Deprescribing

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I have no conflicts of interest.

I will not be discussing any off-label uses.

POLL:
Have you heard the term "deprescribe" before?

One of the first duties of the physician is to educate the masses not to take medicine.

Far too large a section of the treatment of disease is today controlled by the big manufacturing pharmacists, who have enslaved us in a plausible pseudo-science.

Questions to Address

What is deprescribing?

What's so difficult about it?

Why should we care?

What can we all do about it?

Mrs M's Trip To the Doctor

79 year-old woman
Some shortness of breath from COPD
Fasting blood sugar 147
Osteoporosis
Blood pressure 142/97
Knee pain on walking
No medications

Mrs M's Trip From the Doctor

Based on published clinical practice guidelines, **how many medications** would Mrs B start?

How much would these medications **cost**?

How many **potentially harmful interactions** are recognized between them?

Mrs M's Trip From the Doctor

Based on published clinical practice guidelines, **how many medications** would Mrs B start? **14**

How much would these medications **cost**? **$406** out of pocket

How many **potentially harmful interactions** are recognized between them? At least **12**

Boyd, CM et al. Clinical Practice Guidelines and Quality of Care for Older Patients with Multiple Comorbid Diseases. *JAMA* 2005: 294(6).

Mrs Q's Trip To the Doctor

81 year-old woman

Taking 15 medications; complains of dry mouth, fatigue, GI upset related to them

Started exercise program two years ago, changed diet

Very occasional shortness of breath, does not bother her

Rare knee pain after walking over two miles

Was depressed, mood is good now

Fasting blood sugar 102

Osteoporosis - stable

Blood pressure 108/78

Mrs Q's Trip From the Doctor

Based on published clinical practice guidelines, how many medications would Mrs B **stop**?

Treatment Guidelines

Tell you how to start treatments.

Almost never say when to stop.

We have almost no guidance about stopping medications.

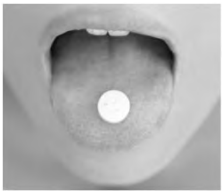
Deprescribing is:
the systematic consideration of how to do good by stopping medications.

This is much more difficult than it sounds.

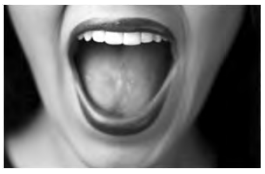
What do we really know about our treatments?

