten staff in each group. The skill mix of participants included directors of nursing, RNs, enrolled and endorsed enrolled nurses, two chefs, kitchen staff, nurse educators, care service employees, dementia carers, assistants in nursing, personal carers and activity officers. There were no dietician participants in any of the focus groups and there was no RN representation in one focus group.

### **4.2. Instrument**

The focus groups were conducted using a structured set of questions designed in consultation with the steering committee (Appendix 5). The purpose of the focus groups was to determine staff perceptions around 15 issues related to the effectiveness, prescription and administration of OLNS for residents with dementia including:

- documentation;
- tests and investigations prior to the commencement of OLNS;
- OLNS orders;
- types of OLNS used;
- reasons for OLNS;
- administration times of OLNS ;
- wastage levels;
- difficulties in administering OLNS;
- strategies used to encourage residents and increase acceptance of the OLNS;
- reactions of the resident to OLNS ;
- staff's feelings of benefits of OLNS;
- evaluation methods of OLNS;
- staff training;
- confidence levels of staff with OLNS; and
- family involvement.

### **4.3. Process**

A focus group was conducted at each facility for the purpose of discussing the use of OLNS with staff. The researcher negotiated a suitable time with the manager of each facility who would then coordinate the attendance of an appropriate skill mix of staff members to participate in the focus group. Consent was obtained from each facility manager and from individual staff members prior to participation in the focus group (Appendix 3). The scheduled time for each focus group session was one hour. Actual time varied from 20 to 45 minutes per group. Each session was tape recorded with the permission of the participants. The variance in time related to staff attendance numbers, level of participation and discussion generated.

### **4.4. Data Analysis**

Tape recordings of all focus groups were transcribed with participants and facilities de-identified. The coding rules applied were pre-determined and based on the 16 question structured interview schedule. Frequencies of responses were calculated across groups.

## **5. Results: Focus Groups**

### **5.1. Documentation**

Participants from all focus groups reported that when the resident's physician prescribed OLNS the order was written in the medication charts. Six groups reported that orders for OLNS were documented on a kitchen list or board. Four groups advised that OLNS orders were documented in nursing care plans. One focus group mentioned diet sheets and another group reported that orders were documented in the dietician folder however it was not clear where the diet sheets or folder were displayed. Five focus groups commented that OLNS administration was documented in the resident's progress notes and one group also utilised handover sheets. Another group detailed how OLNS was ordered as a treatment for wound healing with the orders documented on a wound care plan and on a board in the treatment room. Documentation was not always considered necessary with one group reporting they had been told that the order did not need to be documented, and another group commenting that orders for OLNS were not always written down.

### **5.2. Reasons for Commencement of OLNS**

Several reasons for the administration of OLNS in general were identified by the focus group participants. The reasons identified included: weight loss; poor eating; reduced appetite; wound management; wound healing; weight loss in end stage dementia; poor and deteriorating health; and lethargy. Despite identifying these general reasons for the administration of OLNS, staff participating in the focus groups reported not always knowing why the residents in their facility were being given OLNS. One group said they often presumed a resident was given an OLNS because of weight loss, poor appetite and

dementia. It was also reported that OLNS was given to residents because they liked it. According to another group OLNS was routinely offered to all residents on a daily basis from their time of admission regardless of their pre-existing nutritional status. The group clarified that if the resident was overweight, refused or disliked the OLNS, then this would be assessed and they may not be offered the supplement. Alternatively, the administration of OLNS could be perpetuated on return from acute care with a dietician order. One group reported that a resident was placed on supplements for family reasons stating, *'there's another gentleman we put on supplements because his wife was concerned about his weight loss and even though we know that it's part of the dementia process, we put him on a supplement so that she would feel a lot more comfortable'*. Another group's discussions highlighted that staffs' personal opinions were influential giving an example of when OLNS was administered despite the advice to discontinue administration because of the staff member's subjective assessment that the resident still wanted it.

### **5.3. Personnel Initiating Orders for OLNS**

The focus groups reported that OLNS are most commonly ordered by the RN ( $n=5$  groups). The second most common reported mechanism for the initiation of OLNS was via Medical Officer and/or dietician orders ( $n=4$  groups). Another group advised that the facility manager was responsible for initiating the order after receiving advice on the resident's nutritional status from carers. One focus group reported that experienced care staff would initiate OLNS without consultation with an RN or Medical Officer noting that staff members with experience may often observe that a resident had eaten nothing and would offer OLNS. In contrast, another group relayed the information that OLNS was not given unless ordered.

