NIH Collaboratory

Health Care Systems Research Collaboratory

D-PRESCRIBE-AD: An NIH Collaboratory Distributed Research Network Pragmatic Trial to Reduce Inappropriate Prescribing in Dementia

Jerry Gurwitz, Meyers Health Care Institute and UMass Chan Medical School

Richard Platt, Harvard Pilgrim Health Care Institute and Harvard Medical School

January 7, 2022

Re-introducing the NIH Collaboratory Distributed Research Network

- FDA Sentinel System, designed to assess medical product safety and effectiveness, has ability to support research topics
- Created to allow investigators supported by NIH and other not-for-profit sponsors to collaborate with Sentinel investigators
- Focus is on multi-center research, especially requiring:
  - Access to full text records
  - Linkage to external sources
  - Contact with clinicians and/or patients
  - Collection of patient generated data
- New research partners welcome!

www.rethinkingclinicaltrials.org/nih-collaboratory-drn

NIH COLLABORATORY
LIVING TEXTBOOK
of Pragmatic Clinical Trials

ABOUT RESOURCES GRAND ROUNDS NEWS Search …

DESIGN CONDUCT DISSEMINATION

NIH Collaboratory Distributed Research Network (DRN)

Drs. Jeffrey Brown and Lesley Curtis explain the NIH Collaboratory DRN

Millions of people. Strong collaborations. Privacy first.

Leadership: Richard Platt and Lesley Curtis
Project Manager: Sarah Malek

Publications and Supplementary Material | Presentations

The NIH Collaboratory Distributed Research Network (DRN) enables investigators funded the NIH and other not-for-profit sponsors to collaborate with investigators based in healt plans that participate in the FDA's Sentinel System. The DRN is especially useful for supporting multisite research programs.

https://rethinkingclinicaltrials.org/nih-collaboratory-drn/

DRN Collaborating Organizations

Coordinating Center:

DEPARTMENT OF POPULATION MEDICINE
HARVARD MEDICAL SCHOOL
Harvard Pilgrim Health Care Institute

Data & Scientific Partners

HealthCore
Anthem
Healthagen
aetna™
OPTUM®
KAISER PERMANENTE®
Hawaii
Mid-Atlantic
Northwest
Washington
VANDERBILT UNIVERSITY MEDICAL CENTER
TennCare
Marshfield Clinic Research Institute
Humana
HealthPartners®
Harvard Pilgrim Health Care

NIH Collaboratory DRN's Distributed Database

Database Statistic	Total
Members Currently Accruing New Data	~45 million
Person-years of Data	~450 million
Pharmacy Dispensings	~7 billion
Unique Medical Encounters	~10 billion

Sentinel Common Data Model

Administrative Data

Enrollment	Demographic	Dispensing	Encounter	Diagnosis	Procedure
Patient ID	Patient ID	Patient ID	Patient ID	Patient ID	Patient ID
Enrollment Start & End Dates	Birth date	Dispensing Date	Service Date(s)	Service date(s)	Service Date(s)
Drug Coverage	Sex	National Drug Code (NDC)	Encounter ID	Encounter ID	Encounter ID
Medical Coverage	Zip code	Days Supply	Encounter Type and Provider	Encounter Type and Provider	Encounter Type and Provider
Medical Record Availability	Etc.	Amount Dispensed	Facility	Diagnosis Code & Type	Procedure Code & Type
			Etc.	Principle Discharge Diagnosis	Etc.

Clinical Data

Lab Result	Vital Signs
Patient ID	Patient ID
Result & Specimen Collection Dates	Measurement Date & Time
Test Type, Immediacy & Location	Height & Weight
Logical Observation Identifiers Names and Codes (LOINC®)	Diastolic & Systolic BP
Etc.	Tobacco Use & Type
	Etc.

Registry Data

Death	Cause of Death	State Vaccine
Patient ID	Patient ID	Patient ID
Death Date	Cause of Death	Vaccination Date
Source	Source	Admission Date
Confidence	Confidence	Vaccine Code & Type
Etc.	Etc.	Provider
		Etc.

Inpatient Data

Inpatient Pharmacy	Inpatient Transfusion
Patient ID	Patient ID
Administration Date & Time	Administration Start & End Date & Time
Encounter ID	Encounter ID
National Drug Code (NDC)	Transfusion Administration ID
Route	Transfusion Product Code
Dose	Blood Type
Etc.	Etc.

Mother-Infant Linkage Data

Mother-Infant Linkage
Mother ID
Mother Birth Date
Encounter ID & Type
Admission & Discharge Date
Child ID
Child Birth Date
Mother-Infant Match Method
Etc.

Sentinel Common Data Model 7.0.0

Capabilities

- Work with Sentinel's curated distributed dataset
- Obtain full text records
- Link to external registries
- Collect patient reported data
- Contact providers
- Conduct randomized trials

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- Conduct randomized trials

To work with the DRN

- The DRN invites partnerships on a wide range of topics

- Learn more – https://rethinkingclinicaltrials.org/nih-collaboratory-drn
- Contact us – nih-collaboratory@dm.duke.edu

D-PRESCRIBE-AD

Developing a PRogram to Educate and Sensitize Caregivers to Reduce the Inappropriate Prescription Burden in Elderly with Alzheimer's Disease (D-PRESCRIBE-AD)

Jerry H. Gurwitz, MD
Executive Director
Meyers Health Care Institute
Worcester, Massachusetts

January 7, 2022

R56AG061813/R61AG069794/R33AG069794

A collaborative effort

Importance of Deprescribing in Patients with Alzheimer's Disease and ADRD

Significant public health impact of inappropriate prescribing

- Inappropriate prescribing can act as a "morbidity multiplier."
- Inappropriate prescribing substantially increases the likelihood of experiencing prescribing cascades and adverse drug events.

