Background

The prevalence of dysphagia among Australians has been estimated to be 16%, people with dysphagia can experience problems with swallowing food, liquids and saliva.\(^1,2\) It is well recognised that oral medications are frequently modified for this patient population from their original forms.\(^3,4\)

This study assessed pharmacists and speech pathologists' understanding of Society of Hospital Pharmacists of Australia (SHPA) Don’t Rush to Crush (DRTC) guidelines for referral process, electronic ingestion medication chart annotations, specifying vehicles to carry crushed medications and communication on discharge for patients with swallowing difficulties. To address practice gaps, results from initial audit would be provided to guide institutional clinical practice guidelines updates.

Methods

An electronic survey was conducted across a hospital health network over two weeks in June 2018. Australian registered pharmacists and speech pathologists within the network were recruited through internal local hospital emails to ensure the maximum breadth of participants were included in the study. Survey reminders were sent weekly through emails and group paging systems to ensure maximum completion of the survey.

The questionnaire was conducted online and responses were recorded and collated by Survey Monkey. To participate, pharmacists and speech pathologists clicked the Web Link and completed 8 questions online survey. (Table 1) There was no follow-up interview as identifying details of survey respondents were not requested in the survey. Questions designed were adopted from assessment activity available online via Introductory Chapter of Don’t Rush to Crush Handbook 2nd edition but were tailored to the study site.\(^5\)

The question types included multiple choices for respondents to select one or more options from a list of pre-defined answers and open-ended questions were used to encourage respondents to type the answer into a comment box. Basic demographic information was also requested. Responses were then viewed individually or by test analysis tools.

Following survey completion a designated working group of senior pharmacists and speech pathologists was formed to assess non-compliance with DRTC guidelines and to address gaps in current practice. Local clinical practice guidelines were updated to describe general recommendations for both pharmacists and speech pathologists with the sole focus of improving safer swallowing of medications.

Results

Approximately 45% of pharmacists (\(n = 51\)) and 42% of speech pathologists (\(n = 26\)) completed the survey. With regards to altering oral solid-dose formulations, most participants stated inpatient chart annotations of administration instruction for the nurse to follow should largely be the pharmacist’s responsibility. (Figure 1) Apart from medium thickness recommendations, practice gaps existed where majority of pharmacists (78%) and speech pathologists (73%) stated they did not routinely specify the type of vehicles, eg yoghurt or fruit puree to carry crushed medications. (Figure 2)

For electronic medical records there were inconsistent opinions about the standard place to document medication administration instruction for nurses to follow. Responses included adding ‘order comment’ into the individual drug sentence, flagging as attached documents and entering into electronic daily progress notes or nursing handover notes. (Figure 3)

Conclusion

Practice gap was evident with regards to who should specify the type of vehicles to carry crushed medications. The majority of survey respondents with 76% of pharmacists and 72% of speech pathologists stated they did not routinely provide such recommendations. This would generally place nurses in actual practice to select the type of vehicles whom may not be in the ideal position to recognise food-drug interactions. Many medicines marketed in Australia with approved product information do not provide clarity around the effects of mixing crushed tablets or capsule contents with a small quantity (e.g. two tablespoons) of food such as pudding, yoghurt or apple sauce, which occurs commonly within an aged care setting. There is an assumption that altering medications and administering it with a small quantity of food vehicle does not significantly affect absorption rates and/or bioavailability, however the effect may be quite variable in individual patients and may have clinical consequences for some patients, depending on the drug used. Cautionary Advisory Labels (CALs) produced by the Pharmaceutical Society of Australia (PSA), particularly labels 3a, 3b, 4 and 18 contain warning about interactions with foods and useful explanatory information on the safe and correct use of the medicine. For examples Cautionary Advisory Labels 4 is used for tetracyclines (eg doxycycline, minocycline), bisphosphonates, fluoroquinolone antibiotics (eg ciprofloxacin) and other medicines which can interact with food, resulting in reduced bioavailability. It is well recognised that such food-drug interactions are avoidable and potential for patient harm.\(^6,7\)

In line with electronic medical records, both pharmacists and speech pathologists had inconsistent opinions about the standard place to write medication administration instruction for nurses to follow. The study sites utilised Clinical Order Viewing and e-Prescribing (CLOVER) system across its health services where survey respondents stated administration instruction could be added into ‘order comment’ for individual drugs under Medication Administration Record (MAR), be flagged as attachments on the medication chart, entered into electronic daily progress note or added into nursing handover notes. This highlighted a need to standardise this documentation process in order to provide efficient, effective and timely access to alteration of solid-dosage form instruction at the point of medication administration. This is particularly relevant for the nursing staff where previous studies showed that they more heavily depend on advice from doctors or pharmacists, rather than consulting tests or guidelines when seeking information on how to modify medications.\(^8\)

Overall this study identified and addressed gaps in pharmacists and speech pathologists’ understanding of DRTC guidelines. It highlighted the need for interprofessional collaboration and updates of local CPoS to reflect best practices for patients with swallowing difficulties.

\(^{1}\) Eslick GD, Talley NJ. Dysphagia: epidemiology, risk factors and impact on quality of life. \(\text{Cochrane Database Syst Rev}\) 2014;17(2):207


\(^{3}\) Menon S, Himel Y, Calonge J. Inpatient pharmacist prescribing and non-prescription medication use. \(\text{Drug–Herb Interaction Update} 2011\).


\(^{5}\) McMillan L. (2014). The therapies and medications that are used in aged care facilities. \(\text{Aust J Pharm Pract} 2014;4(1):42–46\.


Reference