### **5.4. Tests and Investigations Completed Prior to Commencement of OLNS**

Observable weight loss was the predominant measure for initiating OLNS. When asked about nutritional tests/measures completed prior to the administration of OLNS participants from all groups reported that they would weigh the resident ( $n=7$  groups). Other tests or investigations reported as being conducted prior to commencement of OLNS included: wound assessment ( $n=1$  group); general nutritional assessment ( $n=2$  groups); placement on food chart initiated by RN ( $n=1$  group); assessment of skin integrity by nursing staff; and on some occasions blood tests ordered by the Medical Officer ( $n=1$  group). Two groups reported that assessment by a dietician would be completed and participants from one of those groups also stated that a speech pathology assessment would be completed if the resident was having swallowing difficulties.

### **5.5. Administration Times of OLNS**

The most frequently reported time of administering OLNS was with medications ( $n=6$  groups) which often coincided with mealtimes ( $n=4$  groups). Administration time could depend on type of OLNS with some groups reporting that Fortisip was administered with

medications ( $n=2$ ) and other groups reporting that 2 Cal was administered with medications ( $n=4$ ). The same four groups reported that other types of OLNS, for example, Ensure, Sustagen or EPD, would be administered either with or between meals. One group determined that OLNS administration was frequently dependent on when the resident accepted it best, elaborating that this was usually at mealtimes. One group reported that OLNS was routinely administered to all residents at one designated mealtime (breakfast) and another group advised that a supplement was offered if the resident refused their meal.

One group explained that they felt it was logical to administer OLNS with medication at meal times although the logic was not always shared by others, *'I actually stress to the staff that you're not to give them supplements until the afternoon in between meal times because it will dampen the appetite'*. Despite the different viewpoints it was noted that individual needs were also taken into account.

### **5.6. Family Involvement in the Decision for OLNS**

All participants reported that families are advised appropriately of their relative's need for OLNS. The RN and also the Medical Officer or dietician would inform the family of the OLNS either by phone, during a visit or when a case conference was conducted.

### **5.7. Types of OLNS Used in Each RACF**

Focus group participants reported a variety of different OLNS in use which was consistent with the brands identified in the chart auditing process (refer Table 1). Where a supplement was made on-site the focus group reported that could be quite a variation in preparation and presentation whereas with commercial brands the product was always the same.

### **5.8. Wastage**

Low wastage levels of OLNS were reported by five of the seven focus groups. One group reported low wastage because staff administer and feed the OLNS to the resident. Two other focus groups commented that wastage varied and sometimes ranged between 35-50%. Participants reported that wastage was linked to flavour and if the flavour offered to the resident was not their preferred flavour, wastage increased. Participants also reported that wastage was increased if staff had less time to administer the OLNS. However, most participants stated that lack of time to administer OLNS was uncommon as they made a conscious effort to ensure all OLNSs were administered and that all residents were encouraged to consume them. In one facility OLNS was administered from a jug to avoid wastage, with the unconsumed OLNS offered through-out the day. The most reliable source of tracking wastage was identified by kitchen staff observing wastage on return to the kitchen and reporting their observations to nursing staff. No documentation of wastage was reported by focus group participants.

## **5.9. Residents' Reactions to OLNS**

Most participants reported residents' reactions to OLNS as positive. The majority of participants reported observing residents smiling and looking happy, and willingly accepting OLNS. Where there was an instance of resistance to OLNS participants reported that this was easily overcome by re-offering the OLNS, encouraging the resident and by staff talking in a reassuring way to the resident.

## **5.10. Difficulties in Administering OLNS**

Most focus group participants reported no difficulties with administration of OLNS. The few difficulties that were encountered included episodes of challenging behaviour which were managed with a variety of strategies. One group assessed communication as a difficulty in relation to the administration of OLNS referring to inadequate information regarding a resident's order for OLNS. Other influencing factors reported to affect administration were the taste of the OLNS, reported by two groups as a difficulty. The need to store some supplements such as 2 Cal in the fridge was reported as a difficulty by another group. Workload issues were another problem identified by one group.

## **5.11. Strategies to Encourage and Increase Acceptance of the OLNS**

Focus group participants reported using several different strategies when administering OLNS. Participants reported that strategies needed to be individualised to the resident's needs. Reported strategies included:

- giving the person their preferred flavour of OLNS ( $n=5$  groups);
- where a resident has a preferred staff member, having that staff member administer the OLNS ( $n=1$  group);
- using approaches and behaviour management strategies that have been successful previously ( $n=2$  groups);
- presenting the OLNS as a milkshake ( $n=4$  groups);
- giving the residents an explanation about the OLNS and encouraging the resident to try the OLNS ( $n=3$  groups);
- mixing the OLNS with other foods, for example, ice cream ( $n=3$  groups);
- giving the OLNS at the temperature preferred by the resident ( $n=1$  group);
- removing distractions ( $n=2$  groups);
- sitting the resident comfortably ( $n=1$  group); and
- offering the OLNS in the resident's preferred cup, sometimes with a lid, sometimes with a straw or in a glass rather than from a bottle or tin ( $n=3$  groups).