Heightened impact for patients with Alzheimer's disease and Alzheimer's disease-related dementias (AD/ADRD)

- AD/ADRD patients are more vulnerable to inappropriate prescribing due to multimorbidity, polypharmacy, and the complexities of their care.
- Patient/caregiver communication with the healthcare provider regarding medications is often suboptimal.

There is a need to activate patients and their caregivers

- Patients and caregivers have important insights into their care, but often do not speak up about these concerns, leaving healthcare providers unaware.
- Several direct-to-patient educational efforts have been shown to be effective in improving the quality and safety of pharmacotherapy.

D-PRESCRIBE-AD

D-PRESCRIBE-AD is planned as a rigorous evaluation of a large scale, low-intensity, health plan-based, educational intervention to improve medication safety among AD/ADRD patients who are at risk for preventable medication-related morbidity.

D-PRESCRIBE-AD: What should the target for the deprescribing intervention be?

- Reduce polypharmacy (i.e., just try to reduce the overall number of meds)?
- Prevent and interrupt prescribing cascades?
- Reduce use of selected high-risk categories of medications in patients with AD/ADRD (e.g., antipsychotics, sedative-hypnotics, and strong anticholinergics)?

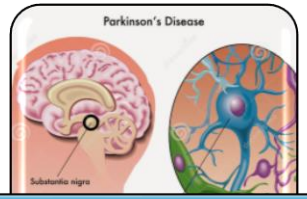
2019 American Geriatrics Society Beers Criteria® Update Expert Panel. American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults. J Am Geriatr Soc. 2019 Apr;67(4):674-694.

Prescribing Cascade Concept: Example 1

Initial drug therapy

Drug A

e.g., antipsychotics



New medical condition

parkinsonism

New drug treatment

Drug B

Antiparkinsonian drugs

Further adverse effects

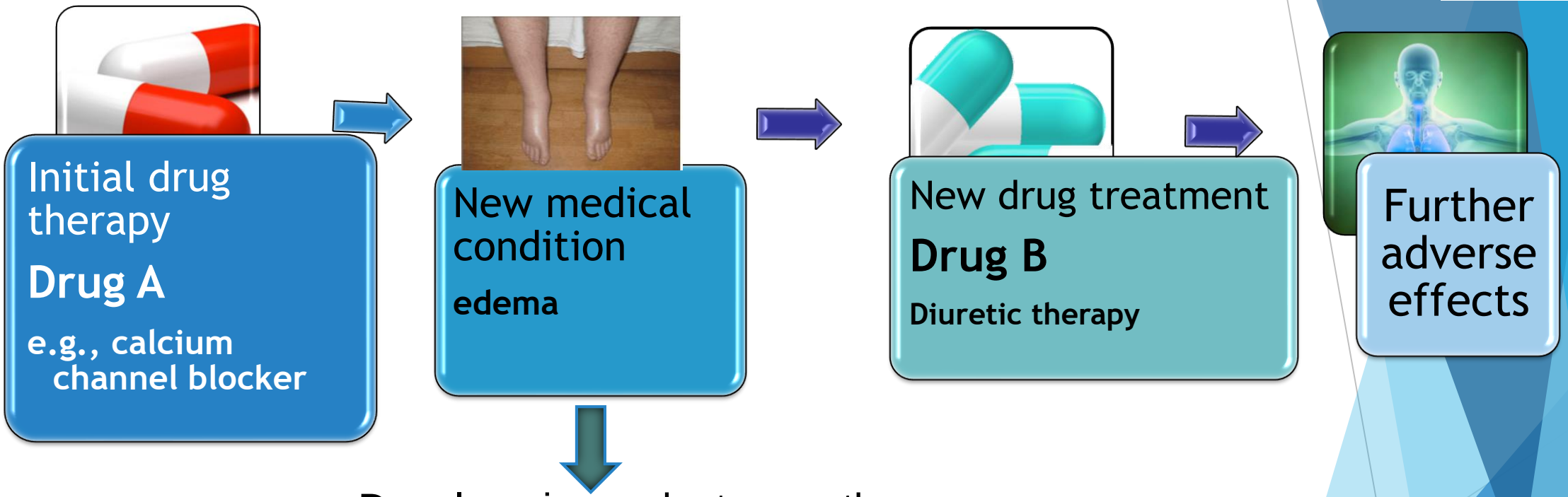
Develops in weeks to months

Not clearly recognized as drug-related

Perhaps confused with age-related changes

Time

Prescribing Cascade Concept: Example 2



CASCADES-AD: The Controlling And Stopping Cascades leading to Adverse Drug Effects Study in Alzheimer's Disease

UMass Chan MEDICAL SCHOOL

Prescribing cascades in older adults with AD/ADRD are far less common than expected, so maybe this is not the best intervention target for testing with a large scale pragmatic clinical trial:

Antipsychotic-antiparkinsonian medication cascade

- Among 121,538 patients with Alzheimer's disease there were 36 incident antiparkinsonian users among 4,534 incident antipsychotic users (0.8%)*

