Factors influencing patient experience of medication explanation at discharge

The Royal Melbourne Hospital

Jane Stephens, Joanne Young, Sarah Charles

The Royal Melbourne Hospital, Melbourne Health

Background

Patient experience surveys are an important source of information used by healthcare providers to identify areas for improvement to patient care.

There is potential to better target improvement strategies by identifying factors that influence patient response.

The Royal Melbourne Hospital (RMH) Post Discharge Patient Experience Survey (PDPES) has been in use since July 2013. It is sent via email to all patients who are discharged from RMH who have a valid email address entered into the patient administration system. In order to capture those patients who do not have an email address, volunteers collect data at random from patients in the Hospital Transit Lounge (an area where inpatients can wait for transport or medications prior to being discharged home).

Aim

- To determine the factors that influence patient experience at hospital discharge in regards to education of medications to be taken at home.
- To identify areas of pharmacy practice that could be changed and/or patient groups who could be further targeted to improve patient experience with discharge medicine education.

Primary objective
To study the association between patient response to Question 17 and 18 (Figure 1) in the RMH PDPES and the factors outlined in Figure 2.

Question 17	• Did a member of staff explain the **purpose** of the medicines you were to take at home in a way you could understand?
Question 18	• Did a member of staff tell you about medication **side effects** to be aware of when you went home?

Figure 1: Questions 17 and 18 in the RMH PDPES

Discharge date	**Treating team**	**Ward**
Discharge day of the week (weekend versus weekday)	**Interpreter required**	**Who completed the survey**
Age	**Gender**	**Marital status**
Indigenous status	**In-hospital complication**	**Discharge destination**
Admission type (elective versus emergency)	**ICU stay during admission**	**Length of stay**
	Discharged via the transit lounge (yes or no)	

Figure 2: Factors analysed

Secondary objective
To study the correlation between patient response to Question 17 and 18 and aspects of clinical pharmacy practice.

Method

Responses from patients and/or their carers who completed the RMH PDPES from the 1st of July 2014 to the 31st of March 2018 were included. For patients with multiple inpatient episodes, the most recent episode was included. Patients who responded to the PDPES with "I didn't need any medications" were excluded.

Data was provided by the Melbourne Health Business Intelligence Unit as an extract of the RMH PDPES. Additional data was manually collected for patient episodes in the period of March 2018 retrospectively via the scanned electronic medical record and hospital dispensing software for the episode of care related to the patient's RMH PDPES response.

Results

A total of 7814 RMH PDPES responses were analysed during the study period and were filtered for inclusion in the analysis.

Primary Objective - Question 17 (purpose)

For Question 17, 90.4% (7066/7814) of the patient episodes met inclusion criteria and were analysed.

- With regards to **marital status,** patients who were married were 32.7% more likely to provide positive feedback compared to widowed patients.
- Those patients **discharged from the ward** were 22.8% less likely to provide positive feedback compared to those who were discharged via the transit lounge.
- When **patients completed the survey** they were 2.24 times more likely to provide positive feedback compared to when the proxy relative, carer or friend completed the survey.
- **Length of stay** also showed statistical significance. For each extra day spent in hospital the odds of a positive response to Question 17 reduces by 1.3%.

Primary Objective - Question 18 (side effects)

For Question 18, 89.9% (7015/7814) of the patient episodes met inclusion criteria and were analysed.

- Patients who were **discharged from the ward** were 35.8% less likely to give positive feedback compared to those patients discharged via the transit lounge
- Patients with a **complication during their hospital admission** were 19.9% less likely to provide positive feedback compared to those who didn't.
- Patient **age** at admission had a very mild impact on their response. As a patients age increased by one year the odds of positive response simultaneously decreased by 0.7%.
- **Male** patients were more likely to provide positive feedback than their female counterparts with the average male 30% more likely to respond positively than females.

Patients who provided a negative response in Question 17 were 32 times more likely to provide a negative response to Question 18.

Further analysis found that with each passing year, from 2014 to 2018, patients were 4.5% less likely to provide negative feedback.

Secondary Objective

Showed no statistically significant results of a correlation between evidence of education being provided by a pharmacist and either a positive or negative result.

Discussion

The findings showed that the patient experience of explanation of medications to be taken at home, including explanation of possible side effects, were influenced primarily by non-modifiable factors (Figure 3).

Marital status	**Gender**	**Length of stay**
Admission Age	**Who completed the survey**	**In-hospital complication**

Figure 3: Statistically significant non-modifiable patient factors influencing positive or negative response to PDPES

Patients who responded negatively to the question about purpose of medications were also likely to respond negatively to the question regarding potential side effects indicating that overall these patients had a negative experience with the explanation of medications.

Patients who were discharged from the ward were less likely to provide positive feedback when compared to patients discharged via the transit lounge. It became evident during the data collection that these patients were often transferred to another facility and it was these patients that often responded negatively to both questions.

Patients with long lengths of stay and in-hospital complications should be targeted by pharmacists throughout their admission for medicine education as this may result in empowered and informed patients.

Conclusion

This study indicates that patients who are older or have a long length of hospital stay could be targeted to improve patient experience with discharge medicine education.

Analysis of PDPES with Electronic Medical Record data is suggested to determine the true impact of clinical pharmacy practice on patient experience with information about medicines.

Acknowledgements

Dr Sourav Das (Biostatistician)

Melbourne Health Business Intelligence Unit