Pharmacists' Interventions in an Interdisciplinary Memory Clinic: A Retrospective Review

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BACKGROUND

- The prevalence of Alzheimer's disease/Related Dementia is increasing dramatically worldwide[1]
- Clinicians are faced with many challenges when managing Alzheimer's patients[1]
- Pharmacists valuable in assessing and optimizing medications
- There is a paucity of literature describing activities performed by pharmacists for cognitively impaired patients.[2]
- The Centre for Family Medicine (CFFM) Family Health Team (FHT) Memory Clinic (MC) in Kitchener Ontario operates 3-4 days a month, and is involved in training other memory clinics in FHTs across Ontario

OBJECTIVES

Primary Objective:
To classify pharmacist activities and Interventions performed in an Interdisciplinary Primary Care Memory Clinic (PCMC).

METHODS

- Retrospective medical records review of patients assessed at the CFFM FHT MC
- Inclusion Criteria:
  - Minimum one documented note by PCMC clinical pharmacy staff
  - Note must be in context of memory clinic
  - Visit from January 2010 to December 2015
- Data Abstracted from visits with documented pharmacy note:
  - Demographics
  - Past Medical History
  - Diagnosis of Dementia-Related Conditions
  - Medications
  - Medication Related Problems
  - Pharmacist Activities
  - Cognitive Testing Scores

RESULTS

Demographics

Figure 1 – Selection Process:

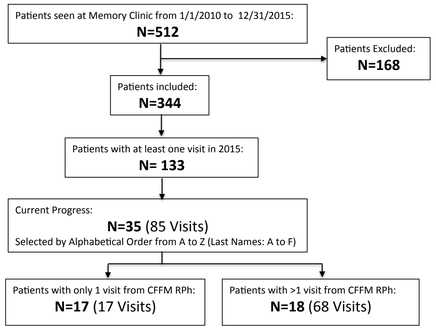


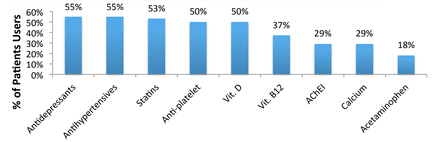
Table 1 – Demographics:

Parameter:		
# of Patients	**35**	
# of Females/Males	**24/11**	69%/31%
Age at Time of Initial Visit	**78**	
# of Memory Clinic Visits	**187**	(Range: 58-90)
# of Visits with Pharmacist Documentation	**85**	45%
Mean # of Times seen by CFFM MC RPh/patient	**2.4**	(SD=2.2)
Mean MoCA Score at Initial Visit	**21**	

Table 2 – Medication Use*:

Type:	Mean:	SD:
Total Meds	**7.2**	**3.4**
Prescription Meds	**4.4**	**2.7**
OTC Meds	**0.74**	**0.76**
NHPs	**2.1**	**2.1**

Figure 2 – Most Frequent Medication Classes Used*



*These values were taken from a subgroup of patient visits (n=38) where all medications were explicitly listed in the Pharmacist Note

Pharmacist Activities

*"**83%** of visits had a Medication Related Problem (MRP)"*

*"**18%** of visits had an Adverse Drug Reaction (ADR) "*

Table 3 – In-Clinic Pharmacist Assessments*:

	N:	% of Visits:
Pharmacist Assessment of Medication Use		
Medication Review	**52**	**67%**
Medication Management Skills	**40**	**51%**
Adherence	**47**	**60%**
Use of Medications that can Impair Cognition/Function:	**53**	**68%**
Pharmacist Assessment of Medical Conditions		
Conditions that affect Cognition:	**42**	**54%**
Conditions that affect Vascular Risk Factor Control:	**30**	**38%**

These rates are only representative of documented activities.

Table 4 – Coordination/Collaboration of Care:

	N:	% of Visits:
Coordination/Collaboration of Care Activities	**49***	**40%**
Collaboration with community pharmacy		
• Add new prescription and/or refill(s)	**27**	**32%**
• Add/remove medication(s) from blister pack	**9**	**11%**
• Discontinue/taper/hold medication(S)	**8**	**9%**
• Request counseling services	**2**	**2%**
• Alter directions of existing prescriptions	**1**	**1%**
• Confirm patient's adherence to medications	**1**	**1%**
Reviewed patient's medications with an outside HCP or clinical staff	**1**	**1%**

The RPh performed multiple Collaboration of Care Activities on certain visits.