## **5.12. Staff Feelings about Administering OLNS**

Without exception, focus groups reported feeling positive about the administration of OLNS. Some participants stated they feel happy and pleased because they are assisting the resident to ingest the OLNS and are providing necessary nutrition. Staff comments included *'you notice they put on weight and are more responsive and happy and that makes you feel good'*, and *'...you are not as worried about it because [the resident is] drinking and sipping and getting something that is high in calories and high in protein'*. Focus groups reported that OLNS fluids were an ideal alternative to someone who could no longer drink thin fluids and the staff had a feeling of satisfaction when their residents accepted the OLNS.

## **5.13. Evaluation Methods of OLNS**

Participants attending the focus groups reported that the effectiveness of OLNS is evaluated in many ways. For example, the residents' condition, tolerance or refusal of OLNS and management strategies are often discussed at handover or between staff and therefore evaluated in an informal manner. Forms of evaluation that were reported included monitoring the residents' weight ( $n=5$  groups), monitoring sleep patterns ( $n=1$  group), assessment of skin integrity and turgor ( $n=2$  groups), subjective assessment of happiness/wellbeing ( $n=6$  groups), monitoring urinary output ( $n=1$  group) and on-going assessment of wound healing ( $n=1$  group). Not all groups were in agreement with one group noting that residents were prescribed Cubitan for wound healing but that wound healing was not an adequate form of evaluation because it was difficult to know how the healing process would have proceeded without administration of Cubitan. Another group reported the absence of cellulitis as an evaluation of good nutrition.

The amount of wastage of OLNS, often observed and reported by kitchen staff to nursing staff, was also used to evaluate the effectiveness of OLNS. However, as previously discussed, none of the groups reported that they documented actual wastage. Participants reported that written evaluation of OLNS was completed in the resident's care plan, usually by nursing staff. Further evaluation may be undertaken by the Medical Officer or dietician and would be documented in the resident's chart. Participants of one group reported that nursing and allied staff conducted regular nutritional meetings to discuss the residents receiving OLNS and the effectiveness of this intervention. One focus group reported an increased order for supply of OLNS as a method of evaluation which they related to resident's acceptance and therefore the increased demand for OLNS.

## **5.14. Staff Training**

Focus group participants reported that training for staff administering OLNS was either provided on an infrequent basis by some of the companies who supplied OLNS, by an educator, dietician, Registered Nurse or through discussion at resident case conferences. One group reported that training was formalised by nutrition competency testing which

was undertaken by all care staff. In contrast, another group reported that education on OLNS was not provided or available. The remaining five groups reported that training was variable and irregular. Most new staff were trained 'in-house' by experienced staff and were allowed to administer OLNS *'after they've done all their buddy shifts and they can prove that they can handle it'*. New staff would also observe the OLNS being administered to the resident and take notice of the strategies best suited to that particular resident. One group reported dieticians as willing to share information freely when asked by staff during assessment and review visits. One participant framed a deficit in education and training by stating *'sometimes it would be better for more education so that I know what it does do for them, why I am giving this to them'*.

### **5.15. Confidence of Staff with Administration of OLNS**

Participants commented that confidence in administration was not an issue. All participants felt able to safely administer the OLNS and stated that there was always someone to ask if they were unsure. Kitchen staff participants reported that despite not being responsible for administration they were confident that staff was experienced and very capable of managing and administering OLNS appropriately.

## **6. Discussion**

The mixed method approach utilised in this study provided a broad insight into both practices and staff perceptions of practice regarding the prescription and administration of OLNS to people with dementia across seven RACFs. In this study retrospective chart audits determined that most OLNS orders were documented in the kitchen of an RACF, a result supported by focus group responses. However, the absence of any documentation in some audited charts, the range of locations in which documentation could be found on chart audit and reported by focus group participants coupled with focus group reports of not always needing to rely on documented orders for the administration of OLNS provides a clear picture of some of the inconsistencies and lack of knowledge that surround the prescription and administration of OLNS.

Documentation cannot guarantee consistency in delivery of OLNS to the prescribed recipient. In a prospective study to investigate the use of OLNS among residents in RACFs, including a large group of people with dementia, Kayser-Jones et al found that prescribed supplements were actually served only 75% of the time. The study also revealed that some participants received either more or fewer than the prescribed OLNS or received a different type of supplement to that which was ordered and documented<sup>[8]</sup>. This study supports the finding that residents might not be administered OLNS due to workload demand while others might receive OLNS on a daily basis without assessment of need. In particular the focus group comment that it was not wrong to give a supplement regardless of whether there was an existing order and the report that OLNS was administered despite the advice to discontinue administration because of the staff

member's subjective assessment that the resident still wanted it highlights some of the inconsistencies as well as some of the ethical implications surrounding the use of OLNS.