Calcium Channel Blocker Diuretic Cascade

- Only 2.1% evidenced a prevalent CCB-diuretic prescribing cascade*

*J Am Geriatr Soc. 2021 May;69(5):1328-1333.
Pharmacoepidemiol Drug Saf. 2021 Aug;30(8):1066-1073

R56AG061813

Use of Selected High-Risk Medications: Antipsychotics, Sedative/Hypnotics, and Strong Anticholinergics

Characteristics of AD/ADRD Population with current evidence of potentially inappropriate prescribing in Health Plans January 2019-January 2020	
Number of health plan members with AD/ADRD	130,682
Number of health plan members with AD/ADRD and evidence of inappropriate prescribing, N (%)	**26,259 (20.1%)**
Antipsychotics, N (%)	**12,581 (9.6%)**
Benzodiazepines/sedative-hypnotics, N (%)	**6,617 (5.1%)**
Strong anticholinergics, N (%)	**11,228 (8.6%)**

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Inspiration for our D-PRESCRIBE-AD Randomized Trial

JAMA | Original Investigation

Effect of a Pharmacist-Led Educational Intervention on Inappropriate Medication Prescriptions in Older Adults
The D-PRESCRIBE Randomized Clinical Trial

Philippe Martin, PhD; Robyn Tamblyn, PhD; Andrea Benedetti, PhD; Sara Ahmed, PhD; Cara Tannenbaum, MD, MSc

IMPORTANCE High rates of inappropriate prescribing persist among older adults in many outpatient settings, increasing the risk of adverse drug events and drug-related hospitalizations.

OBJECTIVE To compare the effectiveness of a consumer-targeted, pharmacist-led educational intervention vs usual care on discontinuation of inappropriate medication among community-dwelling older adults.

DESIGN, SETTING, AND PARTICIPANTS A cluster randomized trial (D-PRESCRIBE [Developing Pharmacist-Led Research to Educate and Sensitize Community Residents to the Inappropriate Prescriptions Burden in the Elderly]) that recruited community pharmacies in Quebec, Canada, from February 2014 to September 2017, with follow-up until February 2018, and randomly allocated them to intervention or control groups. Patients included were adults aged 65 years and older who were prescribed 1 of 4 Beers Criteria medications (sedative-hypnotics, first-generation antihistamines, glyburide, or nonsteroidal anti-inflammatory drugs), recruited from 69 community pharmacies. Patients were screened and enrolled before randomization.

Editorial page 1867

Related articles pages 1933 and 1934

Video and Supplemental content

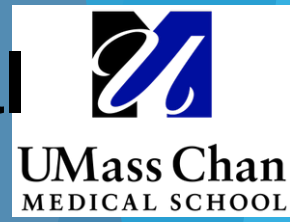
CME Quiz at jamanetwork.com/learning

JAMA. 2018;320(18):1889-1898

D-PRESCRIBE Randomized Trial

- A cluster-randomized trial (pharmacies in Quebec) involving mailings of educational deprescribing brochures to older adult patients and physicians.
- Among the target medication categories were sedative-hypnotics.
- Small trial: 219 in intervention group and 218 in control group
- Compared with usual care, the intervention resulted in greater discontinuation of prescriptions for inappropriate medications after 6 months. In the intervention group, **43%** no longer filled prescriptions for the targeted potentially inappropriate medications vs **12%** in the control group.

Inspiration for our D-PRESCRIBE-AD Randomized Trial



Article

CLINICAL TRIALS

Clinical Trials
2020, Vol. 17(4) 360–367
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DOI: 10.1177/1740774520928426
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SAGE

Practical challenges in the conduct of pragmatic trials embedded in health plans: Lessons of IMPACT-AFib, an FDA-Catalyst trial

Crystal J Garcia[1], Kevin Haynes[2], Sean D Pokorney[3], Nancy D Lin[4], Cheryl McMahill-Walraven[5], Vinit Nair[6], Lauren Parlett[2], David Martin[7], Hussein R Al-Khalidi[8], Debbe McCall[9], Christopher B Granger[3], Richard Platt[1] and Noelle M Cocoros[1]

Abstract

IMPACT-AFib was an 80,000-patient randomized clinical trial implemented by five US insurance companies (health plans) aimed at increasing the use of oral anticoagulants by individuals with atrial fibrillation who were at high risk of stroke and not on treatment. The underlying thesis was that patients could be change agents to initiate prescribing discussions with their providers. We tested the effect of mailing information to both patients and their providers. We used administrative medical claims and pharmacy dispensing data to identify eligible patients, to randomize them to an early or delayed intervention, and to assess clinical outcomes. The core data were analysis-ready datasets each site had created and curated for the FDA's Sentinel System, supplemented by updated "fresh" pharmacy and enrollment data to ensure eligibility at the time of intervention. Following mutually agreed upon procedures, sites linked to additional internal source data to implement the intervention—educational information mailed to patients and their providers in the early intervention arm, and to providers of patients in the delayed intervention arm approximately 12 months later. The primary analysis compares the early intervention arm to the delayed intervention arm, prior to the delayed intervention being conducted (i.e. compares intervention to non-intervention). The endpoints of interest were evidence of initiation of anticoagulation (primary) as well as clinical endpoints, including stroke and hospitalization for bleeding. Major challenges, some unanticipated, identi-

Clinical Trials 2020; 17:360-367.