effects of pills

yes pill



no pill

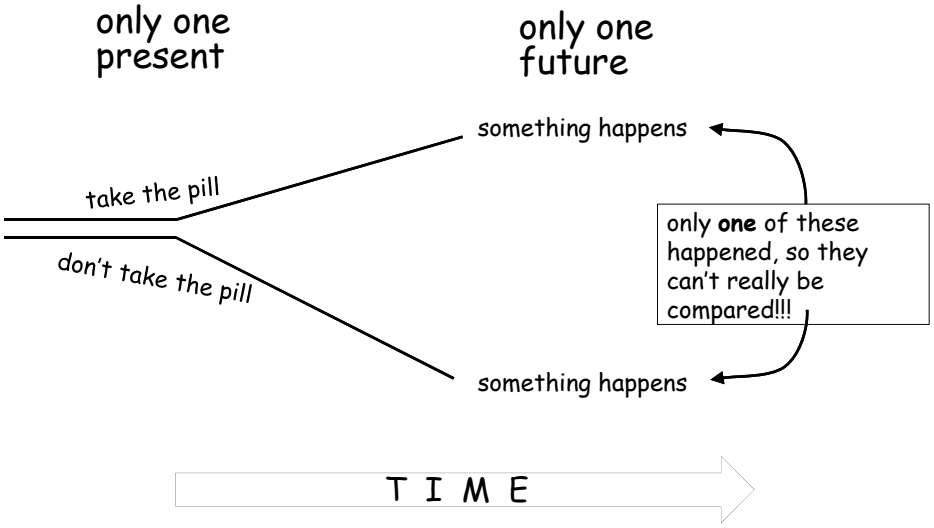


effects a,b,c

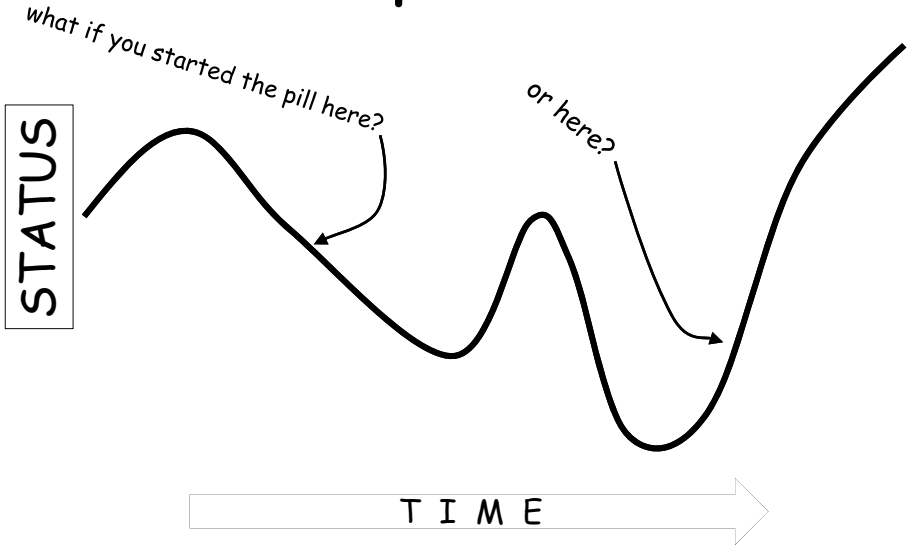
which is better?

effects x,y,z

the problem of **time**



the problem of **fluctuating experience**



the problem of bias, part 1

You Are Biased!

placebos to the rescue!

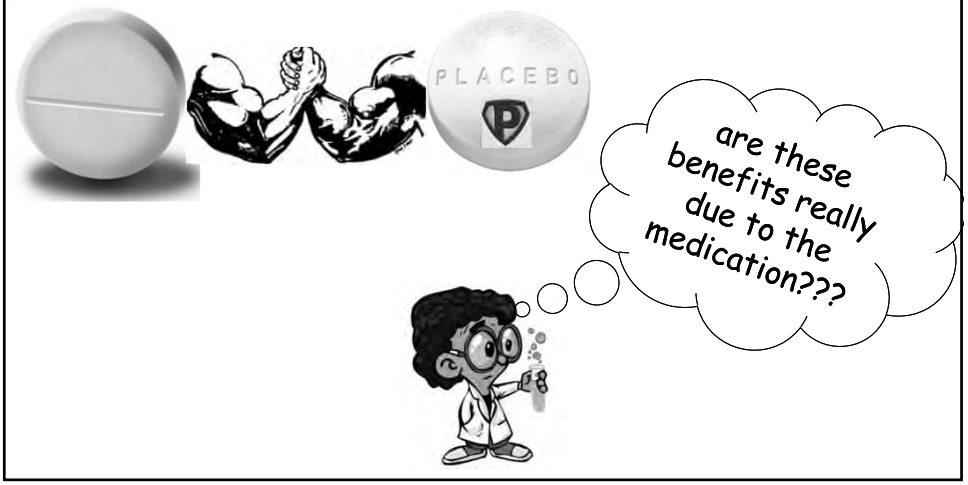
average effects a,b,c

which is better?

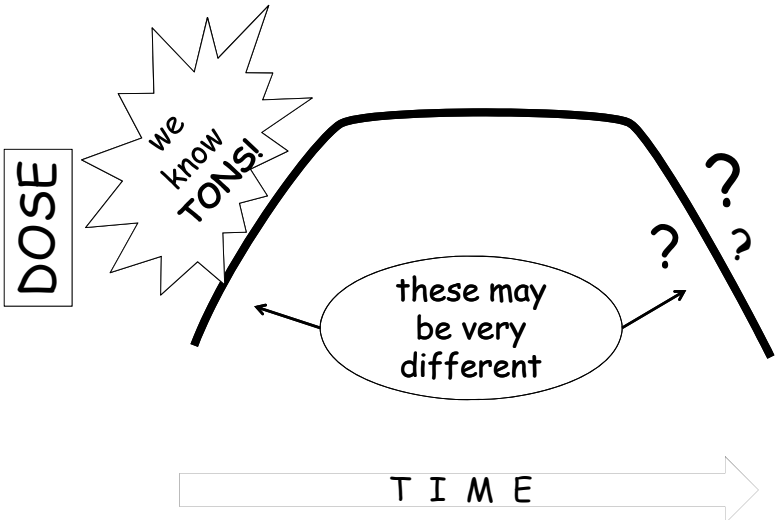
average effects x,y,z

the problem with placebos

they work TOO WELL!



effects of starting, continuing, and stopping pills



the problem of bias, part 2

You Are Biased!