The reasons for prescribing and/or administering OLNS in this study were varied although audited charts and reports from focus group participants most commonly linked OLNS to perceived or actual weight loss, reduced appetite and as an adjunct therapy for wound healing. OLNS is described in the literature as the frontline intervention for nutritional problems such as weight loss and poor appetite <sup>[9]</sup> which supports the findings from our mixed method approach. Not all resident charts showed evidence of a reason for commencement of OLNS and this was supported by the focus group findings where it was identified by participants that in some instances they did not know the reason for the resident receiving OLNS.

In regard to initiating OLNS there was a significant discrepancy between the results of chart audits and the reports from focus group participants with 20 audited charts reflecting a care staff member as the initiator of OLNS, often in consultation with the RN, while only one focus group reported experienced care staff as the initiators of OLNS. However, both chart audit and focus group results revealed the RN was the most frequent initiator of OLNS. The systematic literature review found no information on the initiation of OLNS other than as prescribed medical orders, highlighting a concern about who should be responsible for the prescription of OLNS. This study revealed that initiation of OLNS could vary from no administration without a written medical order to initiation of OLNS by an experienced care staff member, highlighting variances in practice surrounding the prescription and administration of OLNS.

Nutritional assessment prior to and during the administration of OLNS was not always documented according to the chart audit and was reported as an inconsistent, haphazard and rarely measured practice by focus group participants. Most reliance was placed on weight loss or weight gain which is a valid measure but could be hampered by the difficulty in weighing people with significant cognitive impairment on a regular basis. Several studies investigating nutritional supplementation for people with dementia in RACFs have been able to demonstrate statistically significant differences in weight gain between residents in RACFs receiving OLNS and control groups who remained at or near their baseline weight <sup>[10-12]</sup> and significant weight gain was reported in a pre and post OLNS intervention offered to a group of residents including some with a primary diagnosis of Alzheimer's disease <sup>[9]</sup>. Moreover, weight loss has been reported as a '*sentinel event*' in the construction of quality indicators for morbidity and mortality data <sup>[9]</sup>. However, reliance on weight alone tends to ignore reasons for weight change which could be indicative of other treatable causes. Depression for example, may be under-diagnosed in people with dementia and can contribute to malnutrition and subsequent weight loss. Borade et al suggest that supplements are of little benefit without addressing the underlying causes of weight loss, although they also note that there are no existing standards to stratify residents based on degree of cachexia <sup>[13]</sup>. Regular and standardised nutritional assessments for residents on OLNS would facilitate best practice outcomes with regard to the prescription and administration of OLNS thus optimising health care delivery for people with dementia in RACFs.

A best practice approach may also remove inconsistencies surrounding the best time to administer OLNS. Chart audits and focus group reports identified meal times and medication rounds, which often coincide with meal times, as the usual time to administer OLNS. This was in contrast to literature advocating between-meal delivery to minimise the effects on appetite<sup>[13-17]</sup> while literature supporting the administration of OLNS with meals was not found. However, in determining best practice for the administration of OLNS other factors that impact on delivery of OLNS including staffing resources, resident preference and the risk that OLNS may be used as a substitute for taking the time to feed standard food to residents with problems feeding themselves or who eat very slowly, would need to be considered.

Family involvement is now a routine aspect of most institutionalised care and, without exception, all facilities involved in the study either attempted to include families in the decision making process or to advise them of the addition of OLNS to their family member's care plan. The results from chart auditing indicate that while families were advised of the introduction of OLNS to their relative's care plan very few actively participated in the decision-making process. Chart audit results demonstrated that only five case conferences were conducted. The case conference has been recognised as an appropriate mechanism for communication and for facilitated decision-making between care-givers and families for all aspects of care including nutrition<sup>[18, 19]</sup>. Case conferencing may be an approach that could be better utilised in many RACFs regarding family involvement in decision-making processes such as the prescription and administration of OLNS for residents with dementia<sup>[18, 19]</sup>.

The types of OLNS administered were relatively standardised in terms of variety between RACFs which was likely to reflect a combination of cost, availability and management preference. Two of the companies supplying OLNS also provided educational services and this would serve as both a promotional influence for the brand and an attraction for facility management from a staff development perspective.

In terms of wastage, the administration of supplements with meals or with medication rounds, which usually occurred at meal times, was identified as common practice in the RACFs and may have contributed towards the low wastage reported by focus group participants in this study. For example, Welch et al investigated the efficacy of a medication pass supplement and demonstrated a significant reduction of waste when supplements were administered with medications which the investigators attributed to less volume distributed to residents as well as to the delivery process<sup>[9]</sup>. Focus group reports linked low wastage of OLNS to strategies such as offering preferred flavours, giving small amounts, timing, using a straw and assistance with feeding which were also consistent with findings from the Welch et al study<sup>[9]</sup>.