IMPACT-AFib

- Trial aimed at increasing the use of oral anticoagulants by individuals with atrial fibrillation at high risk of stroke and not on treatment.
- Implemented across five U.S. health plans.
- Took advantage of the FDA Sentinel Data Infrastructure.
- Underlying thesis: patients could be change agents to initiate prescribing discussions with their providers.
- Trial tested the effect of mailing information to both patients and their providers.
- 80,000 patients were randomized.
- Endpoint of primary interest: evidence of initiation of anticoagulation.
- Focus of IMPACT-AFib was on prescribing rather than deprescribing.

D-PRESCRIBE-AD Aim

To assess the impact of a patient/caregiver educational intervention on **potentially inappropriate prescribing to Alzheimer's Disease or ADRD patients**

- Potentially inappropriate prescribing includes the use of medications that may no longer be necessary or that may increase the risk of harm.
- For the purpose of our study, potentially inappropriate prescribing includes antipsychotics, sedative-hypnotics, and strong anticholinergics.

D-PRESCRIBE-AD Design

Prospective, randomized design:

- Two national health plans - HealthCore/Anthem and Humana
- Target drug classes: antipsychotics, sedative-hypnotics, and strong anticholinergics
- Three arms: patient/caregiver + provider, provider only, or usual care
- Randomization at the individual patient level
- **3,750** to be randomized to each of the 3 arms of the trial (11,250 subjects)
- No prescriber will have more than one patient enrolled in the trial
- Waiver of informed consent

Study population

Inclusion criteria

- ≥50 years of age as of cohort entry date AND
- Diagnosis of AD/ADRD based on a modified list of Chronic Conditions Data Warehouse codes and an algorithm published by Moura and colleagues, or treatment with a pharmacologic therapy used for AD within the past 365 days prior to or on study entry date AND
- Evidence of inappropriate prescribing within past six months prior to cohort entry date AND
- Continuous medical and pharmacy coverage at least a year prior to cohort entry date.

Exclusion criteria

- Residing in a nursing home or skilled nursing facility or receiving palliative care.

Moura LMVR, et al. Identifying Medicare beneficiaries with dementia. J Am Geriatr Soc. 2021 Aug;69(8):2240-2251

