

UPDATE: Empowering the Safe, Effective and Efficient (S-E-E) Use of Medication in Older Adults

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Empowering the Safe, Effective and Efficient (S-E-E) Use of Medication in Older Adults

- ***Objective***

- To define and apply a set of quality measures to evaluate medication use among older adults
 - Domains: Safety, Effectiveness and Efficiency
 - Using pharmacy data solely
- Determine if measures vary according by demographics and practices
 - No prescriber-level analyses

Study Population

- **RI pharmacy claims data 2018**
 - Older adults (65+)
 - Predominantly community dwelling
 - Excluded patients with Rx suggestive of cancer
 - Continuous pharmacy use
 - Filled at least one prescription in the first and last quarter of 2018

Independent Variables

- **Gender, Age Group**
 - 65-70; 71-79; 80+
- **Payment Type**
- **RI Region (county)**
- **Comorbidity (Rx proxys)**
- **Provider group**
 - Linked prescriber to practice affiliation using NPI

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- **Measures**
 - Environmental scan yielded 47 candidate measures
 - Rated by experts for:
 - Clinical relevance to older adults
 - Evidence-based
 - Feasibility (using pharmacy data only)
 - Operationally define and apply

Safety

Avoid use of:

1. Benzodiazepines
2. CNS depressants
3. NSAIDS, if using anticoagulants
4. Anticholinergic drugs in dementia
5. Fluoroquinolones as initial therapy
6. Continuing opioid rxs after an initial opioid Rx
7. High(er) risk drugs

Effectiveness

Patient adherence

1. Anticoagulants
2. Diabetes medications
3. Depression medications
4. Cholesterol medications
5. Respiratory inhalers

Evidence-based therapies

6. Statin use in diabetes
7. ACEI/ARB use in diabetes

Efficiency

Health system:

1. Limit the number of prescribers
2. Avoid poly-pharmacy

Use of generics:

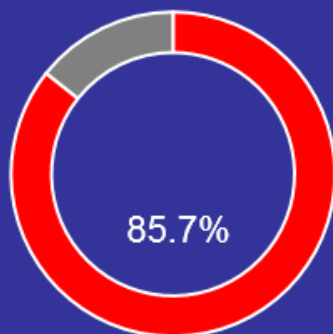
3. Overall
4. Diabetes medications
5. Mental health medications

Piloting: Low value drugs

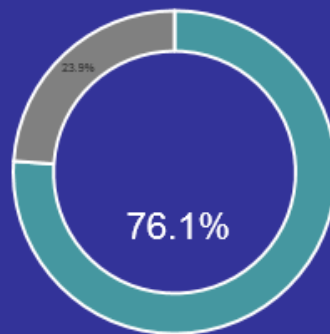
Empowering the Safe, Effective and Efficient (S-E-E) Use of Medication in Older Adults

Safe (S)	Effective (E)	Efficient (C)
<p>Avoiding use of:</p> <ol style="list-style-type: none"> 1. Benzodiazepines 2. CNS depressants 3. NSAIDs, if using anticoagulants 4. Anticholinergics in dementia 5. Fluoroquinolones as initial therapy 6. Chronic opioids 7. Higher-risk drugs (PIMs) <p><i>100% is optimal for all measures</i></p>	<p>Patient adherence to:</p> <ol style="list-style-type: none"> 1. Anticoagulants 2. Diabetes medications 3. Depression medications 4. Cholesterol medications 5. Respiratory inhalers <p>Evidence-based therapies:</p> <ol style="list-style-type: none"> 6. Statin use in diabetes 7. ACE/ARB use in diabetes 	<p>Health system use:</p> <ol style="list-style-type: none"> 1. Limit number of prescribers 2. Avoid polypharmacy <p>Use of generics:</p> <ol style="list-style-type: none"> 3. Overall 4. Diabetes medications 5. Mental health medications <p>Other:</p> <ol style="list-style-type: none"> 6. Low Value Drugs