Focus group participants encountered very few difficulties with the administration of OLNS to residents with dementia. The participants were also unanimous in their reported belief in the nutritional benefit of OLNS for those in their care and of the positive response from recipients. Apart from the workload issue identified by one of the focus groups the few difficulties that were encountered were managed with the range of strategies previously outlined and are similar to those described by Ali in a case study of

the management of under-nutrition for a resident with dementia which supports the appropriateness of the strategies identified by focus group participants <sup>[20]</sup>.

The Care Plan was identified by chart audit and by focus group reports as the main review/evaluation tool for OLNS administration. Focus group reports and chart audits were also in agreement that weight was the most common indicator for implementation of, or changes to, OLNS administration. However, objective measures of resident health status that informed changes to the Care Plan were rarely evident and documentation, for example of weight, was often missing. An observational tool using six quality indicator scores for the improvement of RACF feeding practices has been described by Simmons <sup>[21]</sup>. The indicators include identification of low intake (<50% consumed from meal tray) and various indicators of staff ability to provide assistance for residents including those receiving OLNS, which was an issue identified by one focus group participant. Tools such as those described by Simmons provide immediate evaluation of some of the factors that preclude effective administration of OLNS and could be adapted for evaluating the administration practices and effectiveness of OLNS for people with dementia in RACFs or used as a focus of discussion or guideline for the development of other evaluation methods.

There was no standardised training for the administration of OLNS across any facilities although experienced staff appeared to be confident with the administration of OLNS. There were no reports of specific training or education found in the literature although Simmons noted that a recent controversial United States regulation permitted trained feeding assistants to provide assistance with feeding in RACFs for which they would be recompensed but did not identify the type of training that would be required <sup>[21]</sup>. One study <sup>[22]</sup> reported the staff time required for administration of OLNS without reference to training while another noted the adverse affect of inadequate staffing on resident's food intake and weight loss <sup>[8]</sup>. These findings would suggest that resourcing may be a factor that assumes a higher priority than actual staff training in regard to the administration of OLNS.

Some studies report that OLNS is effective in increasing nutrient intake <sup>[23]</sup> while others suggest limited benefit if the patient is not properly assessed <sup>[13]</sup>. The findings from chart audits in this study could not determine the effectiveness of prescribing and administering OLNS, however the benefits of OLNS articulated by focus group participants not only outlined the perception of benefit for the resident but also the poignant depth of the level of care provided by care staff to the residents with dementia in the seven RACFs that participated in this study.

In summary, the findings from this study identify the non-standardised approach to the prescription and administration of OLNS that currently exists, characterised by inadequate assessment of residents with dementia in RACFs, poor documentation, haphazard monitoring and inadequate evaluation of residents who are prescribed OLNS. There is significant variation in staff training and education on the administration of OLNS although there is no evidence to suggest that a lack of standardised training and education has had an adverse effect on residents who receive OLNS. This lack of evidence for

adverse effects may be a function of documentation rather than circumstance but raises concerns about risk and risk management.

In order to achieve best practice outcomes for residents with dementia who are prescribed or ordered OLNS rigorous research into the practice of using OLNS is needed to enable staff to adopt a consistent and ethical approach to the management of OLNS, including appropriate staff training and education, standardised nutritional assessment and monitoring of wastage.

## **7. Strengths and Limitations**

The researcher who conducted the chart audits and focus groups was experienced in aged care and dementia care. Consequently, her familiarity with documentation methods, care practices and OLNS administration provided strength for the study. This previous knowledge and experience also enhanced credibility with focus group participants and assisted the researcher to interpret the participants' comments and clarify queries and responses as required. A further strength of the research was the range of geographical areas across NSW and the ACT that were represented by the seven facilities involved in the study thereby creating the opportunity for diversity in findings. There was also a wide range of service provision models represented with differing access to health services within their areas. This allowed for staff with varying levels of experience and resources to participate in the research.

It is acknowledged that a limitation of this research may have been the small number of RACFs involved. Although attempts were made to include larger numbers of RACFs, seven RACFs participated. In addition, some RACFs had relatively low numbers of residents who were ordered OLNS. Another limitation of the research was that dieticians and Medical Practitioners were not involved in any of the focus groups. This placed limitations on the gathering of information from these professionals and may have contributed towards bias caused by the categories of staff that were represented.

This study did not look at the possible risks of over or under administration of OLNS. The poor documentation of the use of OLNS found with the chart audit suggests that it would have been difficult to identify over and under administration, making it impossible to identify risks.