Table 5 – Identification of MRPs/ADRs:

	N:	% of Visits:
Identification of MRPs	**160**	-
Mean # of MRPs identified per visit	**1.9**	**83%**
MD/Patient agreement with pharmacist recommendation	**140**	**88%**
Identification of ADRs	**15**	**18%**
# of Pharmacy Intervention(s) Suggested	**191**	**83%**

Figure 3 – MRPs Identified:

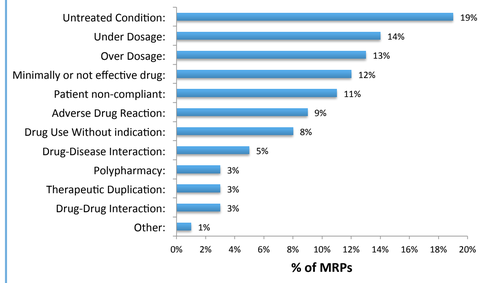


Figure 4 – Pharmacy Interventions Documented & Suggested:

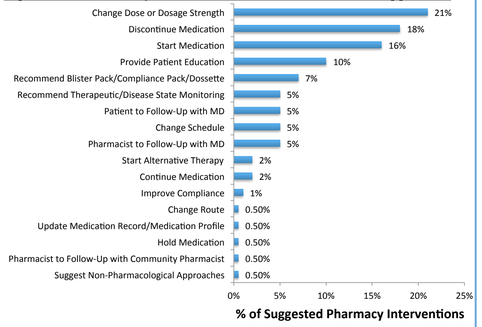


Table 6 – Untreated Conditions:

Untreated Condition:	Medication Initiated:	# of Occurrences:
Vitamin B12 Deficiency	Vitamin B12	7/30
Cognitive Impairment	Donepezil, Risperidone	4/30
Depression/Anxiety	Duloxetine, Citalopram	4/30
Risk of Falls/Fractures	Vitamin D	3/30
Aggression/Agitation	Trazodone	3/30
Insomnia	Mirtazapine	3/30
GI Protection	Pantoprazole, Rabeprazole	2/30
Other:	Miscellaneous	4/30

Figure 5 – ADRs Identified:

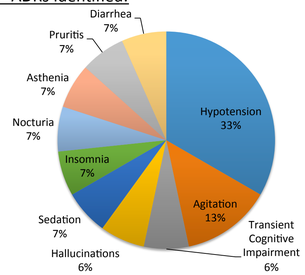
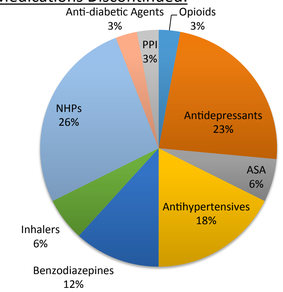


Figure 6 – Medications Discontinued:



CONCLUSION/DISCUSSION

- Pharmacists play a significant role in identifying MRPs, improving medication management skills, and suggesting pharmacy interventions
- PCMC Pharmacists act as point of contact with community pharmacies to call in new prescriptions, refills, dose changes and compliance packaging requests
- Only 10% of the full study population was examined
- Study does not account for undocumented activity by pharmacists – under-reporting of pharmacist activity

REFERENCES

1. Alzheimer's Disease International. World Alzheimer's Report 2015 The Global Impact of Dementia An Analysis of Prevalence, Incidence, Cost and Trends. http://www.alz.co.uk/research/WorldAlzheimerReport2015.pdf. Published August 2015. Accessed April 5th, 2016.
2. Rojas-Fernandez CH, Patel T, Lee L. An interdisciplinary memory clinic: a novel practice setting for pharmacists in primary care. *The Annals of pharmacotherapy.* Jun 2014;48(6):785-795.

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