Outcomes

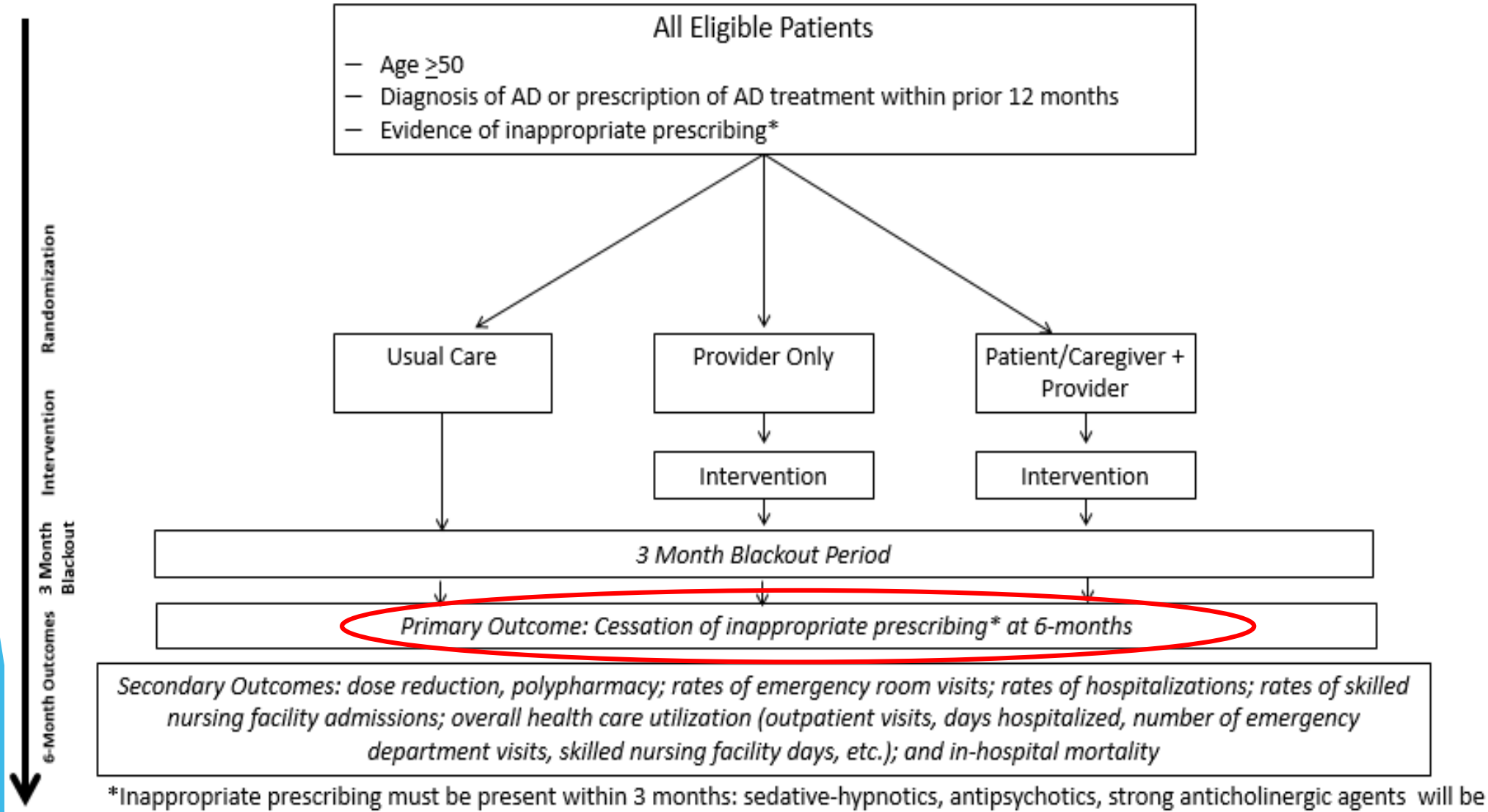
Primary Outcome

- The cessation of inappropriate prescribing

Secondary outcomes

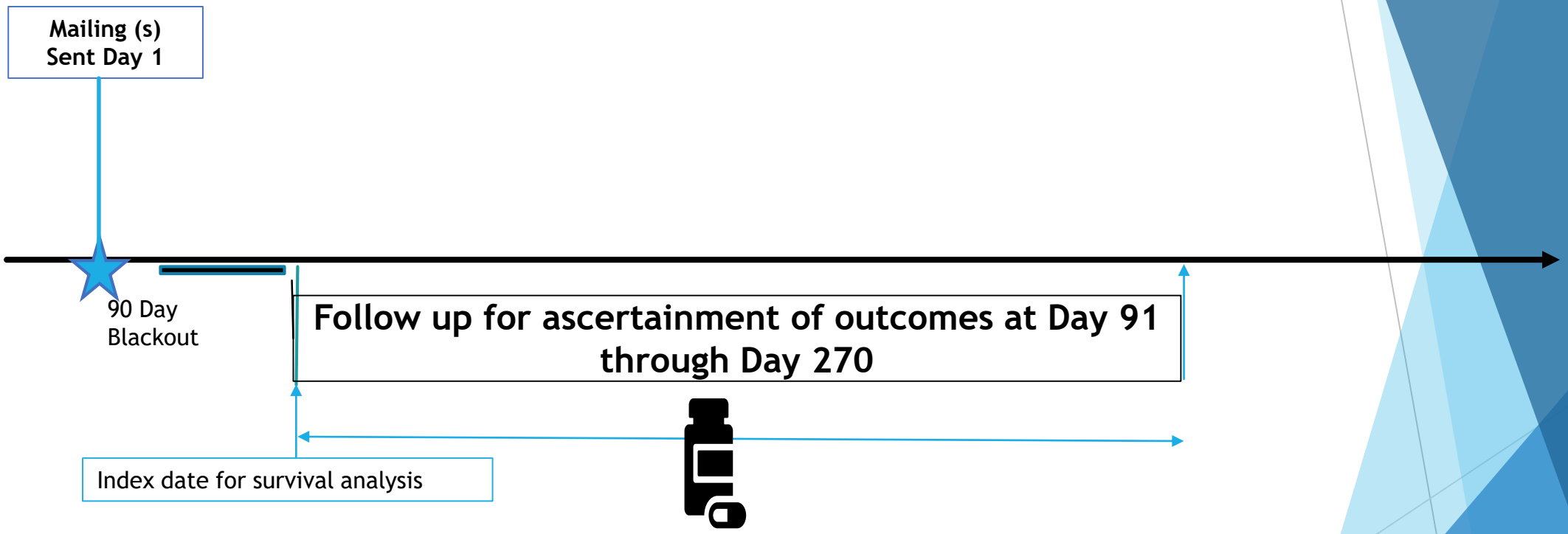
- Dose reduction of the selected inappropriate medication
- Prevalence of polypharmacy (>5 prescription medications)
- Rates of emergency room visits
- Rates of hospitalizations
- Rates of non-acute institutional stays (e.g., skilled nursing facilities)
- Overall health care utilization (number of outpatient visits, days hospitalized, emergency department visits, and non-acute institutional days)
- In-hospital all-cause mortality

D-PRESCRIBE-AD RCT Design



*Inappropriate prescribing must be present within 3 months: sedative-hypnotics, antipsychotics, strong anticholinergic agents will be targeted in this study.

D-PRESCRIBE-AD RCT



Primary Outcome: Cessation of inappropriate prescribing at the end of 6 months (Day 91 – Day 270)

