PP-13

IMPROVING ADHERENCE LEVELS OF ORAL NUTRITION SUPPLEMENTS INTAKE AMONG HOSPITALIZED GERIATRIC PATIENTS AT HOSPITAL KUALA LUMPUR

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KEMENTERIAN KESIHATAN MALAYSIA
HOSPITAL KUALA LUMPUR

1. SELECTION OF OPPORTUNITIES

Oral Nutrition Supplements (ONS) is used as part of Medical Nutrition Therapy (MNT) interventions among patients who are unable to meet their nutritional requirements. Low adherence is associated with wastage of unfinished ONS, delay in improving patients' nutritional status.

1.1 PRIORITISATION OF PROBLEM

NO	PROBLEM	S	M	A	R	T	SCORE
1.	Low success rate of weight loss at obesity clinic	9	10	10	11	9	49
2.	High percentage of food wastage of inpatient meals in wards	8	8	6	9	11	44
3.	Low adherence levels of oral nutrition supplements intake among geriatric inpatients at Hospital Kuala Lumpur	10	13	10	14	12	★ 61

Score scale: 1= low ; 2=medium ; 3=high Group members:5

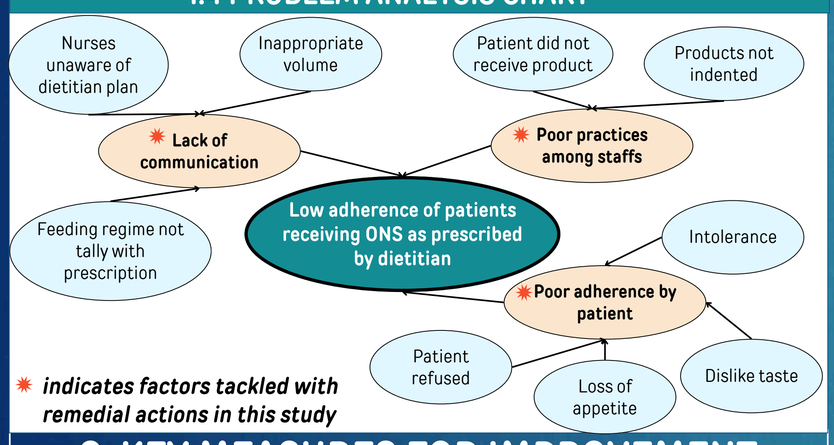
1.2 REASON FOR SELECTION

PARAMETERS	EXPLANATION
Seriousness	Low adherence to ONS may lead to increased hospital stay, malnutrition among patients who are not consuming adequate ONS and wastage of unused and unfinished ONS.
Measurable	Percentage of low adherence can be measured.
Appropriateness	More prevalence of low adherence can be detected and intervened by taking urgent actions as this issue lead to malnutrition.
Remediable	Remediable by implementing appropriate strategies to improve adherence levels by Dietitians, Nurses and PPK.
Timeliness	This project can be completed in a year and effectiveness can be seen with appropriate actions.

1.3 PROBLEM STATEMENT

Problem	A study conducted in February 2019 among 30 patients in selected wards showed that adherence levels of ONS was only 40%.
Effect	Low adherence will affect patient's nutritional status and delay clinical improvement as well as compromising total patient care (Gosney et al. 2003).
Possible cause	Low adherence may be due to multiple factors such as lack of communication, poor practices among staffs, poor adherence by patient, as well as loss of appetite, intolerance, lack of assistance among others (De Luis et al. 2015, Jobse et al. 2015).
Aim of study	This study will improve the adherence levels of ONS as one of the main nutritional support, identify barriers contributing to low adherence to ONS and propose appropriate remedial actions to overcome the problem effectively.

1.4 PROBLEM ANALYSIS CHART



✷ *indicates factors tackled with remedial actions in this study*

2. KEY MEASURES FOR IMPROVEMENT

2.1 OBJECTIVES

General Objective:

To improve the level of ONS adherence among geriatric patients to 68% adherence

Specific Objectives:

i. To verify the percentage of geriatric patients with low adherence to ONS consumption
ii. To identify the contributing factors for low adherence
iii. To formulate and implement proper remedial actions
iv. To evaluate the effectiveness of remedial actions

2.2 INDICATOR & STANDARD

INDICATOR

$$\text{Percentage of adherence (\%)} = \frac{\text{Calories Consumed by ONS in 24 hrs}}{\text{Total calories prescribed by dietitian}} \times 100$$

- Low adherence is defined as ONS consumed less than 20% of calories prescription or less than 400 calories a day from prescribed ONS.
- Standard: >68 % adherence levels (ASPEN 2021)

