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# Polypharmacy Management in a Rural Family Medicine Practice: View from Multiple Perspectives

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# Polypharmacy Management in a Rural Family Medicine Practice

Views from Multiple Perspectives

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Family Medicine Clerkship, May-June 2015  
Mad River Family Practice, Waitsfield, VT



# Identifying the Problem

- › Definitions of ‘polypharmacy’:
  - Intake of multiple medications
    - › No common definition, but generally  $\geq 4$  or 5 medication is considered polypharmacy<sup>2</sup>
  - “At least one potentially inappropriate drug” (PIM)<sup>3</sup>
- › In the United States, 42% of patients over age 65 take 5 or more drugs<sup>1</sup>
- › Primary care physicians prescribe more than twice as many medications per patient as geriatric-trained physicians<sup>6</sup>
  - PCPs have significantly greater odds of prescribing PIMs<sup>6</sup>
- › A large portion of avoidable adverse drug effects result from lack of a designated healthcare professional overseeing patients’ medications prescribed by different physicians.<sup>1</sup>

## Challenges at Mad River Family Practice

- › A random selection of 50 consecutive patients revealed:
  - an average of 4.7 medications per patient (includes supplements)
  - 46% patients take  $\geq 4$  medications
- › Patients are referred to many surrounding healthcare facilities
  - Central Vermont Medical Center, University of Vermont Medical Center, Dartmouth Hitchcock Medical Center, Gifford Medical Center, and more
  - Communication of medical services and prescriptions from other providers can be lacking at times
- › No standard protocol for evaluating a patients’ medication lists





# Public Health Cost

## › Harm to patients

- Drug-drug interactions, drug-disease interactions, inappropriate dosing, side effects <sup>3</sup>
  - › 2/3 of adverse drug events (ADEs) are attributable to four classes of medications:
    - Warfarin, insulins, antiplatelet agents, oral hypoglycemic agents <sup>1</sup>

## › Cost to the healthcare system

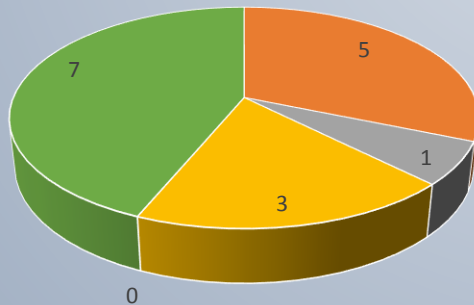
- \$1.3 billion in avoidable costs related to polypharmacy mismanagement among older patients in the United States <sup>1</sup>
- Largest costs incurred are from ADEs resulting in emergency visits and hospitalizations <sup>1</sup>

# Community Perspective

## › Survey of 22 Patients

- 5 (23%) use  $\geq 4$  medications, 14 (64%) are using at least 1 medication
  - › 2 (9.1%) were concerned about using too many medications
- 100% of participants responded ‘yes’ to knowing why they were using each of their medications
- 69% of responders reported never having talked to healthcare providers other than their family physician about the number of medications they were using

Have you ever talked to your family physician about the number of medications you are taking?



■ every visit ■ other - "most visits" ■ some visits ■ once ■ never

## › Discussion with name withheld (Pharmacist in Waitsfield, VT)

- Polypharmacy is an issue everywhere, especially with the aging ‘baby boomer’ population.
  - › More affluent areas may see more polypharmacy resulting from increased access to primary care.
- Patients at highest risk ( $\geq 8$  medications, having chronic diseases) are less likely to be concerned about polypharmacy than those taking 4-5 medications
- Suggested role of primary care in medication management:
  - › Be aware of potential side effects and avoid a prescription cascade.
  - › Prescribe “low and slow.” Start out at a low dose and increase slowly to therapeutic effect.
  - › Consider adding an adjunct medication instead of maximizing dosage.
- Suggestions for family physicians as they review patients’ medications:
  - › Increase in patient volume leads to less time for detailed medication management. “Take a minute to ask about medications in general,” especially side effects.
  - › Consult a local pharmacist for quick and helpful information about patients’ medication lists.