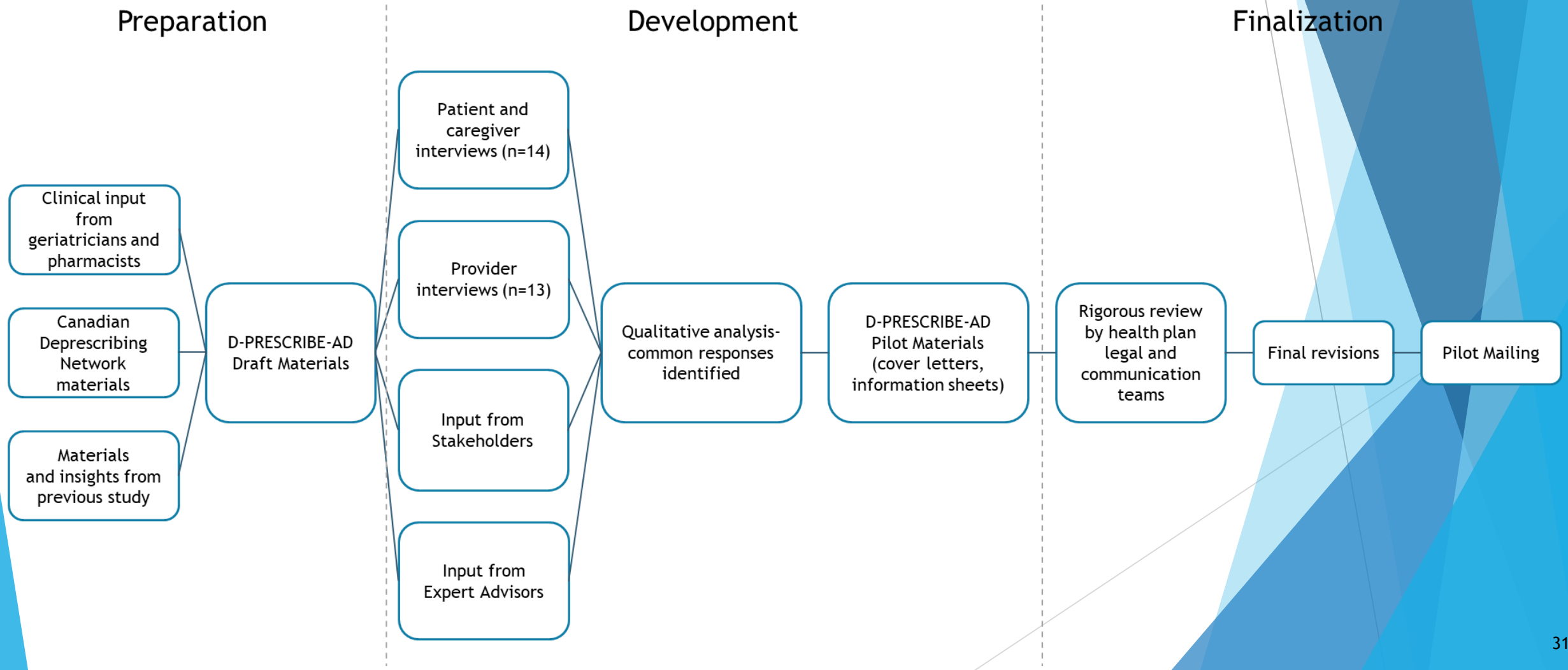
D-PRESCRIBE-AD: Intervention Arms

- Provider only: only providers will be mailed letters and educational materials
- Patient/Caregiver + Provider: patients and providers will be mailed letters and educational materials

D-PRESCRIBE-AD: Usual Care

- No intervention
- Data collection and outcome assessments will be identical to the intervention arms

Intervention Development



Principles of Patient/Caregiver and Provider material development

- Materials must be:
  - concise
  - understandable
  - specific to the patient
  - with clear suggested actions

- Guided by the Deprescribing.org approach used in the creation of educational materials

Patient/Caregiver & Provider Arm

- Patient/caregivers receive:
  - Letter referencing a specific drug
  - Information sheet referencing the drug class
  - Main messages: this drug may be inappropriate for you; talk to your provider

- Providers receive:
  - Letter referencing a specific patient and drug
  - Algorithm to guide decision making about deprescribing
  - Patient information sheet
  - Sample “Tapering Plan” to help patients track dose reductions
  - Main messages: this drug may be inappropriate for this patient; consider deprescribing

- Both sets of materials reference a “KnowMyMeds” **website where additional information and resources will be available**

Provider Only Arm

- Patients do not receive any materials
- Providers receive:
  - Letter referencing a specific patient and drug
  - Algorithm to guide decision making about deprescribing
  - Patient information sheet
  - Sample “Tapering Plan” to help patients track dose reductions
  - Main messages: this drug may be inappropriate for this patient; consider deprescribing

[Send date – In Month Day, YYYY format]

[ANTHEM LOGO]

<Member First … manag… medications is imp… our…

Drug name and warning

Recommendation to talk to doctor

It's necessary to talk with your … rly about medications to ensure they are still right for you. To help you do that, we've included information about **lorazepam (Ativan®)**, which you are currently taking, so you can discuss this medication at your next doctor's visit.

Lorazepam is sometimes prescribed to treat anxiety or sleep problems. Using this medication for a short time may be appropriate. However, taking it for a long time may lead t… harmful side effects such as falls and fractures, dizzines… memory problems, or daytime fatigue. These side ef… be more common as you age or if you're taking t… with other drugs. **Ask your doctor if lorazep… still the best treatment for you.**

Recommendation to talk to share with caregiver

Important: **Do not stop or change this medica… without talking to your doctor.**

Warning to not stop prematurely

Anthem and HealthCore, Inc. have partnered to bring you this information. If you do not wish to receive any more materials like this, please email **dnc@healthcore.com** or call **844-203-3796**.

— Your <Anthem> service team

Share this information

Show this letter and the enclosed information sheet to your doctor at your next visit.

If you have someone who helps you with your medications, share these materials with them, too.

For more information

Phone:
833-739-1374 (toll free)

Email:
knowmymeds@umassmed.edu

Website:
knowmymeds.org

This effort is a collaboration between Anthem Blue Cross and researchers at the UMass Chan Medical School, funded by the National Institute on Aging to increase awareness in patients, caregivers, and clinicians about improving medication safety.