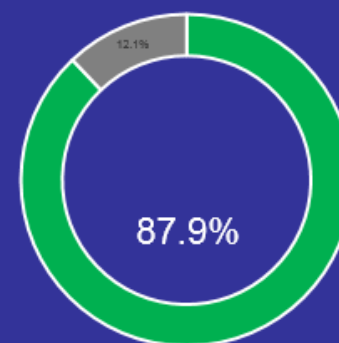
Safety



Effectiveness



Efficiency



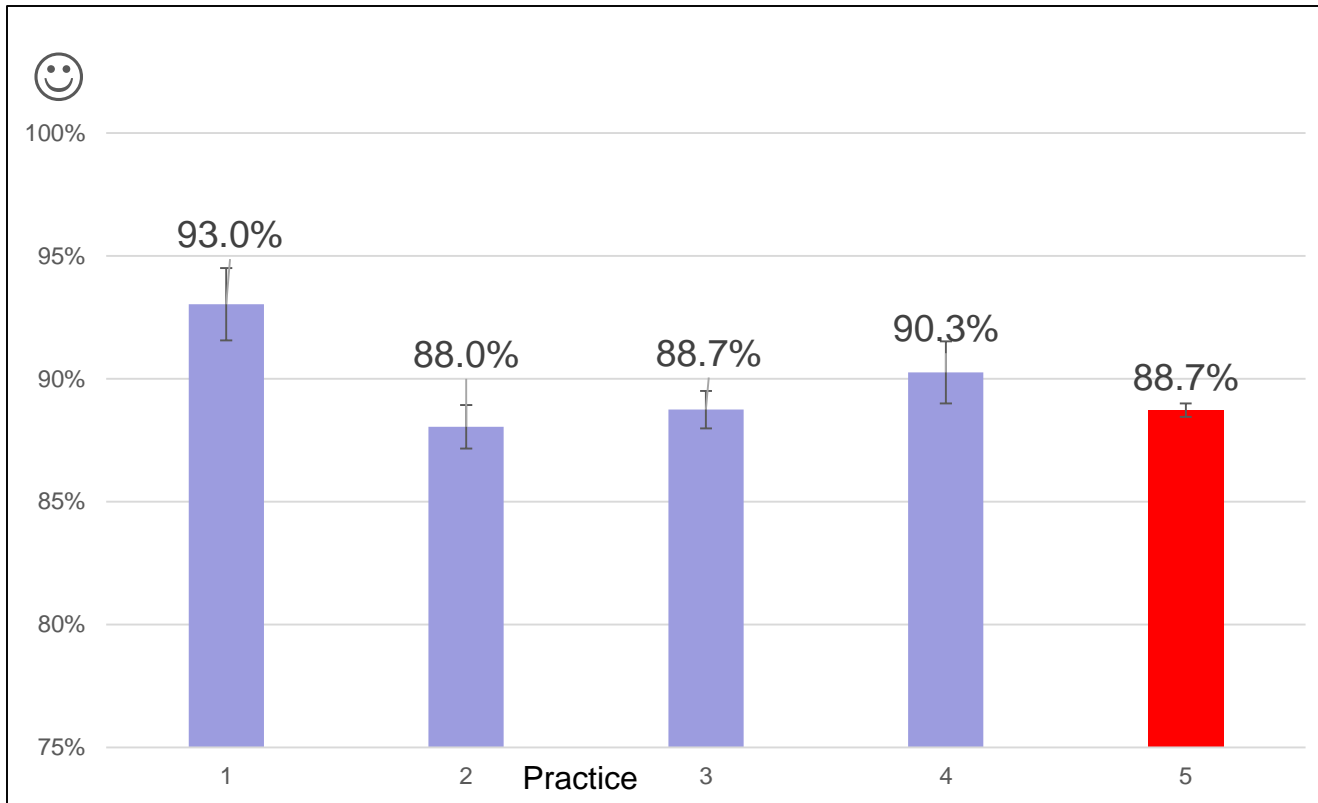
2016

Study Population: Older Adults Filling Prescriptions in RI in 2018 (n = 108,050)

	N	%
AGE CATEGORY		
65-70	41,922	38.8
71-79	42,642	39.5
80+	23,441	21.7
GENDER		
Female	61,044	56.5
Male	47,006	43.5
REGION		
Bristol	6,753	6.3
Kent	19,558	18.1
Newport	10,123	9.4
Providence	53,885	49.9
Washington	17,686	16.4
PAYMENT TYPE		
Cash	10,170	9.4
Medicaid	698	0.7
Medicare	76,566	70.9
PBM / Commercial	15,232	14.1
Other	5,384	4.9

