Evaluation of the Implementation of a Choosing Wisely Recommendation at Vancouver General Hospital

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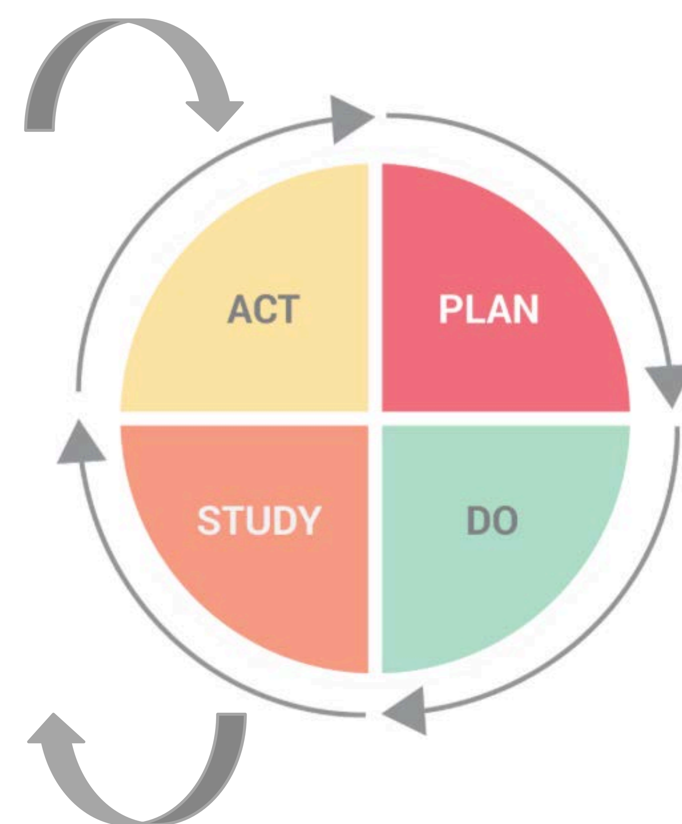
Background

- Choosing Wisely, an initiative of the American Board of Internal Medicine, promotes health care that is supported by evidence, not duplicative, free from harm and necessary
- Multidisciplinary collaboration to implement a recommendation from the American Geriatrics Society: don't prescribe a medication without conducting a drug regimen review
- Use of more medications in geriatric patients increases their risk for adverse effects, drug interactions, cognitive impairment, falls, functional decline and reduces adherence
- Medication reviews help to identify potential problems to avoid these outcomes
- Model for Improvement (Plan-Do-Study-Act Cycles)

Methods

- **Design**: Multidisciplinary, Quality Improvement (QI) initiative using **Model for Improvement** (Plan-Do-Study-Act Cycles)

What are we trying to accomplish?	Safe Effective Patient-centered Timely Efficient Equitable
How will we know that a change is an improvement?	Quantitative measures
What changes will result in improvement?	Not all changes are an improvement



- **Patients:** admitted to Acute Care for Elders unit at Vancouver General Hospital, identified as at high-risk for readmission (Readmission Risk Assessment Score ≥10) and >80 yrs old
- **Intervention**: Medication review by Clinical Pharmacist within 48 hrs of admission, collaborative discussion between Hospitalist, Clinical Pharmacist and Family Physician
- **Data**: Pharmacist's patient monitoring form, patient healthcare record documentation, discharge medication calendar
- **Analysis**: Descriptive statistics of quality assurance variables

Table 1: Baseline Characteristics.

Patients with Medication Review	35
Age (years, average ± SD) (n=35)	84.8 ± 10.5
Female	17/35 (51%)
Readmission Risk Assessment Score (average ± SD) (n=32)	11.7 ± 1.9
# Comorbidities per patient (average ± SD) (n=34)	5.9 ± 3.7

Living Arrangements:		**Compliance Aids:**	
Independent	11/35 (34%)	Blister Pack	18/35 (51%)
Care Facility	8/35 (23%)	Vial	10/35 (29%)
With Family	5/35 (14%)	Dosette	4/35 (11%)
Home Care	4/35 (11%)	Other/Unknown	3/35 (8%)
Unknown	7/35 (17%)		

Table 2: Drug Therapy Problems and Interventions

	Total	Per Pt (average ± SD)
Drug Therapy Problems Identified	63	1.8 ± 1.4
Total Interventions Made	42	1.2 ± 1.4
Clinical Interventions Made	26	0.7 ± 1.0
Compliance Interventions Made	16	0.5 ± 0.7