Therefore

It's much harder to **stop** than to **start** a pill

People end up taking the **same pills or types of pills <u>f o r e v e r</u>**

Key Challenges in Knowing What Medications Continue to Do

1. Logical fallacies
2. Placebo response
3. Optimism bias
4. Withdrawal / Acclimation
5. Deteriorating conditions
6. Contextual factors
7. Lack of evidence

1. Logical Fallacies

Something happened after something else, so it is caused by it (*post hoc* fallacy).

→*We started the pill, and you got better.*

→*We stopped the pill, and you got worse.*

We know what **might** have been.

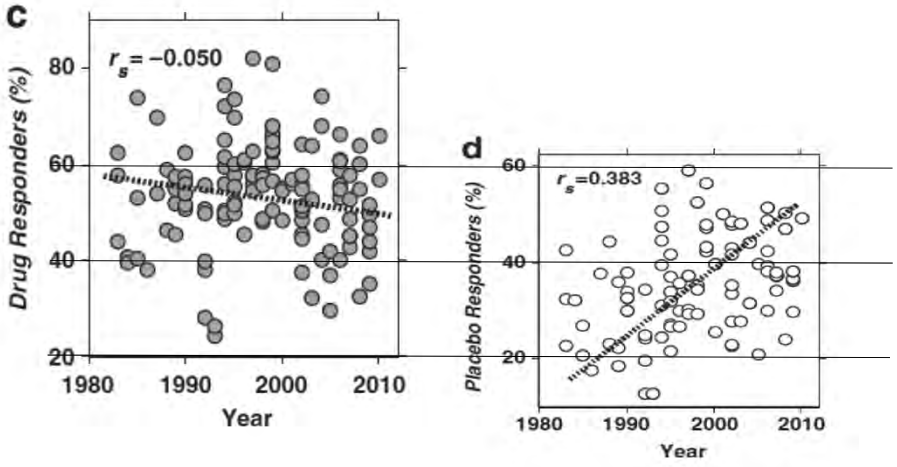
→*If you had not started this pill, you would be worse.*

→*If you had not stayed on this pill, you would be worse.*

You can't go back to Kansas.

→*If you stop taking this pill, it might never work again.*

2. Placebos Have Big Effects



Without a placebo control, it is illogical to attribute a drug effect to the drug.

3. Pharmaco-Optimism

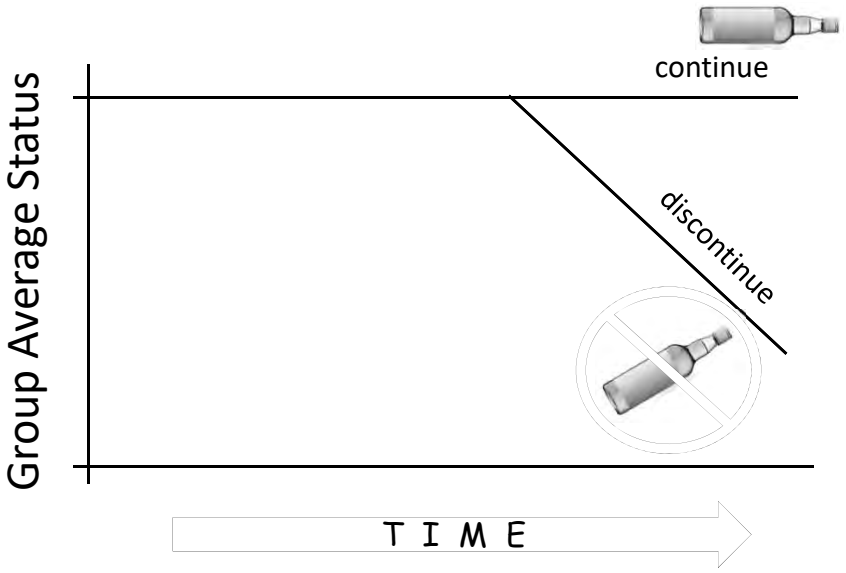
Intention translates into benefit.