# Methods and Intervention

## › Methods:

1. Provided a short survey to patients at Mad River Family Practice to better understand the management of their medications
2. Spoke with a local pharmacist to gain information on polypharmacy and its prevention specific to this area
3. Created a presentation detailing these findings and information from current polypharmacy research as an educational tool for practicing physicians at Mad River Family Practice

## › Intervention: PowerPoint presentation to a physician at Mad River Family Practice

### – Slide titles:

- › Definitions and Facts
- › Why Should We Care?
- › Survey of 22 Patients
- › Discussion with local pharmacist
- › Other Recommendations

The University of Vermont College of Medicine student currently rotating through our office is requesting your assistance with a project. Through this project, she is hoping to gain a better understanding of patient participation in medication management. This brief survey should take no more than a few minutes of your time. Your participation is completely voluntary and anonymous.

1. Please circle your age group:

Younger than 25      25-45      45-65      Older than 65

2. How many medications are you currently taking? Please include over-the-counter medications.

\_\_\_\_\_

3. Do you know why you are taking each of your medications?

Yes      No

4. Are you ever concerned with the number of medications you are taking?

Yes      No

If yes, please explain why:

\_\_\_\_\_

5. Have you ever talked to your family physician about the number of medications you are taking?

Yes      No

a. If no, please explain why: \_\_\_\_\_

b. If yes, how often?

Once      Some visits      **Every visit**      Other: \_\_\_\_\_

6. Have you ever talked to other healthcare providers about the number of medications you are taking?

Yes      No

## Other recommendations

- ▶ If a patient is prescribed ≥5 medications, schedule regular medication reviews
  - ▶ Is the patient receiving therapeutic benefit?
  - ▶ Is there ongoing clinical need for the medication?
  - ▶ Do the benefits outweigh the risks and side effects being experienced?
- ▶ Involve the patient in decision making.
  - ▶ Thorough communication about need for medication and potential adverse effects is key.



## Results

- › Physician response to the presentation “Polypharmacy in Primary Care”
  - A presentation like this causes physicians to reconsider their practices regarding prescribing medications.
    - › Several patients may come to mind, and the physician wonders how he could better manage them.
  - This is a good educational tool that could lead to further discussions amongst providers.

### Polypharmacy IN PRIMARY CARE

#### Why should we care?

- ▶ Harm to our patients
  - ▶ Drug-drug interactions, drug-disease interactions, inappropriate dosing
  - ▶ Avoidable adverse drug events result from lack of a designated healthcare professional overseeing patient's medications prescribed by different physicians.
- ▶ Cost to the healthcare system
  - ▶ \$1.3 billion in avoidable costs related to polypharmacy mismanagement among older patients in the United States
  - ▶ Largest costs incurred are from adverse drug events resulting in emergency visits and hospitalizations.
- ▶ Primary care physicians prescribe more than twice as many medications as geriatric-trained physicians
  - ▶ PCPs had significantly greater risk of prescribing a potentially inappropriate medication





# Evaluation of Effectiveness and Limitations

## › Effectiveness

- This project allowed the primary Family Medicine provider at Mad River Family Practice to reconsider his prescribing practices.
- Effectiveness could further be measured through analyzing this physician's prescribing patterns to see if any changes are seen regarding prescribing to his patients with polypharmacy.

## › Limitations

- Limitations specific to the patient survey include a small number of participants, a deficiency of time for patients to record their answers, and an inability to determine whether the population completing the survey is representative of the patient population at the practice.
  - › More in-depth investigation of patients' medication management could provide specific areas within this Family Medicine practice that could benefit from change.
- Limitations of the presentation include the small number of providers available at Mad River Family Practice and the inability to provide tools other than information to help change prescribing patterns.





## Future Recommendations

- › Perform a more in-depth analysis of prescribing practices and patient polypharmacy at this rural practice to determine specific problem areas.
- › Implement regular discussions amongst the providers about current polypharmacy research and suggested practices.
  - Include patient-specific cases in which polypharmacy could lead to adverse effects for the patient.
- › Implement a protocol within the practice for preventing polypharmacy and its adverse effects.
  - The EMR is a potential tool that could be used for this purpose. For example, patients with significant polypharmacy or increased risk or adverse effects from medications could be flagged for intervention.



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