S1. Avoiding Use of Benzodiazepines

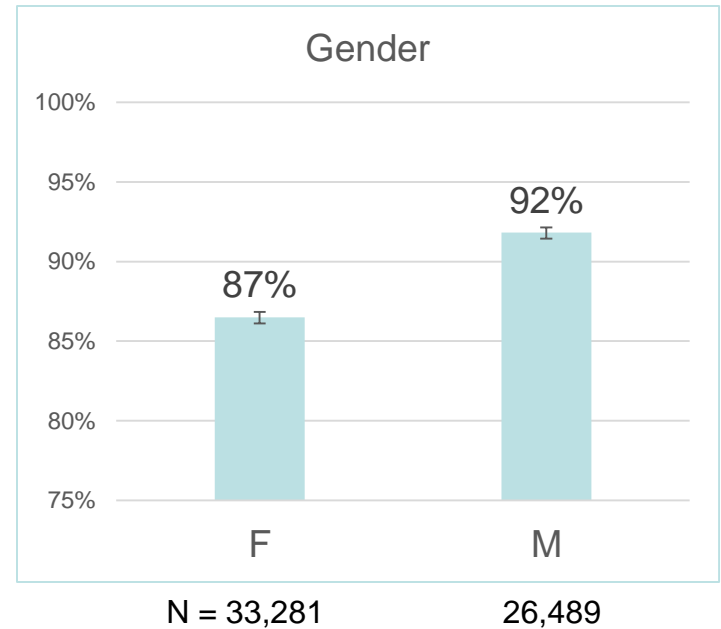
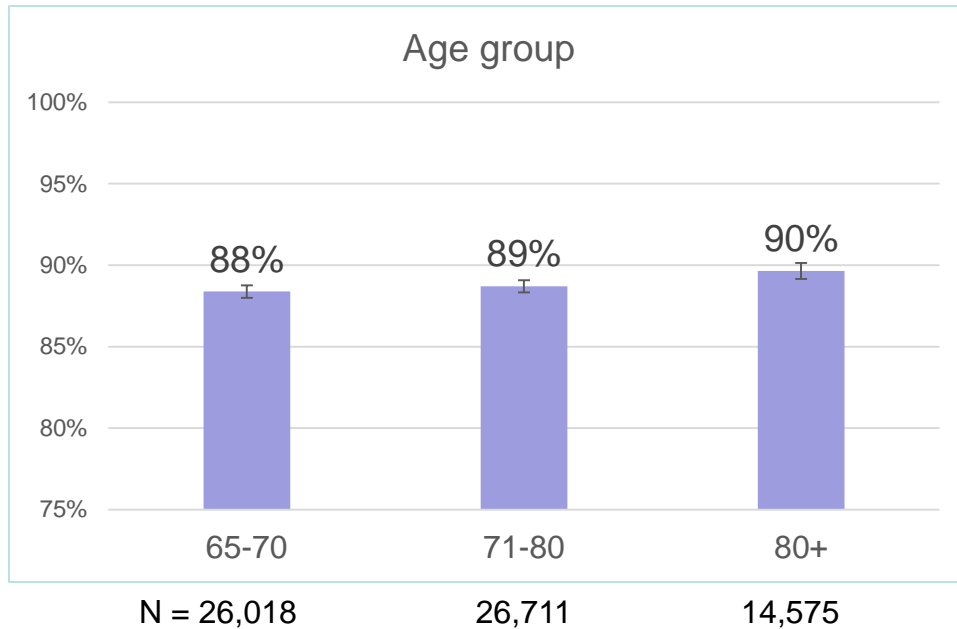
Patients without 60+ days supply of benzodiazepine during 2018