* HealthCore, Inc. is a wholly owned subsidiary of Anthem, Inc. that conducts research for health plans, life sciences, and government entities.

Are your medications still right for you?

As life changes, your medication needs may change as well. Medications that were once good for you may not be the best choice for you today.

Specific drugs

The **medications** in this box are sometimes used **for anxiety or sleep:**

- Alprazolam (Xanax®)
- Clonazepam (Klonopin®)
- Diazepam (Valium®)
- Eszopiclone (Lunesta®)
- Lorazepam (Ativan®)
- Temazepam (Restoril®)
- Zolpidem (Ambien®)

Side effects

These medications can cause **side effects** including:

- falls and fractures
- dizziness
- worsened memory problems
- daytime fatigue
- dependence

As people age, they are more likely to experience side effects. Because of this, experts recommend that people on these medications talk to their healthcare provider about whether they should continue, reduce, or stop these medications.

Recommendations including talk to doctor

Do not stop this medication before talking with your doctor. These medications must be reduced slowly. They should not be stopped suddenly. Stopping too quickly may cause problems.

Your doctor may suggest alternative medications or lifestyle changes that may help you.

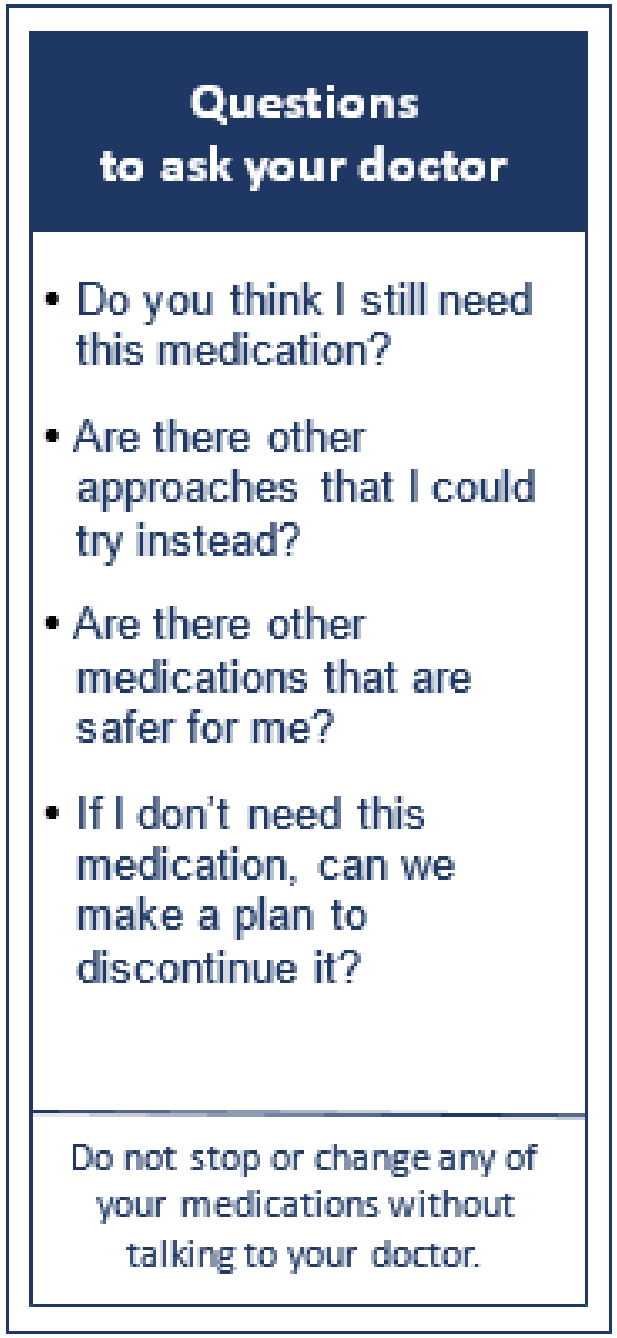
What should you do?

- If someone helps you with your medications at home, share this information with them.
- **Bring this information sheet to your doctor.**
- Ask your doctor whether reducing or stopping this medication is the right choice for you.

This information sheet was produced by clinicians and researchers at the UMass Chan Medical School, funded by the National Institute on Aging (4R33AG069794-02) and adapted from materials developed by B. Farrell of the Bruyère Research Institute and C. Tannenbaum of the Université de Montréal, accessible at Deprescribing.org.

UMass Chan MEDICAL SCHOOL

Pocket Card


Questions
to ask your doctor
• Do you think I still need this medication?
• Are there other approaches that I could try instead?
• Are there other medications that are safer for me?
• If I don't need this medication, can we make a plan to discontinue it?
Do not stop or change any of your medications without talking to your doctor.

[Health Plan Logo]

Return address

[Date]
[Clinician Name]
[Clinician Address]
[Clinician City, St, Zip]

Suggested Actions:

- ✓ Review enclosed information
- ✓ Discuss with your patient and make any warranted changes in therapy

Dear [Clinician Name],

This letter contains information that may assist you in caring for your patients. According to our records a patient of yours may be taking [medication name].

Sedative-hypnotic medications often have side effects including falls and fractu[illegible]izziness, memory problems, and daytime fatigue. Experts recommend that **these pote[illegible]ppropriate medications are best avoided by older adults** in most circumstances.[1]

We have mailed a patient information sheet on sedative-hypnotic[illegible]wing patient (a copy is enclosed).

