

# Nutrition Prescription Chart: a multidisciplinary approach for the safe practice of charting specialised nutritional products

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## INTRODUCTION

In Australia there is no standardised clinical practice for charting and documenting administration of enteral and oral nutritional products. The Australian Commission on Safety and Quality in Health Care (ACSQHC) acknowledges that the medication chart should not be used for the purpose of prescribing specialised nutritional products as it poses a significant medication safety risk<sup>1</sup>. With limited evidence and in accordance with the 'Knowledge-to-Action Framework', our team developed and trialled a Nutrition Prescription Chart (NPC).

## AIMS

- Improve the safe prescribing of specialised nutritional products
- Evaluate clinician satisfaction with the NPC compared to previous standard practice
- Assess adherence of prescribing and administration of specialised nutritional products with the NPC

## RESULTS

A total of 42 pre- and 30 post-implementation clinician surveys were completed, as well as 36 electronic medical record audits and all RiskMan data from the trial period. Key results included:

- Clinician satisfaction with the new documentation process increased post-implementation; 63% compared to 44% previously ( $p < 0.05$ ) (table 1).
- Approximately 70% of clinicians agreed the NPC was more efficient compared to previous practice (figure 2).
- Clinicians' perception was that administration documentation significantly improved with the NPC compared to previous documentation practices ( $p < 0.05$ ) (table 2).
- Clinicians were largely adherent with chart completion, with 77% ( $n = 1190$ ) of prescribed orders correctly signed.
- There was less perceived risk of error (table 3); no NPC-related incidents were reported into RiskMan.

## METHODS

- The NPC was co-designed by a multidisciplinary team, led by a dietitian, nurse, and pharmacist.
- Feedback sought and modifications made to the NPC following staged implementation across the Inpatient Rehabilitation Centre at The McKellar Centre.
- Three-month trial conducted at University Hospital Geelong on wards with a high use of specialised nutritional products
- Education was provided to nurses, dietitians, doctors and pharmacists prior to the three-month trial.
- Pre- and post-implementation data collected in the form of surveys and a retrospective electronic medical record audit.
- Likert scale responses were aggregated and text responses were thematically analysed.
- Data were analysed using Stata
- Incident report data were reviewed to determine if there were any clinical incidents associated with use of the chart.

	Pre-implementation N=42	Post-implementation N=30	Comparison of pre- & post-implementation p-value
Level of satisfaction with current forms			
Very satisfied	7 (18.0)	1 (3.3)	0.006
Satisfied	10 (25.6)	18 (60.0)	
Somewhat satisfied	19 (48.7)	6 (20.0)	
Unsatisfied	3 (7.7)	3 (10.0)	
Very Unsatisfied	0 (0.0)	2 (6.7)	

Table 1: Level of satisfaction pre- and post NPC implementation (Significance level  $p < 0.05$ ).

	Pre-implementation N=42	Post-implementation N=30	Comparison of pre- & post-implementation p-value
How often is specialised nutritional product or enteral feed information recorded if administered?	n (%)	n (%)	
Always	11 (27.5)	20 (66.7)	0.009
Most of the time	19 (47.5)	8 (26.7)	
Sometimes	8 (20.0)	2 (6.7)	
Occasionally	2 (5.0)	0 (0.0)	
Never	0 (0.0)	0 (0.0)	

Table 2: Clinician opinion on documentation practices pre- and post NPC implementation (Significance level  $p < 0.05$ ).