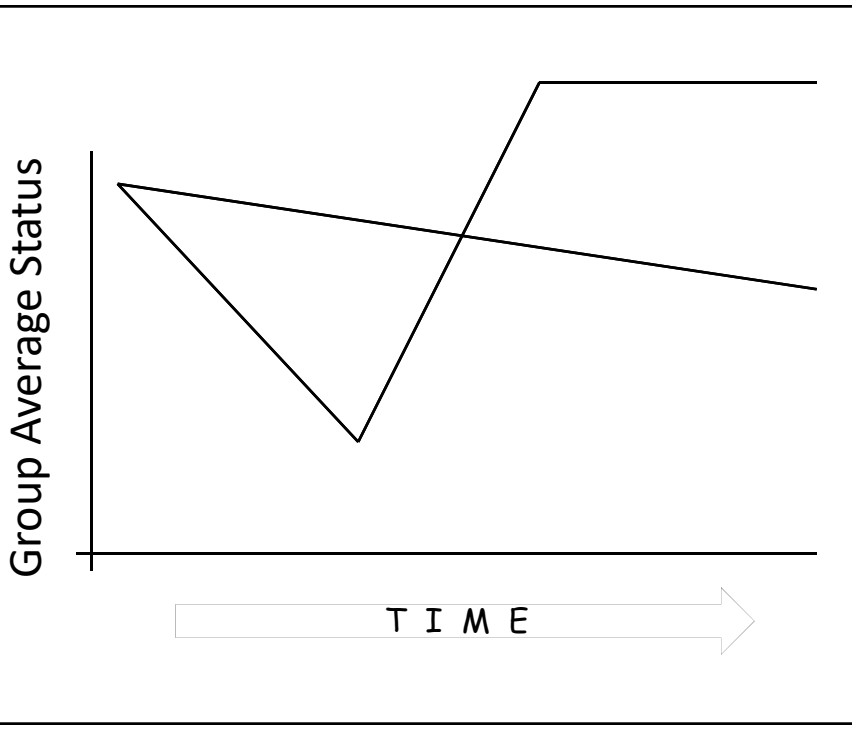
→*I'm trying hard to find the right pills at the right doses, so they must be working.*

I have a hammer. All problems are nails.

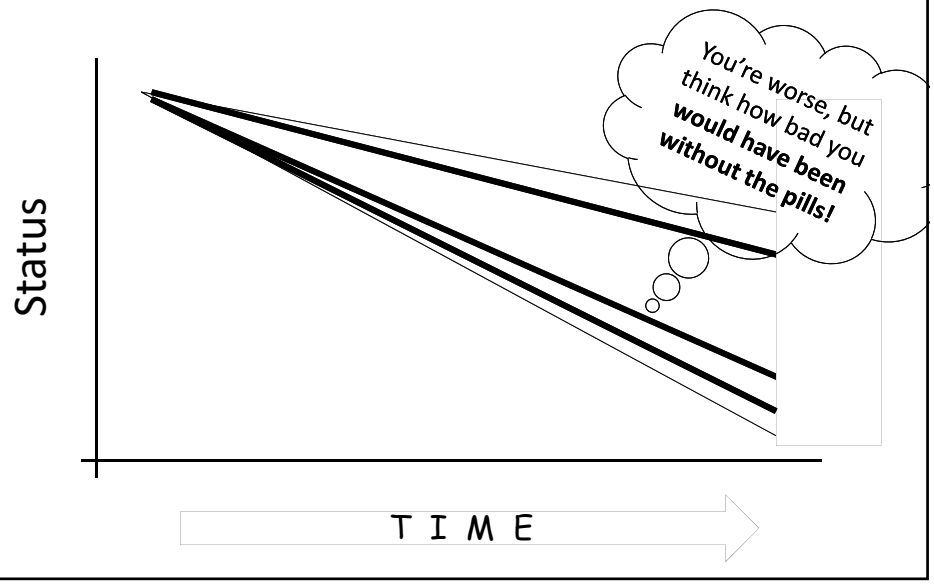
→*There is a pill that will fix your problems. We just need to keep trying.*

4. “If you stop, you’ll feel worse”





5. Deteriorating Conditions



6. Contextual Factors

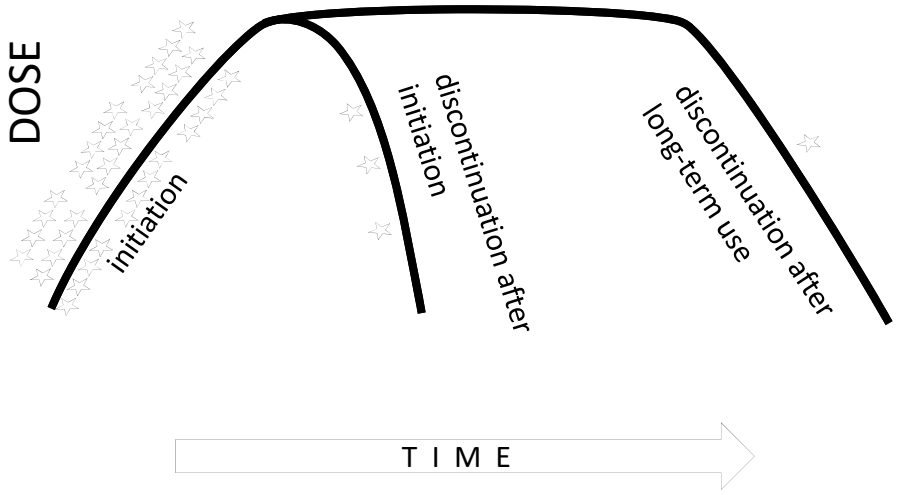
Medication changes happen **during** other, usually negative, events

"He stopped the pill and he got worse."