2.3 PROCESS OF CARE

✷ *indicates critical steps*

2.4 MODEL OF GOOD CARE

NO	PROCESS	CRITERIA	STANDARD	VS	C1	C2
1.	Dietitian prescribed ONS	**Prescription by dietitian based on disease specific and requirements**	100%	100%	100%	100%
		a) Anthropometry Assessment	100%	100%	100%	100%
		b) Biochemical Assessment	100%	100%	100%	100%
		c) Clinical Assessment	100%	100%	100%	100%
		d) Dietary Assessment	100%	100%	100%	100%
2.	Nurses filled up forms and PPK dispatched the form to kitchen	**Dietitian endorsed the product**	100%	100%	100%	100%
3.	ONS collection from kitchen by PPK	**Delivery of product to patient**	100%	10%	90%	86%
4.	Consumption of ONS by patients	a) Anthropometry Assessment	100%	100%	100%	100%
		b) Biochemical Assessment	100%	100%	100%	100%
		c) Clinical Assessment	100%	100%	100%	100%
		d) Dietary Assessment • **Consumption of ONS**	68%	40%	58%	69.5%
5.	Monitor of intake by dietitian	a) Anthropometry Assessment	100%	100%	100%	100%
		b) Biochemical Assessment	100%	100%	100%	100%
		c) Clinical Assessment	100%	100%	100%	100%
		d) Dietary Assessment • **Dietitian monitored intake and calculates intake (adherence)**	100%	100%	100%	100%

VS: Verification study C1: Cycle 1 C2: Cycle 2

3. PROCESS OF GATHERING INFORMATION

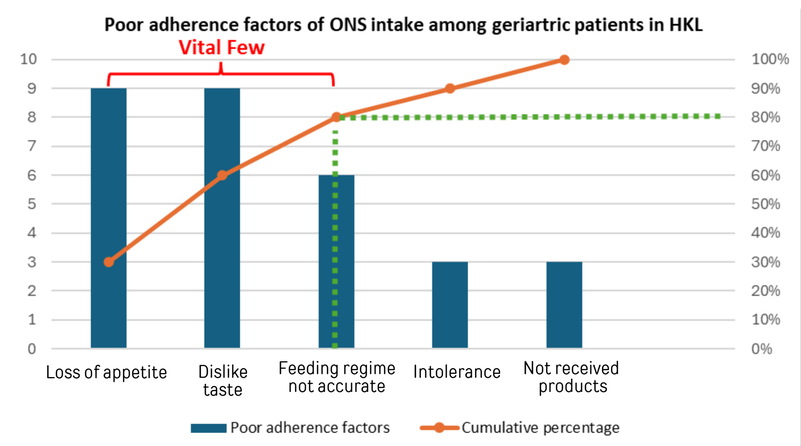
3.1 METHODOLOGY

Study Design	• Quasi experimental : uncontrolled before and after
Study Period	• Verification Study : February 2019 • Remedial Cycle 1 : 1 November – 23 December 2022 • Post remedial data Cycle 1 : 26 – 30 December 2022 • Remedial Cycle 2 : January – November 2023 • Post remedial data Cycle 2 : December 2023
Sample Size	• Verification Study (N=30) • Cycle 1 (N=66) • Cycle 2 (N=256)
Study Population	• Geriatric patients on any type of ONS with intake at least 400 calories from ONS prescription
Sampling Technique	• Prospective study using convenience sampling method
Inclusion Criteria	• 60 years and above • Minimum ONS prescription 400 calories from ONS • Not solely on modular products • Minimum of follow up within 5 days of first seen by dietitian
Exclusion Criteria	• No follow ups • Tube feeding patients
Source of data / data collection tools	• Dietetic Care Notes (DCN) • Borang Pemesanan susu KEW-PS8 • Borang Data Risk Matrik

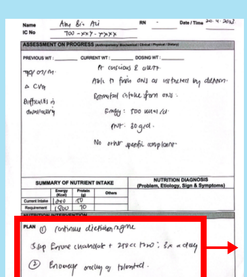
4. ANALYSIS AND INTERPRETATION

4.1 VERIFICATION STUDY

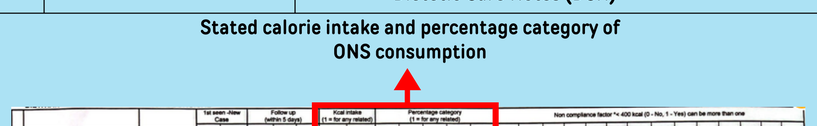
Verification study conducted on February 2019 revealed adherence levels at 40%. (N=30)



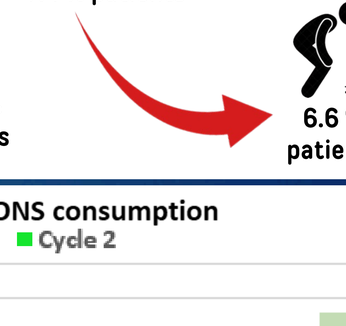
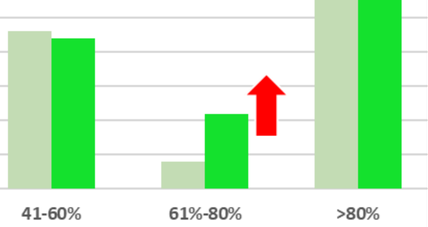
5. STRATEGIES FOR CHANGE