N = 67,322

S1. Avoiding Use of Benzodiazepines

Subgroup Analysis: Age Group and Gender



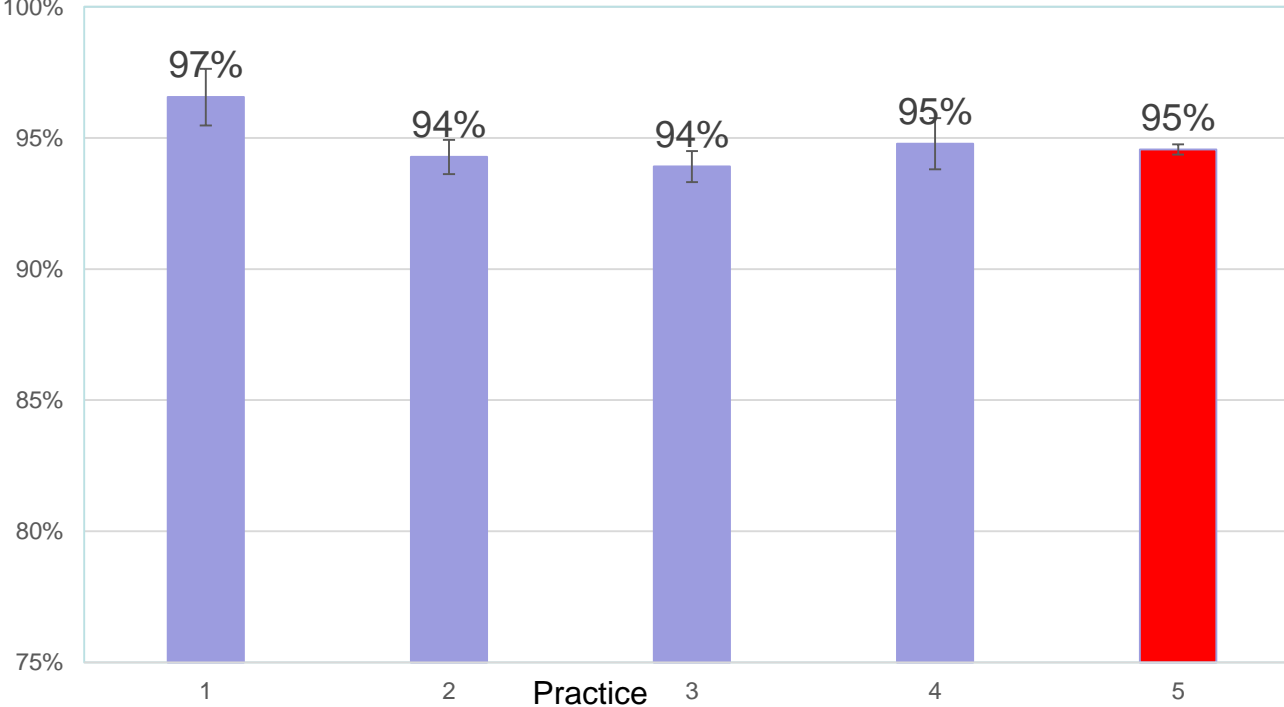
S2. Avoiding CNS Medications

Patients without 60+ days supply for any of the following drug classes during Q4 2018: opioid, benzodiazepine, skeletal muscle relaxant, sleep medication, or barbiturate