=

"He went to the hospital. He stopped the pill in the hospital. After the hospital he was worse."

7. The knowledge base is terrible



Therefore

We don't **know** if any one person, or people in general, would be better off having continued or stopped their medications.

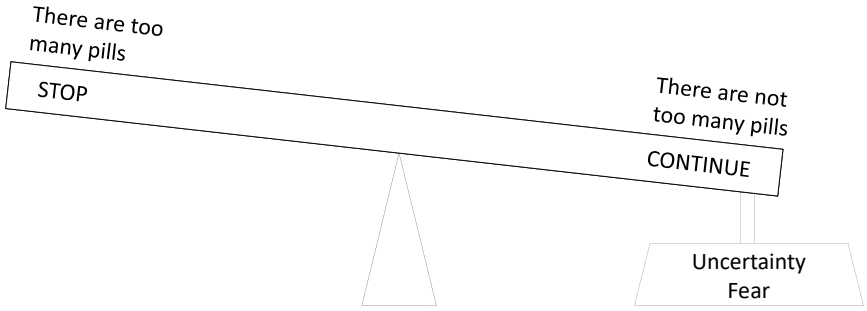
?

When in doubt, we …

ADD PILLS

or

STAY THE COURSE



Is this really a problem?

15% of older adults in general practice report an adverse drug event during the prior 6 months

25% of older adults are hospitalized for medication-related problems during a five year period

About 30% of hospital admissions for older adults are medication-related; 75% of these are potentially preventable

Polypharmacy and Adverse Drug Events

About 30% of **all** hospitalizations in adults 65+ years old are due to ADEs

Rehospitalization rates are about 2-3 times higher for those on 8+ medications compared to those on 1-2

Budnitz DS et al. Emergency hospitalizations for adverse drug events in older Americans. *N. Engl. J. Med.*365,2002–2012 (2011).

Fabbietti P et al. Impact of potentially inappropriate medications and polypharmacy on 3-month readmission among older patients discharged from acute care hospital: a prospective study. *Aging Clin Exp Res* 2017.

Is this really a problem?

About 40% of people in residential care or the community are prescribed potentially inappropriate medications

The single most important predictor for adverse drug events is the **number of drugs** one is taking

Number of drugs	Risk of ADE per year
2	13%
4	38%
7+	82%

Patterson, S. M. et al. Interventions to Improve the Appropriate Use of Polypharmacy for Older People. *Cochrane Database of Systematic Reviews*(John Wiley & Sons, Ltd, 2012).

Is this really a problem?

Average number of medications:
- Community-dwelling older adults: **3**
- Residents of care facilities: **7**
- Hospitalized older adults: **9**

During hospitalization, 2-3 drugs are stopped, **but 3-4 are added**

Polypharmacy triples the risk of delirium during hospitalization

Known Medication Risks

Some medications are proven to increase risk of serious harms

e.g. antipsychotics for dementia: 1.6 times increased risk of DEATH

About 25% of people with dementia in nursing homes are prescribed an antipsychotic

WARNING: Increased Mortality in Elderly Patients With Dementia-Related Psychosis

Elderly patients with dementia-related psychosis treated with antipsychotic drugs are at an increased risk of death. Analyses of 17 placebo-controlled trials (modal duration* of 10 weeks), largely in patients taking atypical antipsychotic drugs, revealed a **risk of death in drug-treated patients of between 1.6 to 1.7** times the risk of death in placebo-treated patients. Over the course of a typical 10-week controlled trial, the rate of death in drug-treated patients was about 4.5%, compared to a rate of about 2.6% in the placebo group.

Although the causes of death were varied, most of the deaths appeared to be either cardiovascular (e.g., heart failure, sudden death) or infections (e.g., pneumonia) in nature. Observational studies suggest that, similar to atypical antipsychotic drugs, treatment with conventional antipsychotic drugs may increase mortality.

News Flash!

Miraculous Medical Breakthrough Reduces Risk of Death by 38% in Group of Dementia Patients

What do we learn when we study deprescribing scientifically?