	Reasons for Non-compliance factors	Remedial action to be takenRemedial action to be taken
	Cycle 1	
1.	**Lack of communication** • Nurses unaware of dietitian plan • Inappropriate volume • Feeding regime not tally with prescription	• Communicate with nurses via Dietetic Care Notes (DCN) and Risk Matrix Form • CME on ONS adherence was included to sustain the plan  **Stated with regime of ONS** **Dietetic Care Notes (DCN)**

Stated calorie intake and percentage category of ONS consumption



Risk Matrix Form

	Reasons for Non-compliance factors	Remedial action to be takenRemedial action to be taken
	Cycle 2	
2.	**Poor practices among staffs** • Patient did not receive product • Products not indented	Daily product indent and pantry checking every afternoon by using *'Borang Audit Stok Produk Enteral'*  BORANG AUDIT STOK PRODUK ENTERAL DI PANTRI WAD Wad: KTSCO No Ext: 5849 Tarikh: 30/8/24 Bil. / Kriteria Pemantauan / YA / TIDAK / Catatan 1. Lebihan produk enteral — Jika ya, senaraikan: Nama produk: Vivol 1.5 — Kuantiti: 3 bh; Actimax Fos — 4 bh 2. Produk enteral luput tarikh 3. Produk enteral rosak (kemek/koyak/karat) 4. Lain-lain Tindakan Pembetulan & Penambahbaikan: Diperiksa oleh (Pegawai Dietetik): NORSUHAILA BINTI SHA'ARI Dietetic & Food Service Department Hospital Kuala Lumpur Disahkan oleh (Juniorawat Bertugas): 30/8/24
3.	**Poor adherence by patient** • Patient refused • Loss of appetite • Dislike taste • Intolerence	 Usage of **flavoured ONS** to improve palatalization (Wheat, Vanilla, Coffee and Almond)  Average **2 servings of ONS were given during breakfast and afternoon** in replacement of tea and coffee

This project was also converted into departmental risk matrix management.

6. EFFECT OF CHANGE

LOSS OF APPETITE
40.7 % patients

30.8 % patients

INTOLERANCE
7.4 % patients

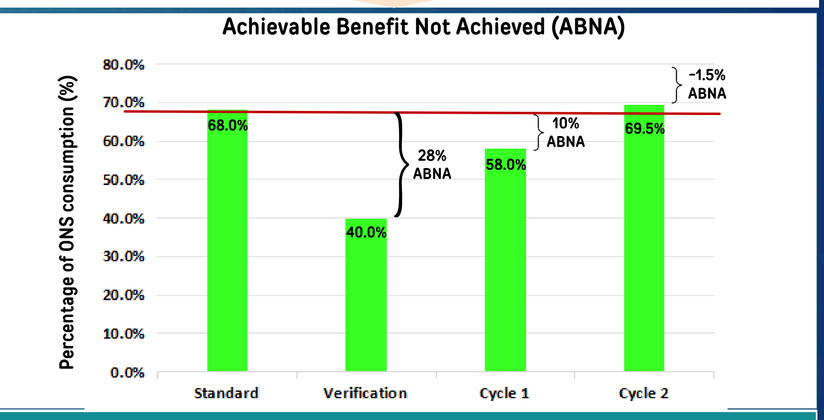
6.6 % patients

TOTAL NUMBER OF FOLLOW UP PATIENTS
54 % patients

60% patients
(an increase of 6% of total patients)

WASTAGE REDUCTION OF ONS
RM 42,000

RM 21,000
(2200 unused cans saved from wastage)



LESSON LEARNT

1. Our remedial strategies proved successful in increasing the percentage of adherence to ONS consumption.
2. These results also shows we can prevent ONS wastage from happening and improve patients nutritional status in the future.

7. THE NEXT STEP

- Implementations of remedial actions to all patients consuming ONS at Hospital Kuala Lumpur.
- Continuous monitoring of adherence levels and enforcement of remedial actions to further improve adherence levels of ONS will be carried out. Clinical audit on adherence will be done to improvise the delivery and adherence levels.
- Policy of ONS to be given at wards. Monitoring of wastage prevention measurements and on going pantry checking.

ACKNOWLEDGEMENT

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- **All Dietitians, Nursing Department, Clinical Dietetics Unit, Hospital Kuala Lumpur**

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REFERENCES
1. Gosney, M. 2003. Are we wasting our money on food supplements in elder care wards? J Adv Nurs 43(3): 275–280
2.De Luis, D. A., Izaola, O., Lopez, J. J., Torres, B. & Gomez Hoyos, E. 2015. Oral Nutritional Supplements and Taste Adherence in Malnourished Adults Inpatients, Effect on Adhesion During Hospital Stance. Annals of Nutrition and Metabolism 67(4): 205–209.
3.Jobse I, Liao Y, Bartram M, Delantonio K, Uter W, Stehle P, et al. Compliance of nursing home residents with a nutrient-and energy-dense oral nutritional supplement determines effects on nutritional status. The journal of nutrition, health & aging. 2015;19(3):356-64.https://doi.org/10.1007/s12603-014-0544-y
4. American Society for Parenteral and Enteral Nutrition (ASPEN) 2021