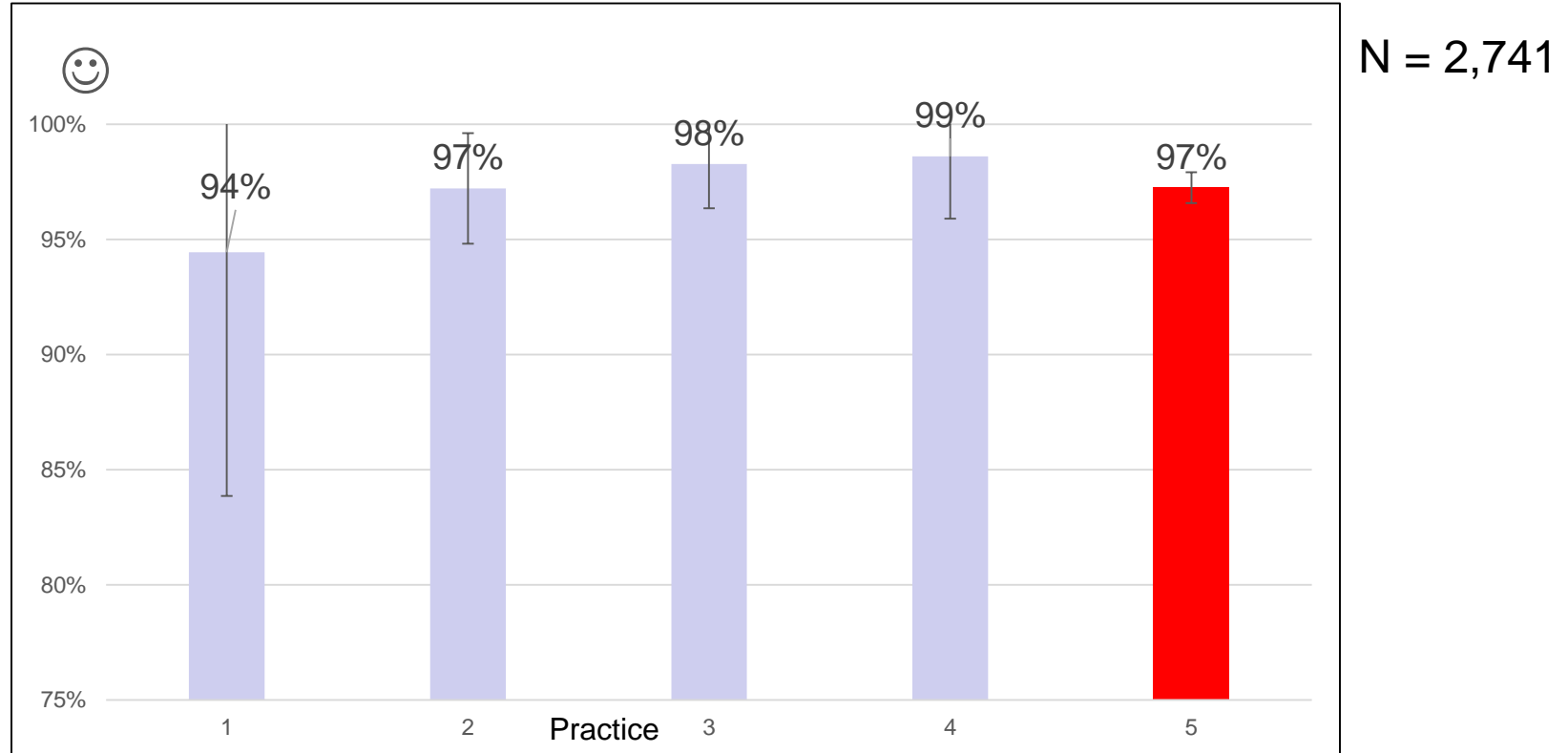
100%

N = 67,034



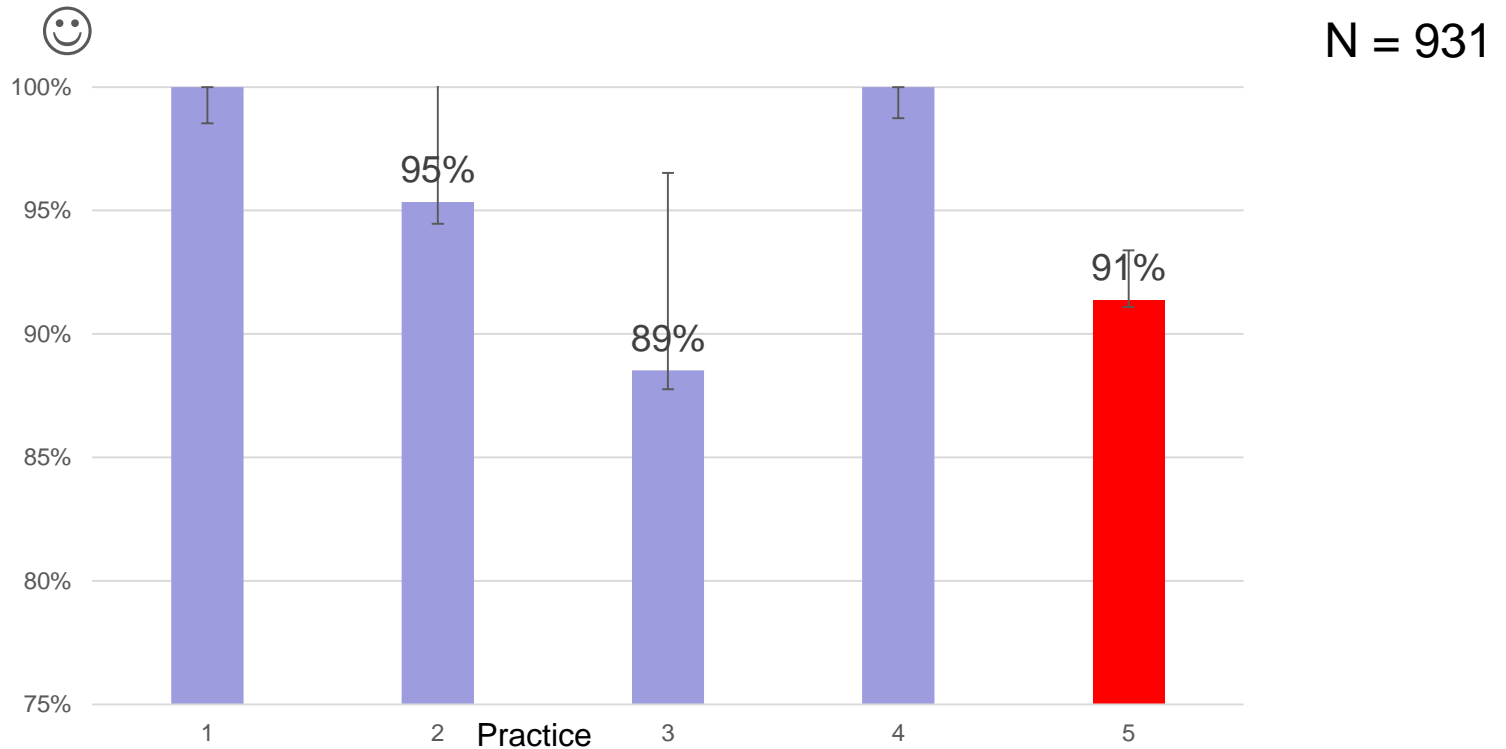
S3. Avoid Chronic Use of NSAIDs with Warfarin/DOACs