## **8. Recommendations for Further Research**

This research was undertaken over a limited period of time and involved a limited number of RACFs. There were some areas of the research that would be worthwhile expanding on. Future studies could replicate this study with a larger number of RACFs, including facilities that specialise in providing care for people with dementia. It is also recommended that further research undertaken on OLNS include facilities in rural areas and facilities with culturally diverse resident populations to determine whether they have

problems related to their unique environment that impact beyond what was found in generic urban facilities.

Rigorously randomised and controlled trials are needed into the use of OLNS in people with dementia to determine its benefits, particularly in people with high energy expenditure related to wandering and pacing, and in people with late stage dementia and unexplained weight loss or cachexia. The current use of OLNS suggests that there is no scientific foundation for decision making in relation to people with dementia who may differ from people without cognitive impairment.

A possible option for gathering more extensive data would be through anonymous surveys or structured individual interviews. Another aspect that could be further explored is case conferencing or family consultation in relation to OLNS. Not enough is known about the attitudes of family carers about OLNS and its role in the overall nutrition care of people with dementia who require residential care, or their involvement in the decision making process.

Focus groups that include dietitians and Medical Officers alongside other health care professionals from both the acute and residential care areas may provide insight into how health care professionals view OLNS and what they consider as appropriate and effective.

Tracking residents with dementia who are admitted to aged care facilities following acute care commencement of OLNS may provide further information about the usefulness of short and long term use of OLNS.

Direct observations of practice may be useful as there was limited scope to cross reference charts, focus group information and actual practice. The information from direct observation will allow conclusions to be drawn about the use of OLNS instead of supporting the consumption of a standard diet to manage staffing shortages, and whether staff use OLNS subjectively, particularly in late to end stage dementia, for people who may not need it, as suggested by focus group participants.

## **9. Recommendations for Practice**

- Facilities should institute a clear policy regarding who has responsibility for ordering OLNS.
- Facilities should institute a clear policy on the location for written orders for the prescription of OLNS.
- When writing orders, the reason for prescribing OLNS for people with dementia should be clearly articulated.
- Nutritional assessment, where undertaken, should be clearly noted in residents' charts and regular, standardised evaluation should be undertaken.
- Staff should be encouraged to comply with orders where OLNS is prescribed. Education for staff in the nutritional benefits and the variety of reasons for prescribing of OLNS to people with dementia may assist.

- Literature advocates between-meal delivery of OLNS to minimise negative effects on appetite <sup>[13-17]</sup>.
- Standardised training in the administration and evaluation of the use of OLNS for people with dementia living in RACFs is recommended.
- Case conferencing may be an approach that could be better utilised to encourage family involvement in decision-making around the prescription and administration of OLNS for residents with dementia <sup>[18, 19]</sup>.

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## **11. Appendices**

### **Appendix 1: Letter of Introduction**

NAME OF RELEVANT PERSON  
NAME OF ORG  
ADDRESS  
ADDRESS

Dear

**RE: Request for approval to undertake research in your organisation**

**Project title: The prescription, administration and effectiveness of thickened fluids and oral liquid nutritional supplements to people with dementia in residential aged care facilities**

Hammond Care and the Queensland University of Technology are conducting a project to investigate issues associated with the prescription, administration and effectiveness of thickened fluids and oral liquid nutritional supplements to people with dementia living in residential aged care facilities. The project consists of two systematic reviews, focus groups with staff and chart audits.

I am writing to request your permission to undertake the abovementioned project in the following residential aged care facilities (TO BE LISTED). This will involve the research team conducting:

- (1) focus groups with staff
- (2) an audit of the files of patients with dementia

#### ***Focus groups***

The focus groups will be held with staff involved in the prescription and/or administration of thickened fluids and/or oral liquid nutritional supplements to residents with dementia. The groups will be conducted by the chief researcher for the project, who is a member of the research team. It is anticipated that focus groups will take no longer than an hour and will involve around 8 staff members. Focus groups will be held at the participating residential aged care facility and will be audio-recorded with permission of the participants. For your information, please find attached the information sheet and a consent form which participants will be given to sign, as well as questions to be asked at the focus groups.

***File audits***

The audit will investigate issues relating to the prescription and administration of thickened fluids and oral liquid nutritional supplements. In particular the audit will record dosage/viscosity level, time of day of administration, extent of wastage (where recorded) and demographic information such as dementia diagnosis, nutritional status (where recorded), and resident age. As with the focus groups, the audit will be conducted by the chief researcher. Only group results, in de-identified form, will be presented for this project. Please find attached a copy of the audit document for your information.

The Human Research Ethics Committee of Queensland University of Technology has approved this project, pending formal approval from participating residential aged care facilities. Please find attached a certificate verifying this.

