

Research Poster Awards 2023

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 feeds and specialised 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 risk¹. With limited evidence and in accordance with the 'Knowledge-to-Action Framework', our team developed and trialled a Nutrition Prescription Chart (NPC).

OBJECTIVES

- Investigate the efficacy of using the NPC for charting specialised oral nutritional products and enteral feeds
- Evaluate clinician satisfaction with the NPC compared to previous standard practice
- Assess adherence of documenting administration using the NPC

METHOD

- The NPC was co-designed by a multidisciplinary team (MDT), 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.

RESULTS

A total of 42 pre- and 30 post-implementation clinician surveys were completed, as well as 36 electronic medical record audits for 25 patients and 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 1).
- 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 in RiskMan.

| | 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 | 2 (5.0) | 0 (0.0) | |

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

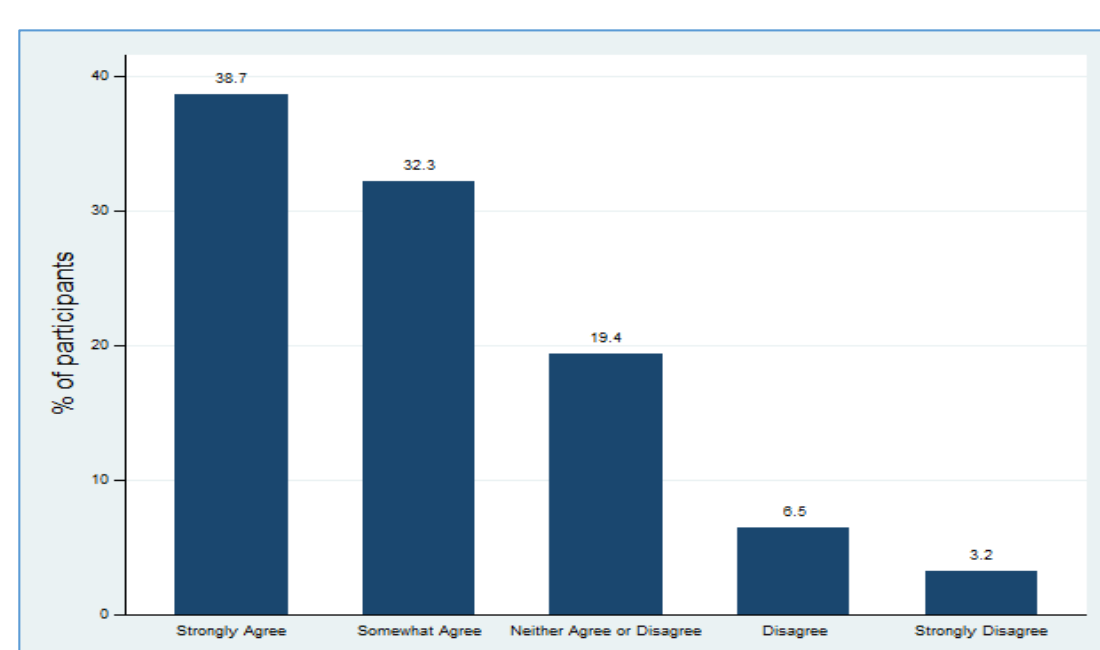


Figure 1: Clinician opinion on efficiency of NPC compared to previous processes

| | 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).

NUTRITION PRESCRIPTION CHART (NPC)