Name: **[Patient Name]**

Date of Birth: **[Patient Date of Birth]**

Medication: **[Patient Medication]**

Date Initiated: **[Date Medication Initiated]**

Patient specific information

Reference to enclosures

We have enclosed an **algorithm** that may help you decide whether to reduce or discontinue this medication, and a **tapering guide** to help patients understand and track dose reductions. This, along with the patient information sheet, are available at [website].

We realize that our records may not reflect all clinically relevant information or may be incomplete. If you have questions or concerns about this letter, please contact us at [health plan email] or [xxx-xxx-xxxx].

Sincerely,

Chief Medical Officer
Health Plan

UMass Chan MEDICAL SCHOOL

Medication Tapering Plan

Talk to your doctor, nurse or pharmacist before making any changes to your medication.

Patient Name: _____ Doctor: _____ Medication:_____

Tapering Schedule							
WEEK OF:	SU	MO	TU	WE	TH	FR	SA
1. __/__							
2. __/__							
3. __/__							
4. __/__							
5. __/__							
6. __/__							
7. __/__							
8. __/__							
9. __/__							
10. __/__							
11. __/__							
12. __/__							
13. __/__							

UMass Chan MEDICAL SCHOOL

Sedative/Hypnotic Deprescribing Algorithm

Why is patient taking a sedative/hypnotic?

If unsure, find out if history of anxiety, past psychiatric consult, whether may have been started in hospital for sleep, or for grief reaction.

- Insomnia on its own OR insomnia where underlying comorbidities managed
  For those ≥ 65 years of age: taking sedative/hypnotic regardless of duration (avoid as first therapy in older people)
  For those 18-64 years of age: taking sedative/hypnotic > 4 weeks

- Other sleeping disorders (e.g., restless legs)
- Unmanaged anxiety, depression, physical or mental condition t
  causing or aggravating insomnia
- Sedative/hypnotic effective specifically for anx ety
- Alcohol withdrawal

Engage patients

- Discuss potential risks, benefits, withdrawal plan, symptoms and duration

Continue sedative/hypnotic

- Minimize use of drugs that worsen insomnia (e.g., ca e, alcohol etc.)
- Treat underlying condition
- Consider consulting psychologist or psychiatrist or sleep specialist
- Use lowest possible effective dose

Recommend deprescribing

Taper and then stop sedative/hypnotic

- Taper slowly in collaboration with patient, for example ~25% every two weeks and, if possible, 12.5% reductions near end and/or planned drug-free days

Monitor every 1-2 weeks for duration of tapering

Expected benefits:
- May improve alertness, cognition, daytime sedation and reduce falls

Withdrawal symptoms:
- Insomnia, anxiety, irritability, sweating, gastrointestinal symptoms (all usually mild and last for days to a few weeks)

- Use non-drug approaches to manage insomnia

If symptoms relapse:
Consider
- Maintaining current sedative/hypnotic dose for 1-2 weeks, then continue taper at slow rate

Alternate drugs
- Other medications have been used to manage insomnia. Assessment of their safety and effectiveness is beyond the scope of this algorithm.

Outcome measurement

Primary outcome

- **Discontinuation of the potentially inappropriate prescription**: absence of any dispensing of the targeted medication from day 91 to day 270 during the 9 month-period following the mailing.
- Measured as **hazard ratio**: relative hazard of time to dispensing of the inappropriate medication in the intervention vs control group.

Outcome measurement

Secondary outcomes

- Dose reduction of the targeted inappropriate medication after 6 months defined as more than a 50% reduction in dose of the targeted medication
- Prevalence of polypharmacy (defined as >5 active prescriptions for different prescription medications)
- Rates of emergency room visits; rates of hospitalizations; rates of non-acute institutional stays (e.g., skilled nursing facilities); overall health care utilization (number of outpatient visits, days hospitalized, emergency department visits, and non- acute institutional days).
- In-hospital all-cause mortality

Data management

Electronic data are accessed, maintained, and protected, as part of a “distributed system.”

- Data remain in their existing secure environments
- Health plans maintain physical and operational control over their electronic health data behind their institutional firewalls
- Health plans transform their data into the Sentinel Common Data Model, execute standardized analytic queries, then share the output of queries with the Operations Center via a secure network portal

This system protects the privacy and confidentiality of individual-level health information and is preferred by participating health plans over a centralized data repository approach.

D-PRESCRIBE-AD: Summary

What we hope to achieve:

(1) To demonstrate the feasibility of population-based outreach to AD/ADRD patients at high risk for potentially inappropriate prescribing and their family caregivers;

(2) To demonstrate the feasibility and effectiveness of a low-intensity educational intervention focused on reducing potentially inappropriate prescribing, and involving AD/ADRD patients, their family caregivers, and healthcare providers; and

(3) To demonstrate the value and efficiency of capitalizing on routinely collected health plan data to identify high-risk populations and to assess primary and secondary outcomes.

D-PRESCRIBE-AD: Challenges, Uncertainties & Lingering Questions

(1) Who should receive the provider letter and materials? The primary care provider or the prescriber of the potentially inappropriate medication?

(2) We don't know if there is a caregiver and if there is a caregiver, we don't know how to identify them. And if there is a caregiver, will that person ever see the mailed materials?

(3) Does the patient really have AD/ADRD? Does it really matter? (N.B., the educational materials never allude to AD/ADRD)

Thank you!

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