**If you are willing for the nominated residential aged care facilities to be involved in this project, please sign the enclosed letter and return as soon as possible to the address provided on the letter.**

If you have any questions concerning participating in this project, please contact Mr Richard Fleming of Hammond Care on 02 9825 5081 or [rflaming@dementia.com.au](mailto:rflaming@dementia.com.au) or Professor Jenny Abbey of Queensland University of Technology on 07 3138 3879 or [j.abbey@qut.edu.au](mailto:j.abbey@qut.edu.au) to discuss further.

Yours sincerely,

Richard Fleming  
Director Dementia Services Development Centre  
Hammond Care

DATE:

Att: Copy of letter to be signed to acknowledge approval  
QUT HREC Ethics Certificate – for your information  
Copy of chart audit – for your information  
Copy of focus group questions – for your information  
Copy of information sheets and consent forms for participation in focus groups – for your information

\*\*\*Please sign and return this letter to the address directly below. Thank you\*\*\*

(Address  
Address  
Address)

**RE: Authorisation for Hammond Care to conduct audits on files of people with dementia and to conduct focus groups with staff**

**Project title: The prescription, administration and effectiveness of thickened fluids and oral liquid nutritional supplements to people with dementia in residential aged care facilities**

By signing below, I/we indicating that I/we:

- have read and understood the information document regarding this project
- have had any questions answered to my/our satisfaction
- understand that if I/we have any additional questions I/we can contact the research team
- understand that I/we are free to withdraw at any time, without comment or penalty
- understand that I/we can contact the Research Ethics Officer on 07 3138 2340 or [ethicscontact@qut.edu.au](mailto:ethicscontact@qut.edu.au) if I/we have concerns about the ethical conduct of the project
- agree to participate in the project
- understand that the project will include audio recording

**Name** \_\_\_\_\_

**Signature** \_\_\_\_\_

**Date** \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

## Appendix 2: Participant Information Sheet

	<b>PARTICIPANT INFORMATION for QUT RESEARCH PROJECT</b>
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**The prescription, administration and effectiveness of thickened fluids and oral liquid nutritional supplements to people with dementia in residential aged care facilities**

### Research Team Contacts

Professor Jenny Abbey  
(Queensland University of Technology)  
07 3138 3879  
j.abbey@qut.edu.au

Mr Richard Flemming  
(Hammond Care)  
02 9825 5081  
rflemming@dementia.com.au

### Description

The purpose of this project is to investigate the prescription, administration and effectiveness of thickened fluids and oral liquid nutritional supplements to people with dementia in residential aged care facilities.

The research team requests your assistance because you are involved in the prescription and/or administration of thickened fluids and/or oral liquid nutritional supplements to people with dementia which live in a residential aged care facility.

### Participation

Your participation in this project is voluntary. If you do agree to participate, you can withdraw from participation at any time during the project without comment or penalty. Your decision to participate will in no way impact upon your current or future relationship with QUT or with Hammond Care Group.

Your participation will involve a focus group, in which you will be asked questions concerning your views and experiences regarding the prescription, administration and effectiveness of thickened fluids or oral liquid nutritional supplements to people with dementia living in residential aged care facilities.

The focus group will be audio recorded. By signing the consent form attached, you are agreeing to your comments being audio recorded.

The focus group will be held at the residential aged care facility where you work. The duration of the focus group is anticipated to be no longer than 1 hour.

### Expected benefits

It is expected that this project will possibly not directly benefit you, however you may find

that participating in the focus group does expand your knowledge about current practice regarding the prescription and/or administration of thickened fluids and/or oral liquid nutritional supplements to people with dementia living in RACFs.

#### **Risks**

There are no risks beyond normal day-to-day living associated with your participation in this project.

QUT provides for limited free counselling for research participants of QUT projects, who may experience some distress as a result of their participation in the research. Should you wish to access this service please contact the Clinic Receptionist of the QUT Psychology Clinic on 07 3138 4578. Please indicate to the receptionist that you are a research participant.

#### **Confidentiality**

All comments and responses are anonymous and will be treated confidentially. The names of individual persons are not required in any of the responses.

It is a requirement of participation in the project that you agree to being audio-recorded.

The audio recordings will be used only for the purpose of this research project. Only members of the research team from QUT and The Hammond Care will have access to the audio recordings.

Participants will not be given the opportunity to view the transcript of the audio-recordings to verify comments made. However, they will be able to obtain a summary of the main points covered by the focus group which they participated in.

After the contents have been transcribed, the tapes from the audio-recordings will be stored in a secure, locked position for 5 years, and will then be destroyed using confidential disposal document protocol.

#### **Consent to Participate**

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate.

#### **Questions / further information about the project**

Please contact the researcher team members named above to have any questions answered or if you require further information about the project.