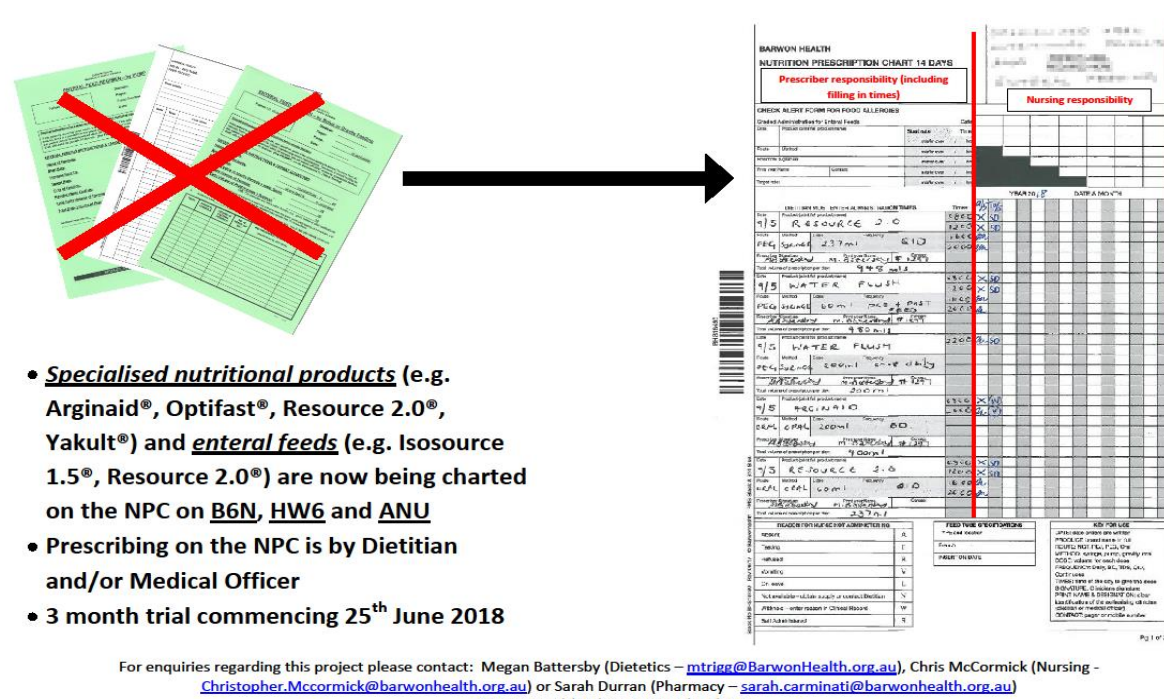


Figure 2: Example of educational poster for clinicians prior to trial period

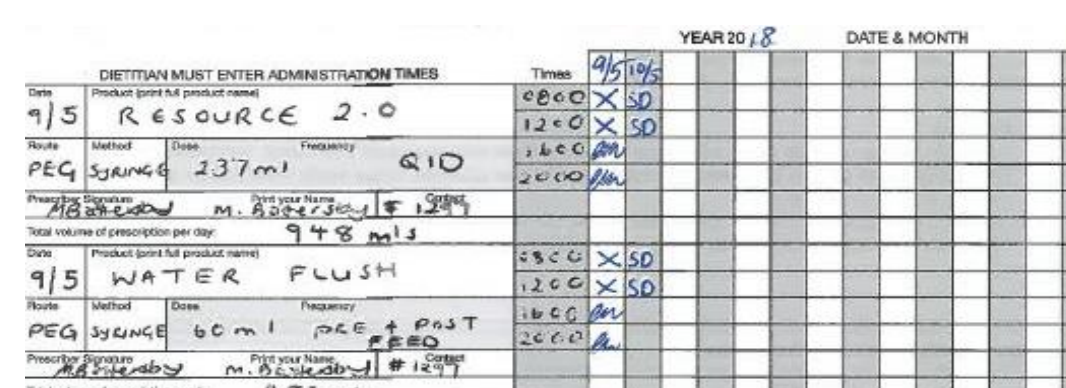


Figure 3: Example of NPC chart completion

DISCUSSION

- The NPC provides a feasible, streamlined approach to address clinical risk for charting and documenting administration of nutritional products
- The NPC led to improved clinical practices, providing a more complete medical record of the nutritional care of patients in the inpatient setting.
- The MDT approach contributed to the successful implementation.

CONCLUSION

- The NPC improves safety relating to the documentation of specialised oral nutritional products and enteral feeds
- Following the success of the trial, the NPC has been implemented across all clinical areas of University Hospital Geelong and The McKellar Centre and it is now standard clinical practice.
- Ongoing monitoring of RiskMan reports and consultation with clinical staff has led to further revisions of the chart.

REFERENCES & ACKNOWLEDGEMENTS

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/>