

Implementation of a malnutrition diagnosis sticker: The impact on identification and revenue

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Research

Introduction

The Australian Commission on Safety and Quality in Health Care defines malnutrition as a deficiency of nutrients associated with adverse outcomes including delayed wound healing, muscle wastage as well as increased length of stay, treatment costs and mortality.

The 2017 multi-site Epworth malnutrition prevalence audit (n=616) revealed 26% of patients were at risk of malnutrition group wide. 62% of patients at risk of malnutrition and 50% of patients diagnosed with malnutrition had not been referred to dietetics for assessment or intervention. These short fallings contribute to considerable patient risk, negative patient outcomes and significant financial losses for Epworth through missed reimbursements, all of which could be mitigated.

In May 2018, 51 health professionals (10 Doctors, 3 Allied Health and 38 Nursing staff) at Epworth Richmond were surveyed regarding their understanding and identification of malnutrition. 100% of responders felt that knowing their patient was malnourished would change their practice. On average, effectiveness of communication was rated 3/5 and 81% were not able to correctly identify when patients were diagnosed with malnutrition.

Following these results, the Epworth Malnutrition sticker was developed (in collaboration with Health Information Services (HIS)) to improve the communication of malnutrition diagnosis with patient care providers and assist HIS coders to assign a code for malnutrition so that Epworth is appropriately reimbursed financially.

Aims

To review and evaluate the malnutrition sticker's effectiveness in generating reimbursement via coding and the impact of the sticker in identifying malnutrition for HIS staff.

Methodology

- Senior Dietitians (SD) worked with HIS to extract data from iPM using MS Reports, for episodes where a malnutrition code (from ICD-10-AM) was assigned as an additional diagnosis.
- For comparative purposes, average revenue was derived from two months worth of data in 2023 and calculated from episodes in which the coding of malnutrition had a direct impact on revenue
- The figures from 2023 (post sticker implementation) were then compared to 2017 data (pre-sticker implementation)
- Qualitative feedback was obtained from the HIS clinical coding team via email and thematic analysis was performed by SD

Figure 1: Malnutrition Sticker

DIETITIAN MALNUTRITION ASSESSMENT			
<input type="checkbox"/> BMI <18.5kg/m ² OR BMI <22kg/m ² (>65 y.o)	Subcutaneous fat loss: Nil Mild Mod Severe		
<input type="checkbox"/> Unintentional weight loss	Muscle wasting: Nil Mild Mod Severe		
<input type="checkbox"/> Suboptimal oral intake	Phys. Ax Sites: _____		
Mild-Moderate Malnutrition <input type="checkbox"/>	Severe Malnutrition <input type="checkbox"/>	Pre-existing <input type="checkbox"/>	
Dietitian: _____		Contact: _____	

Results

Table 1: Comparison of Revenue for 2017 Vs 2023

Extrapolated from quotients calculated based on March and May 2023 data

Year	2017	2023
Discharges	182,950	211,733
No. of cases with malnutrition code	1371	1822
% of cases with malnutrition code	0.75%	0.86%
No. of malnutrition cases that changed revenue per 1000 discharges	0.36	0.41
Revenue from malnutrition coded per 1000 discharges	\$1844.78	\$2115.35
Total revenue generated from malnutrition coding annually	\$337,502.50	\$447,888.92
Total annual revenue difference	+\$110,386.42	

Table 2: Thematic analysis of clinical coding team feedback

Theme	Feedback summary	Quote
Colour	Pink is effective and ensures documentation is not missed	"I love the pink sticker, it is (an) effective (colour) and ensures I don't miss the documentation from the Dietitian"
Documentation and coding	Well loved, very helpful and clear, filled in well, easily identifies malnutrition and pre-existing	"Best documentation in the progress notes" "They fill it in well and its so easy to see if they have malnutrition, the type of malnutrition and whether pre-existing! Sometimes this info can get lost in the detailed notes, the sticker really sticks out at me and summarises well"
Suggestions for improvements	Separate mild and moderate, increase font size, lighten colour, incorporate management plan to link to diagnosis, add obesity identification	"Mild and moderate are lumped together, so you don't really know if it is mild or moderate unless it is stated elsewhere"

Conclusions

The introduction of a novel malnutrition diagnosis sticker has been successful in generating revenue to Epworth HealthCare, contributing more than \$110,000 annually. Clinical coding teams report positive feedback regarding the sticker's visibility and effectiveness in malnutrition coding. Overall, the malnutrition sticker is an efficient tool in generating increased malnutrition diagnosis awareness and safeguarding associated hospital funding. Future work in this area will adapt HIS feedback while incorporating revisions regarding hospital acquired malnutrition criteria or the implementation of electronic medical records in our organisation.

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