Drug-Drug Interactions: Perceptions of Ambulatory Clinic Patients

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Background

- This research project is a continuation of prior research:
  - Alert fatigue contributes to under detection of DDIs[1].
  - Poor agreement between pharmacists on severity of DDIs[2].
- DDIs, although often preventable, can lead to adverse drug reactions resulting in patient harm.
- Healthcare professionals (HCPs) play a significant role in providing medication counselling to patients.
- Prior to this study, there is a lack of research exploring patients understanding of DDIs and how DDIs can impact their health.

Objectives

1. Identify patients' perception of drug interactions.
2. Determine factors that are important to patients understanding of medications.

Methods

- Design: Qualitative study of key informant interviews that were completed over the phone.
- Recruitment: The patient population included individuals recruited from the renal transplant clinic at SPH, heart function clinic at VGH, and through professional interactions. Written informed consent was provided by the participants, prior to the interview.
- Qualitative Analysis: Audio recordings were transcribed into text and subsequently organized into themes using NVivo.

Demographics (n = 7)

Mean (±SD)			
Clinic	VGH: 2	SPH: 4	Other: 1
Age (years)	63 (±12)		
Gender	5 males	2 females	
Education	Post-secondary 5	Trades 2	
Medical Conditions	3 (±2)		
Number of Medications	9 (±1)		

Results

Questionnaire

Patient Reported Understanding of Medications (Mean ±SD) Likert scale: 0 = very low to 5 = very good	4 (±1)	
Patient Reported Definition of a DDI	Correct: 2	Incorrect: 5

"I would define a drug interaction as when the effects of one drug interferes with the effects of another drug."

"[A] drug interaction… could possibly [be] fatal or harmful to patients."

Patients Have an Incomplete Understanding of DDIs and Often Equate Them to Drug Side Effects

COMMON THEMES

Most patients were unable to define a DDI (5)
Patients are unclear if they experienced a DDI or not (4)
Patients are concerned about GI and CNS side effects, which they believe are caused by minor and moderate DDIs (7)

Patients Rely on HCPs to Identify and Manage DDIs

COMMON THEMES

HCPs should inform patients about DDIs and how they plan to resolve them (3)
Shared responsibility between physicians and pharmacists to manage DDIs (6)
Pharmacists have the pharmacological knowledge to detect DDIs (4)
Physicians should be responsible for the medications being prescribed (3)

"[HCPs should] let the patient be aware of the drug-drug interaction, if to stop taking the drugs and find an alternative to one or both medications."

Patients Do Not Seek Information Relating to DDIs

COMMON THEMES

Patients want to know medication side effects when being counselled (5)
DDI information were important counselling points for only some patients (2)
Patients do not identify barriers preventing them from accessing medication information (6)
Reliance on using the internet to find supplemental medication information (4)

"…there's information readily available as long as you know where to look on the internet."

Discussion

- Patients believe they fully understand their own medications, however our research study suggests:
  - Patients have difficulty distinguishing a side effect from a medication versus a DDI.
  - Limited understanding of the risk of DDIs, negative effect on medications and health.
  - Rely on physicians and pharmacists to identify and resolve DDIs.
- In terms of medication counselling:
  - Patients care and want to know about side effects.
    - Understand that side effects can affect their wellbeing.
- No barriers accessing medication information:
  - Patients comfortable using the internet to find information, rather than speaking with HCPs.
    - Underexplored in our study, but it does suggest that there may be a knowledge gap not being addressed between HCPs and patients.
- Future research may explore how different educational interventions can improve patients understanding of DDIs.

Limitations

- Conclusions from this study may not be representative of other patient populations, such as non-ambulatory and inpatients.
- Potential selection bias because participants recruited have a large circle of care consisting of numerous different HCPs.
- Subjective analysis of qualitative study.

Conclusion

- Patients have a good understanding of side effects from medications, however, have limited knowledge of the implications from DDIs.

References

1. Bagri, H., Legal, M., Dahri, K. Hospital pharmacists perceptions and decisions around drug-drug interactions. 2018.
2. Lau, L., Bagri, H., Legal, M., Dahri, K. Characterization and evaluation of clinical importance of drug interaction identified by hospital pharmacists and computer systems. 2019.