Patients with 10+ months supply of warfarin and/or DOAC during 2018 and without 90 days or more supply of any NSAID



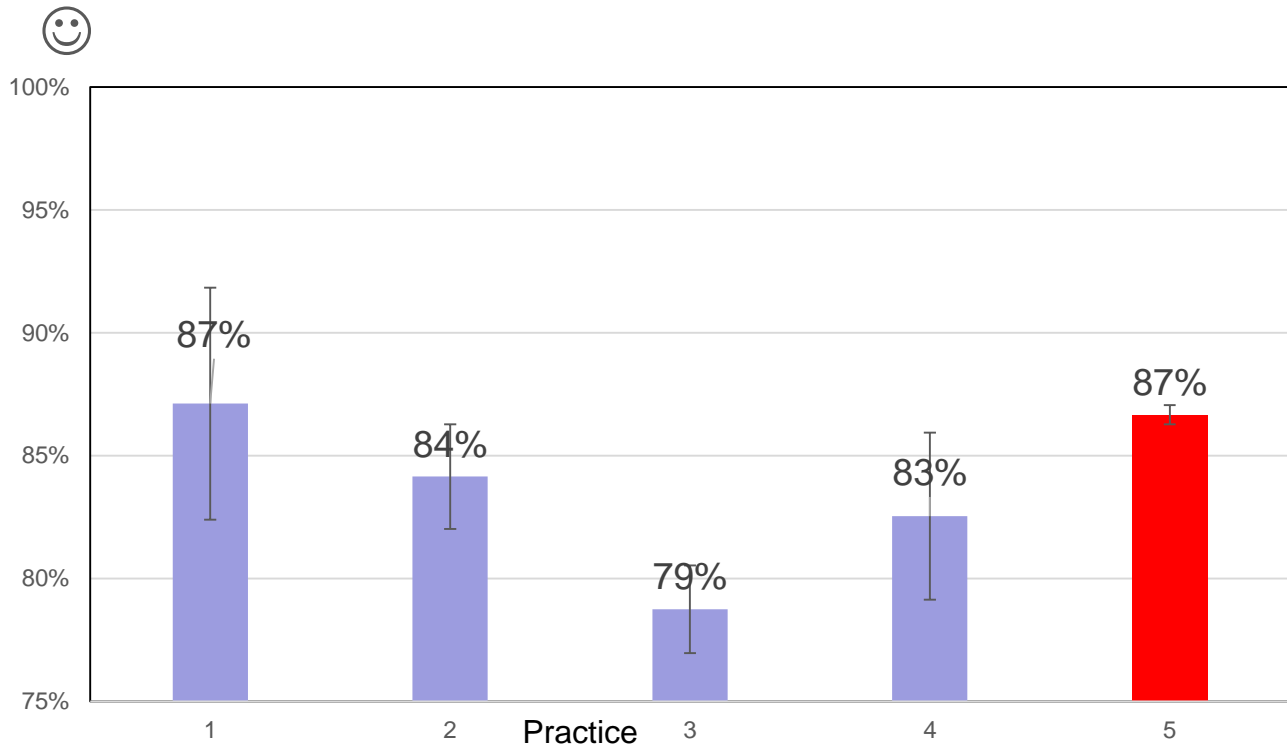
S4. Avoid Concurrent Use of Anticholinergic and Dementia Medications