#### **Concerns / complaints regarding the conduct of the project**

QUT is committed to researcher integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Officer on 07 3138 2340 or [ethicscontact@qut.edu.au](mailto:ethicscontact@qut.edu.au). The Research Ethics Officer is not connected with the research project and can facilitate a resolution to your concern in an impartial manner.

**Appendix 3: Participant Consent Form**



**The prescription, administration and effectiveness of thickened fluids and oral liquid nutritional supplements to people with dementia in residential aged care facilities**

**Statement of consent**

By signing below, you are indicating that you:

- have read and understood the information document regarding this project
- have had any questions answered to your satisfaction
- understand that if you have any additional questions you can contact the research team
- understand that you are free to withdraw at any time, without comment or penalty
- understand that you can contact the Research Ethics Officer on 07 3138 2340 or [ethicscontact@qut.edu.au](mailto:ethicscontact@qut.edu.au) if you have concerns about the ethical conduct of the project
- agree to participate in the project
- understand that the project will include audio recording and chart auditing

**Name** ..... **ORGANISATION** .....

**Signature** .....

**Date** ..... / ..... / .....

**Appendix 4: Clinical Audit Oral Liquid Nutritional Supplements**

**FACILITY No:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**Study Number:** \_\_\_\_\_ **Principal Diagnosis:** \_\_\_\_\_ **Auditor:** \_\_\_\_\_

**Audit Topic:** Prescription, administration and effectiveness of supplements to residents with dementia

**Rationale:** Limited research conducted to date suggests that there is no strong evidence base for the prescription, administration and effectiveness of oral liquid nutritional supplements to people with dementia living in Residential Aged Care Facilities

**Process:** An audit of clinical records of the residents who are taking supplements will be undertaken. A minimum of 6 and maximum of ten audits will be completed in each facility.

	QUESTION	FINDINGS (Circle/write in where appropriate)	
1.	Where is the order for the supplements documented?	Care plan Fluid chart Dietician notes Medical notes Assessment form ACCR	Physician notes Kitchen chart Nursing notes Speech Pathologist notes Admission form Other
2.	What reason is given for the use of liquid supplements?	Weight loss Family request Resident request	Reduced appetite Abnormal pathology results Other:
3.	Who initiated the order?	Physician /GP Dietician Speech Pathologist Care staff ( AIN etc) Other	Geriatrician Family request Resident request Registered Nurse

4.	What nutritional tests/measures are recorded as having been completed?	
	<b>QUESTION</b>	<b>FINDINGS</b>
5.	What time(s) of the day are the oral liquid supplements administered?	Morning (__ AM)                      With meals/between meals Afternoon (__ PM)                      With medications? Evening (__ PM)                      Other
6.	What discussions (if any) are documented to have occurred with the family/other on the rationale/reason for supplements?	
7.	What supplement type/brand is given? What quantity?	
8.	How long after admission was the resident commenced on supplements?	
9.	Is there any documentation on the wastage levels of supplements? What wastage is there?	
10.	Is there any documentation on the reaction of the resident when given supplements?	Refuses to eat                      Spits out Requires assistance                      Facial grimace Enjoyment                      Other
11.	Is there any evaluation/review in the residents file on the use of supplements? How often?	Care plan                      Medical notes Assessments                      Progress notes Other

Completed By: \_\_\_\_\_ Signature : \_\_\_\_\_

## Appendix 5: Focus Group Prompt Questions

### Possible Questions: Supplements

*Preamble: Outline briefly the project aims, and ask that when responding to questions, to try and consider questions in relation to caring for residents with dementia*

*Mention at beginning that it is **only** oral liquid nutritional supplements that you are interested in, not other supplements – e.g. vitamins etc*

### Prescription

- What tests or investigations were completed prior to the resident commencing on supplements?
- Are the supplements ordered Who orders them? Where would I find the order of the supplements documented?
- What reasons are given for residents commencing on supplements? / Do you know why they've been given supplements?

### Administration

- Are the supplements given at the time of medication rounds or at another time? Given at or between meal times?
- How much wastage do you estimate there is when administering supplements?
- What difficulties do you experience in administering and managing the supplements? What strategies do you use to encourage the resident to take the supplement? Are there special care strategies you follow when administering supplements? (eg: resident must sit up, give slowly, record what is given?)

### Effectiveness

- How does the resident react when you administer the supplements?
- What are your feelings on the benefits of the supplements?
- Is there a preferred way to present the supplement to the resident that increases their likelihood of taking it? (*prompt: in cup, in prima pack etc*)
- How is the effect of supplements evaluated in your facility?

### Other

- What training do you undertake on supplements? (*prompt e.g. in-services by speech therapist/dietician/provider company, on the job training/peer training*)
- How confident are you in administering thickened fluids?