Lots of Medications Are Used Without a Clear Reason

21% of all medications prescribed are off-label

Three-quarters of off-label use has no clear scientific basis

The only reason for using such pills is if they provide an actual benefit to the patient

(Radley et al, *Archives if Internal Medicine*, 2006)

Strategies for discontinuation of proton pump inhibitors: a systematic review

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Abstract

Purpose. Proton pump inhibitors (PPIs) are considered to be overprescribed. Consensus on how to attempt discontinuation is, however, lacking. We therefore conducted a systematic review of clinical studies on discontinuation of PPIs.

Methods. Systematic review based on clinical studies investigating discontinuation strategies and discontinuation rates for users of antisecretory medication judged eligible for withdrawal. The databases Medline, Embase and Cochrane Library were searched to December 2013 using the terms antisecretory, anti-ulcer, PPI, acid suppressant, discontinuation, step-down, step down, cessation, tapering, withdrawal and withhold. Search terms were used either singularly or in combination. Papers written in English or Scandinavian were included. Concurrent hand searching was undertaken to pursue references of references. The website ClinicalTrials.gov was searched for unpublished results and ongoing studies. A total of 371 abstracts were scrutinized to determine relevancy.

Results. The thorough search resulted in six clinical studies on strategies for discontinuation of PPIs. All discontinuation regimens used in the studies differed, and several interventions have been tested in order to decrease use of PPIs. Discontinuations were reported across all studies ranging from 14% to 64% without deteriorating symptom control. Tapering seems to be a more effective discontinuation strategy than abrupt discontinuation.

Conclusion. Discontinuation of PPIs is feasible in a clinical setting, and a substantial number of the patients treated without a clear indication can safely reduce or discontinue treatment. Tapering seems to be the most effective way of doing this.

Expert Rev Clin Pharmacol. 2016 Sep 15. [Epub ahead of print]

What are the dangers of biological therapy discontinuation or dose reduction strategies when treating rheumatoid arthritis?

Atzeni F[1], Benucci M[2], Talotta R[1], Masala IF[3], Sarzi-Puttini P[1], Govoni M[4].

Author information

Abstract

INTRODUCTION: Treatment with biological DMARDs (bDMARDs) has meant that remission or low disease activity (LDA) is now a realistic goal for patients with rheumatoid arthritis (RA). However, as in the case of all long-term therapies, potential side-effects give rise to concern. The main reasons for withdrawing or tapering bDMARDs are safety and the sustainability of national healthcare systems. Given these data our review has been focused on important question is whether conventional, including steroids, or bDMARDs can be reduced or even stopped in patients with stable established RA or early RA.

AREAS COVERED: The studies included in the evaluation had to be RCTs, observational studies, systematic reviews evaluating the withdrawing or tapering bDMARDs in RA patients who who have been on long-term treatment and have achieved remission or LDA. A search was made of the MEDLINE and EMBASE databases from 1980 to May 2016. Expert Commentary: There is curently no standardised way of identifying the patients for whom reducing bDMARD therapy is appropriate. Clinical experience and data from de-escalation studies suggest that patients with RA in sustained remission are the best target population for studying drug-tapering regimens, and that LDA should not be considered an indication for bDMARD de-escalation because it indicates a persistent amount of inflammation.

A Randomized Placebo-Controlled Discontinuation Study of Cholinesterase Inhibitors in Institutionalized Patients With Moderate to Severe Alzheimer Disease

Nathan Herrmann MD[a,b,c], Jordana O'Regan MSc[d], Myuri Ruthirakuhan MSc[b], Alexander Kiss PhD[b], Goran Eryavec MD[c], Evelyn Williams MD[e], Krista L. Lanctôt PhD[a,b,d,f,*]

Objectives: Cholinesterase inhibitors (ChEIs) offer modest benefits in Alzheimer disease (AD), which must be balanced against risks. Relatively few data delineate the benefits and risks of long-term ChEI administration in institutionalized patients with advanced AD. This study investigated the effects of ChEI discontinuation in institutionalized patients with AD.

Design: Institutionalized patients with moderate to severe AD (standardized Mini- Mental Status Examination ≤15) and treated with a ChEI for ≥2 years were randomized, double-blind, to ChEI continuation or placebo, with a 2-week tapering phase, for 8-weeks.

Measurements: The primary outcome of this pilot study was change on the Clinician's Global Impression of Change (CGI-C) scale. Secondary outcomes included safety, efficacy, and tolerability. Baseline (BL) predictors of clinical deterioration were also determined.