Patients with 10+ months supply of dementia medication during 2018 and without 90 days or more supply of anticholinergic drug



S5. Avoid Use of Fluoroquinolones as Initial Therapy

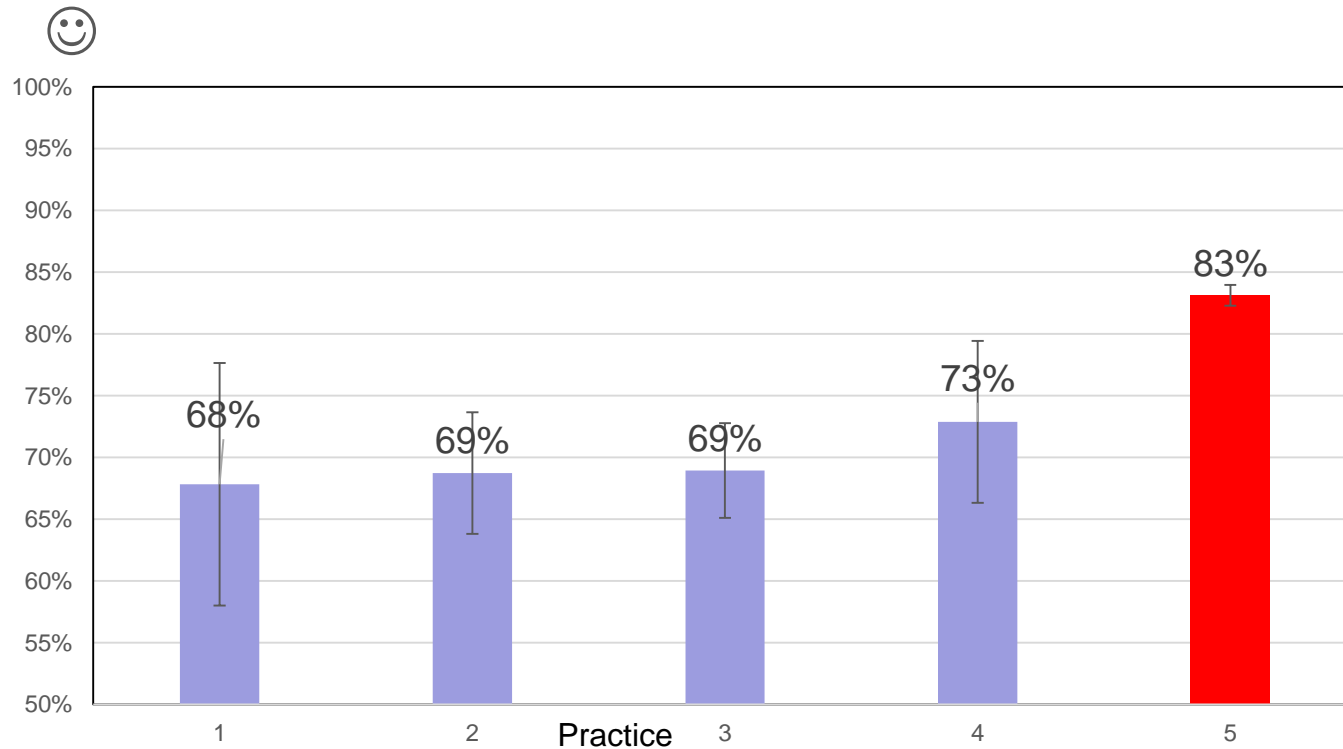
Patients with a new antibiotic rx after period of no antibiotic prescription in previous 120 days; antibiotic is not a fluoroquinolone



N = 33,193

S6. Avoiding Chronic Opioid Use

Among patients who received at least one prescription for an oral opioid medication during Sept.-Dec 2018, the proportion who received less than 200 total dosage units