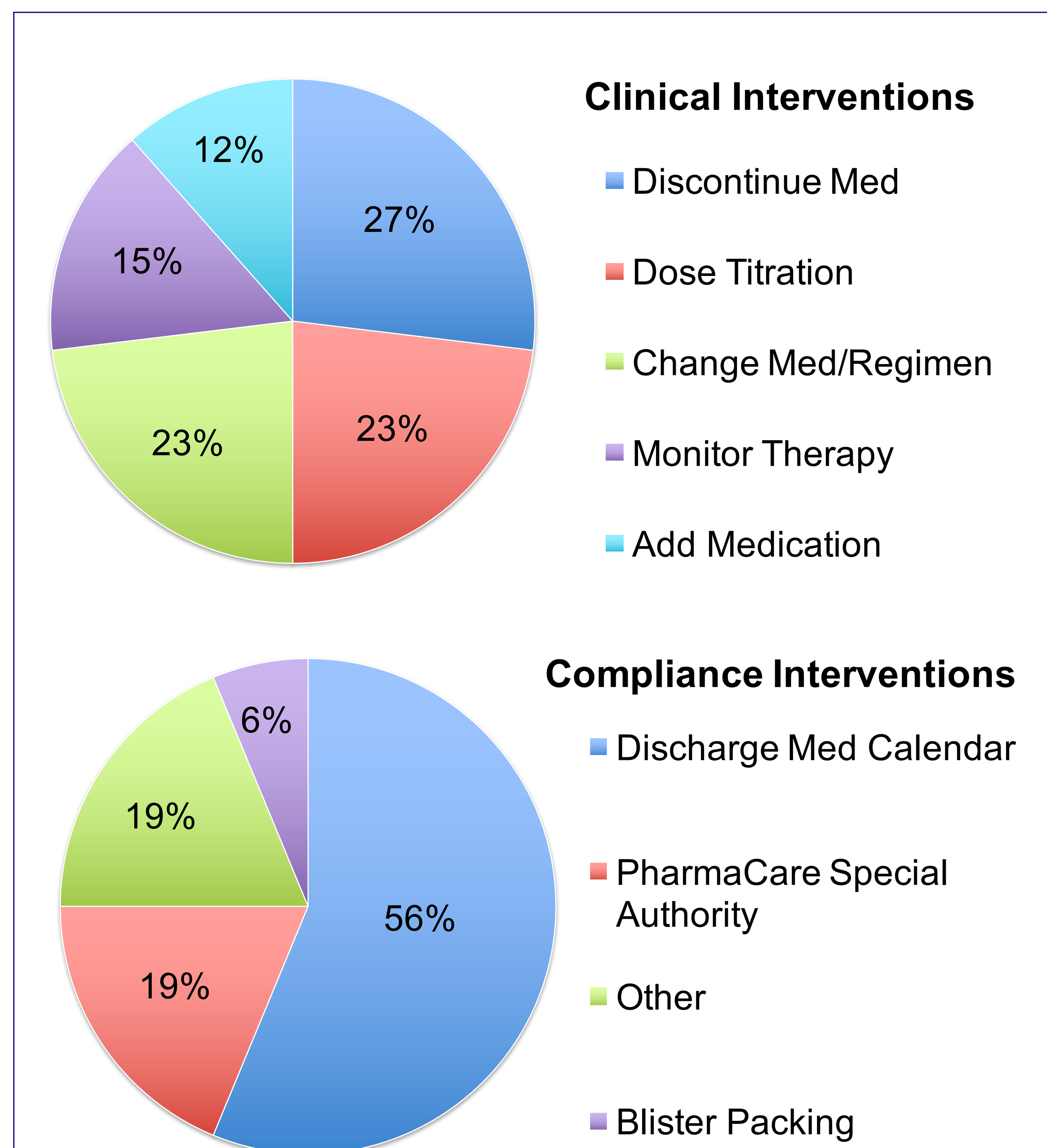
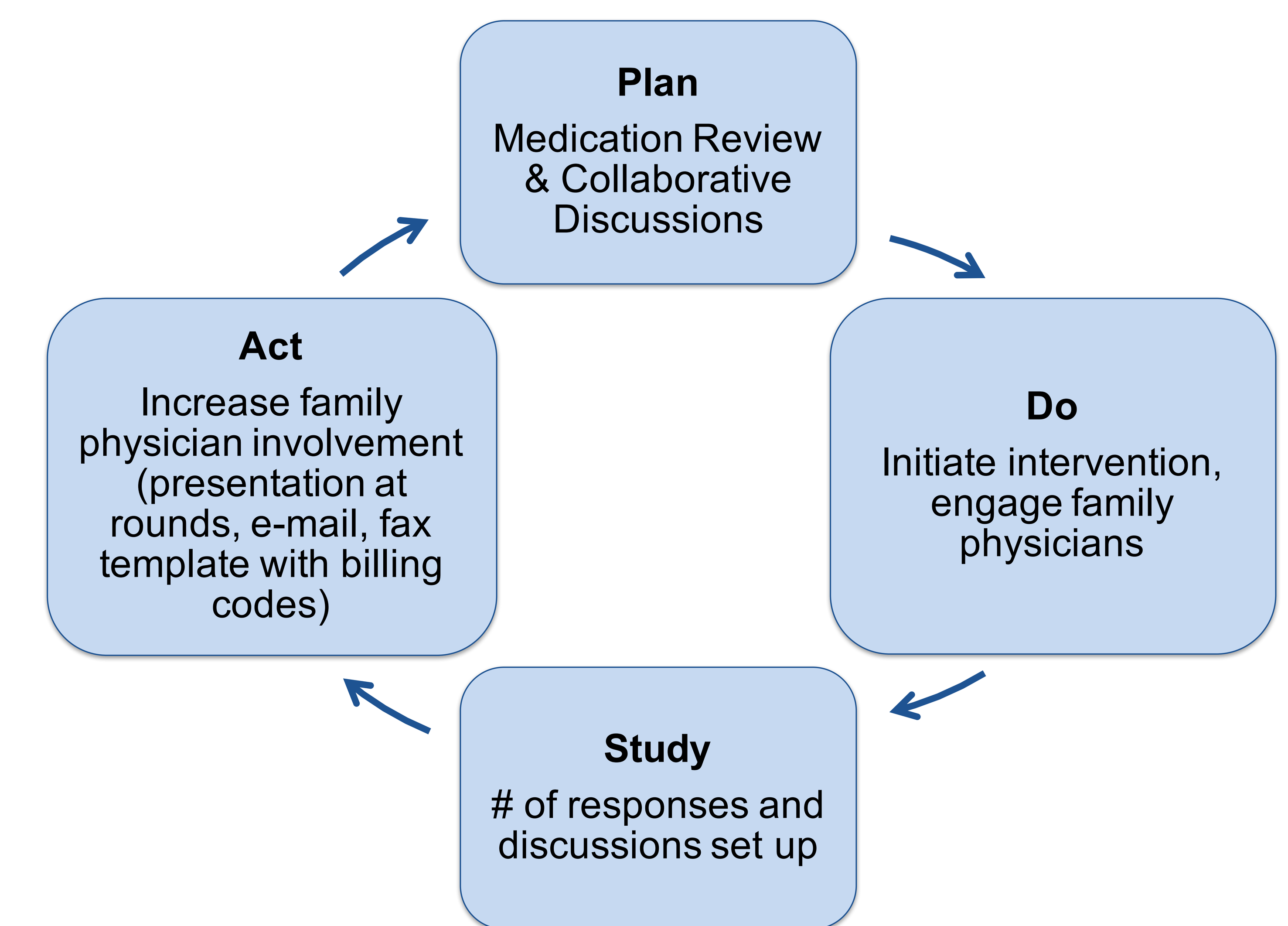