Results: Forty patients (mean ± standard deviation age = 89.3 ± 3.5 years, standardized Mini-Mental Status Examination = 8.1 ± 5.2, Neuropsychiatric Inventory–Nursing Home version total score = 21.1 ± 15.9, 80% male) were randomized to ChEI continuation (n = 21) or placebo (n = 19). There was no significant difference in clinical worsening in the ChEI continuation (28.6%) and placebo groups (36.8%) on CGI-C (odds ratio for worsening 1.58, 95% confidence interval .38–6.55, $P = .53$). The occurrence of adverse events was similar in both groups. There were no significant differences in any of the secondary outcome measures. In the placebo group, BL hallucinations predicted CGI-C worsening [$F(1,17) = 6.4$, $P = .02$], and there was a trend for BL delusions to predict CGI-C worsening [$F(1,15) = 3.5$, $P = .08$].

Conclusions: These results suggest that ChEI discontinuation is safe and well tolerated in the majority of institutionalized patients with moderate to severe AD. When discontinuing ChEI, the presence of hallucinations and delusions may predict clinical deterioration, suggesting the need for increased caution.

CLINICAL PRACTICE GUIDELINES

Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia

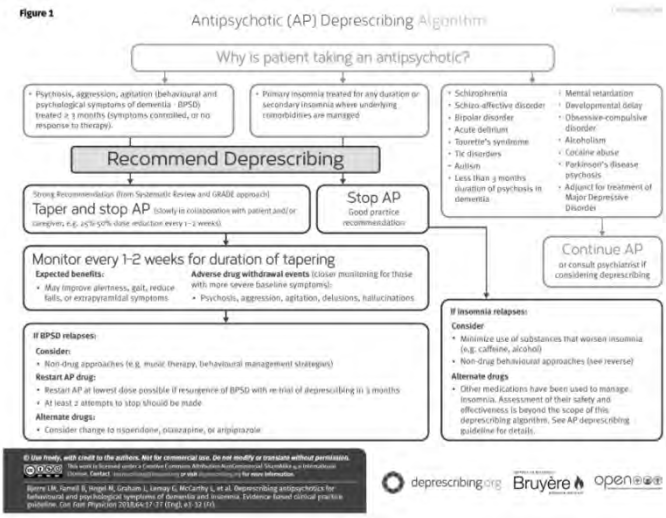
Evidence-based clinical practice guideline

"Antipsychotics are associated with harms and can be safely tapered."

- Antipsychotics have the potential for considerable harm, including an increased overall risk of death, cerebrovascular adverse events, extrapyramidal symptoms, gait disturbances and falls, somnolence, edema, urinary tract infections, weight gain, and diabetes; the risk of harm is higher with prolonged use and in the elderly.
- A systematic review of antipsychotic deprescribing (dose reduction or discontinuation) in patients taking them to control BPSD failed to demonstrate negative outcomes resulting from deprescribing.

Bjerre et al, Deprescribing antipsychotics for behavioral and psychological symptoms of dementia and insomnia, *Canadian Family Physician*, January 2017.

Deprescribing Antipsychotics



Bjerre et al, Deprescribing antipsychotics for behavioral and psychological symptoms of dementia and insomnia, *Canadian Family Physician*, January 2017

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Discontinuing Psychiatric Medications: A Survey of Long-Term Users

Laysha Ostrow, Ph.D., M.P.P., Lauren Jessell, L.M.S.W., Manton Hurd, M.S.N., P.M.H.N.P., Sabrina M. Darrow, Ph.D., David Cohen, Ph.D., M.S.W.

Objective: Individuals undergoing long-term psychiatric treatment frequently choose to stop taking psychiatric medications. To enhance service user choice and prevent undesirable outcomes, this first U.S. survey of a large sample of longer-term users sought to increase knowledge about users' experience of medication discontinuation.

Methods: A sample of 250 U.S. adults with a diagnosis of serious mental illness and a recent goal to stop up to two prescribed psychiatric medications, which they had taken for at least nine months, completed a web-based survey about experiences, strategies, and supports during discontinuation.

Results: About half (54%) met their goal of completely discontinuing one or more medications; 46% reported another outcome (use was reduced, use increased, or use stayed the same). Concerns about medications' effects (for example, long-term effects and side effects) prompted the decision to discontinue for 74% of respondents. They used various strategies to cope with withdrawal symptoms, which 54% rated as severe. Self-education and contact with friends and with others who had discontinued or reduced medications were most frequently cited as helpful. Although more than half rated the initial medication decision with prescribers as largely collaborative, only 45% rated prescribers as helpful during discontinuation. Of respondents who completely discontinued, 82% were satisfied with their decision.