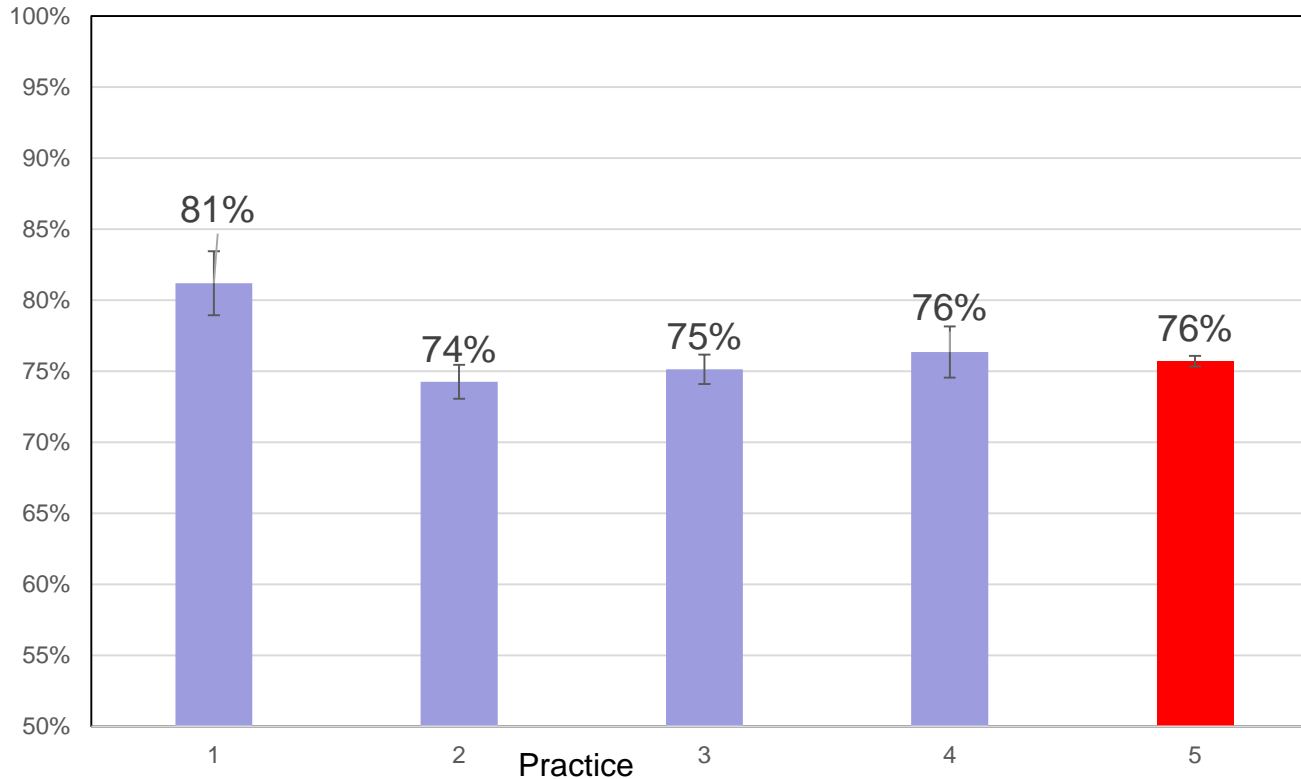
N = 8,671

S7. Avoid Use of High(er) Risk Drugs

Patients without any prescription for a medication considered high(er) risk drug



N = 67,322



- First-generation antihistamines
- Antispasmodics
- Ticlopidine and dipyridamole
- Nifedipine, immediate release
- Tertiary tricyclic antidepressants
- Barbiturates
- Nonbenzodiazepine “Z” drugs
- Desiccated thyroid
- Sulfonylureas, long duration
- Metoclopramide
- Meperidine
- Indomethacin
- Skeletal muscle relaxants

Highlights

- Benzodiazepine use is frequent among older adults
- Interacting drugs generally avoided in Afib and dementia
- Fluoroquinolone use first line in 14% of cases; variability among provider organizations
- Among patients prescribed opioids, approximately 1 in 5 received 200+ dosage units
- Approximately 1 in 4 patients received a potentially inappropriate rx

Next Steps

- Additional / revised measures
 - Refine NPI mappings
- Effectiveness and efficiency domains
 - Low value drugs
- Intervention
 - Clinical pharmacy
 - HIT
- Other data sources: APCD

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Questions