Figure 1: Interventions by Category

Results

- 35 Patients had a medication review; incomplete data 6 patients (n=29)
  - Average (± SD) # medications/patient: 9.5 ± 5.0
  - Average (± SD) Beer's List medications/patient: 1.1 ± 1.2
  - Proportion of patients taking >5 medications: 72%
- 28 Patients discharged (7 patients died); incomplete data 3 patients (n=25)
  - Average (± SD) # medications/patient: 10.7 ± 4.1
  - Average (± SD) Beer's List medications/patient: 1.1 ± 1.1
  - Proportion of patients taking >5 medications: 96%
- 20 Family Physicians faxed,10 responses, 3 collaborative discussions
- Length of Stay (days, average ± SD):19 ± 14
- 30-day Readmission Rate (n=28): 7%

Plan-Do-Study-Act Cycle



Conclusions

- Process implementation takes time, especially with multiple stakeholders involved
- Plan-Do-Study-Act Cycles help to implement change, evaluate improvement and plan next steps
- Pharmacists implemented a number of interventions as part of care team
- Further cycles to focus on improved participation in collaborative discussions

Limitations

- Small sample size
- Difficult to engage family physicians in collaborative discussions likely due to time constraints
- Data sources did not consistently capture all desired information leading to implementation of standardized Medication Review Forms

Acknowledgements

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