Conclusions: Discontinuing psychiatric medication appears to be a complicated and difficult process, although most respondents reported satisfaction with their decision. Future research should guide health care systems and providers to better support patient choice and self-determination regarding the use and discontinuation of psychiatric medication.

Psychiatric Services 2017; 68:1232–1238; doi: 10.1176/appi.ps.201700070

54% successfully discontinued; of these, 82% satisfied
54% experienced severe withdrawal effects → of many different types

A Prescription for "Deprescribing" in Psychiatry

Swapnil Gupta, M.B.B.S., M.D., and John Daniel Cahill, M.B.B.S., B.Med.Sci.

The term "deprescribing," initially coined in geriatric medicine, describes a process of pharmacologic regimen optimization through reduction or cessation of medications for which benefits no longer outweigh risks. Burgeoning rates of polypharmacy, growing appreciation of long-term adverse effects, and a focus on patient-centered practice present specific indications for deprescribing in psychiatry. A strong therapeutic alliance, appropriate timing, and consideration of the meaning of medication for the patient must accompany the following established elements: review of all medications, identification of medications that could be ceased or reduced, collaborative planning of the deprescribing regimen, and provision of review and support to the patient and caregivers. The authors discuss how deprescribing might be adapted for and implemented in psychiatry, identify potential barriers, and make recommendations for future directions.

Psychiatric Services 2016; 67:904–907; doi: 10.1176/appi.ps.201500359

What can we do?

1. Build an evidence base about discontinuation.
2. Develop guidelines about stopping medications.
3. Develop processes to determine if and how medications can be safely stopped for individuals.
4. Give ourselves and our patients **permission** to talk about discontinuation <u>at every visit.</u>

We should be as good at deprescribing as at prescribing.

Deprescribing **Guidelines**

At scheduled intervals, reconsider whether each medication is providing benefits that matter to the patient (or that produce some other good).

Structure stopping trials of those medications that do not have clear benefit.

Measure changes.

Challenge our logic about pills.

Really to know what works:

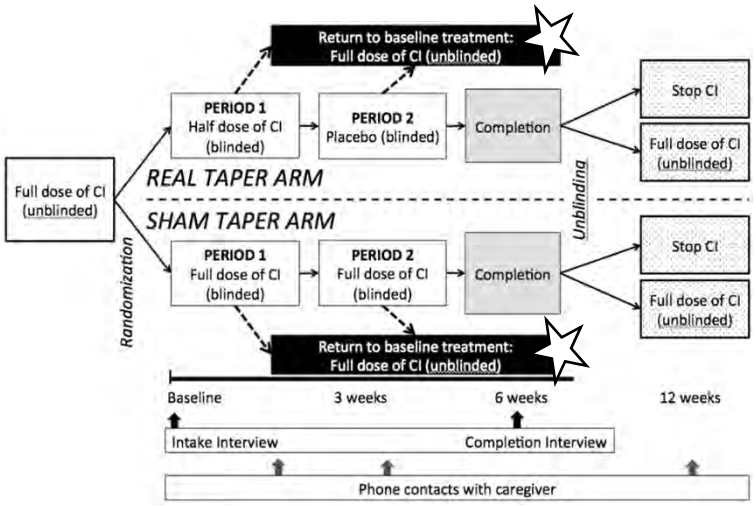
-Planned (not emergency) n-of-1 trials

-Blind administration of pill / placebo

-Measurement of something that matters to the patient

-Reasoned judgment about findings

Double-Blind Discontinuation Study in Dementia



Permission to Deprescribe

-For patients (and families) to ask:

"Why am I on so many pills?"

"What does each of them do?"

"How could I find out which pills I want to keep taking?"

-For us to feel safe and capable in stopping medications.

One of the first duties of the physician is to educate the masses not to take medicine.

Far too large a section of the treatment of disease is today controlled by the big manufacturing pharmacists, who have enslaved us in a plausible pseudo-science.

Mr A's Trip To the Doctor

87 year-old man

Referred for memory and cognitive problems

"I can't think straight."

8 medications: 5 psychotropics, 2 anticholinergics

Unclear mental health history

Medications had been added to treat symptoms and/or side effects

Mr A's Trip From the Doctor

Planned to taper slowly off two of the psychotropic medications, then to reassess

Called to check in one week later

Reframing "Stopping"

In the end, only three things matter:
how much you loved,
how gently you lived,
and how gracefully you let go of things not meant for you.

-FakeBuddhaQuotes.com

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