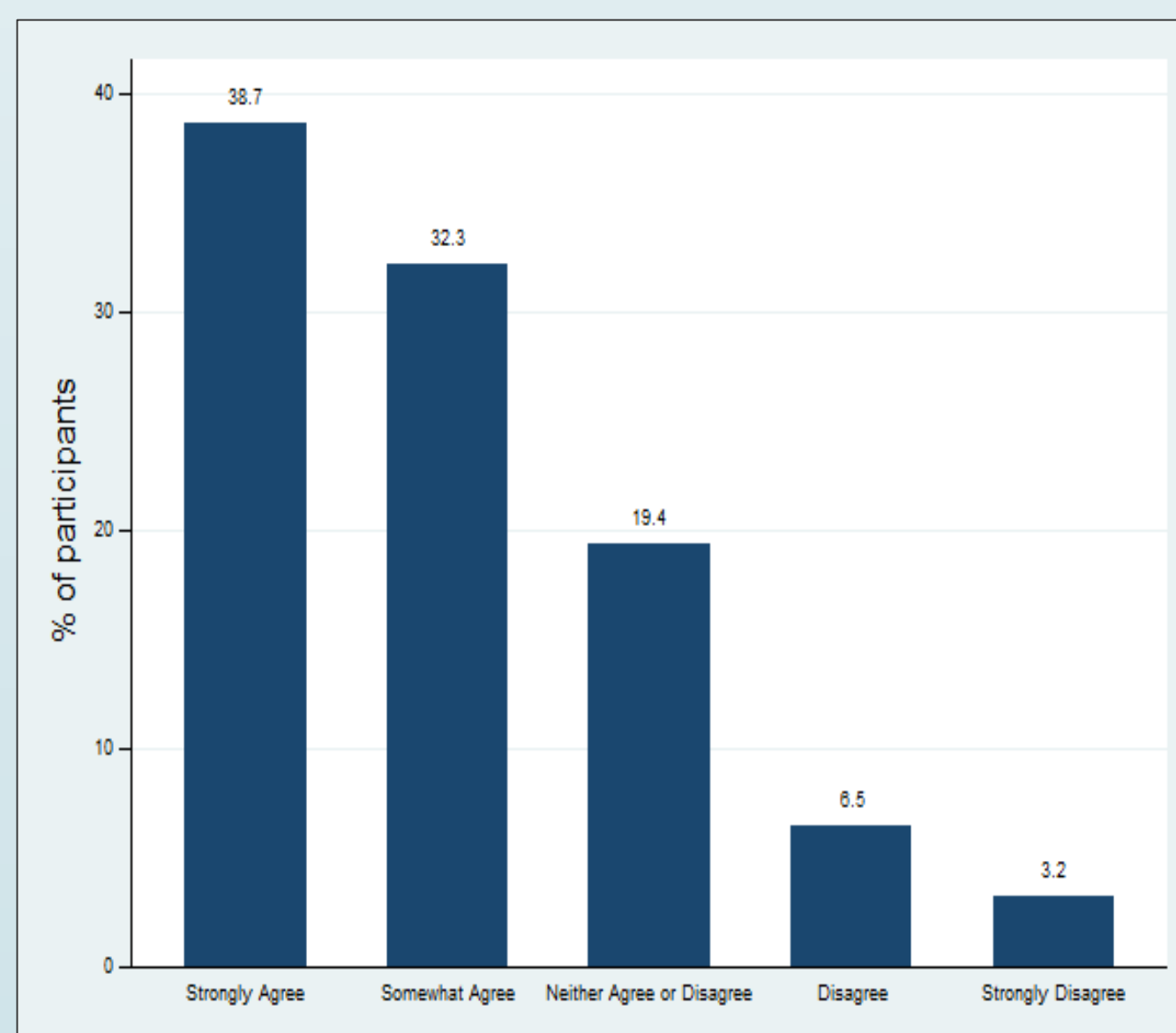


Figure 2: Clinician opinion on efficiency of NPC compared to previous processes

	Pre-implementation N=42	Post-implementation N=30	Comparison of pre- & post-implementation p-value
Perceived risk	n (%)	n (%)	
Very high risk	2 (4.8)	2 (6.7)	0.077
High risk	5 (11.9)	3 (10.0)	
Somewhat a risk	16 (38.1)	11 (36.7)	
Minimal risk	19 (45.2)	9 (30.0)	
Not a risk at all	0 (0.0)	5 (16.7)	

Table 3: Clinician perceived level of risk relating to prescription, administration, and documentation of specialised nutritional products and enteral feeds pre- and post NPC implementation (Significance level  $p < 0.05$ ).

## Key findings of NPC audit:

- 36 NPCs were completed for 25 patients over 3 month trial period.
- NPC predominantly used for charting enteral feeding regimes (97%).
- Average length of use 5.6 days (range 1-12 days).
- Accuracy of completion 77% ( $n = 1190$ ).

## CONCLUSION

The NPC improves safety relating to the documentation and administration of specialised nutritional products.

Following the success of the trial, the NPC has been implemented across all clinical areas of University Hospital Geelong and The McKellar Centre (with the exception of mental health and paediatrics).

Ongoing monitoring of RiskMan reports will occur, in addition to a scheduled six-month adherence reaudit.

## NUTRITION PRESCRIPTION CHART (NPC)

- **Specialised nutritional products** (e.g. Arginaid®, Optifast®, Resource 2.0®, Yakult®) and **enteral feeds** (e.g. Isosource 1.5®, Resource 2.0®) are now being charted on the NPC on **B6N, HW6 and ANU**
- Prescribing on the NPC is by Dietitian and/or Medical Officer
- 3 month trial commencing 25<sup>th</sup> June 2018

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Figure 1: Example of educational poster for clinicians prior to trial period

DIETITIAN MUST ENTER ADMINISTRATION TIMES		Times	DATE & MONTH
Date	Product (post full product name)	Times	9/5/18
9/5	RESOURCE 2.0	12:00 X SD	
Route	Method	Frequency	
PEG syringe	237ml	QID	
Total volume of prescription per day: 948ml			
Date	Product (post full product name)	Times	9/5/18
9/5	WATER FLUSH	12:00 X SD	
Route	Method	Frequency	
PEG syringe	60ml	PRE & POST	
Total volume of prescription per day: 480ml			

Figure 3: Example of NPC chart completion

## REFERENCES

- 1 Australian Commission on Safety and Quality in Healthcare. (2019). Ordering nutritional supplements on the NIMC and PBS HMS. Retrieved May 29, 2019 from <https://www.safetyandquality.gov.au/our-work/medication-safety/medication-charts/tools-and-resources-for-medication-charts/ordering-nutritional-supplements-on-the-nimc-and-pbs-hmc/>