



US Deprescribing Research Network

ANNUAL REPORT 2021



Network Co-Principal Investigators: Michael Steinman, MD and Cynthia Boyd, MD, MPH

www.deprescribingresearch.org

Welcome

The US Deprescribing Research Network (USDeN) is a national research network devoted to supporting high-quality, high-impact research on deprescribing for older adults. Funded by the US National Institute on Aging since 2019, our work is organized around four key pillars:

- We support Investigator Development by providing opportunities for learning, collaboration, and community.
- We facilitate Stakeholder Engagement so that deprescribing research is responsive to the needs and perspectives of older adults and those who care for them.
- We provide Pilot and Grant Planning Awards to catalyze novel research and junior investigator career advancement related to deprescribing.
- We develop high-value Research Resources and Guidance to promote cutting-edge research and advance the field.



We welcome you to learn more and to join our community! Please visit us at deprescribingresearch.org to learn more and sign up for our listserv to keep abreast of upcoming events and resources.

Cynthia Boyd and Michael Steinman, Co-Principal Investigators, USDeN

Why is Deprescribing Important?

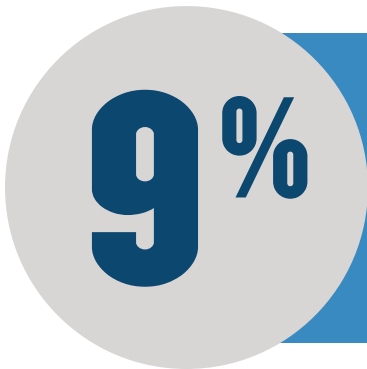


In the US, 67% of older adults take 5 or more medications.¹



In the US, more than 1 in 7 older adults are using medications with potential for major drug-drug interactions.

15%



Adverse drug reactions account for 1 of every 11 hospital admissions among older adults.¹



2 out of every 3 older adults want to reduce the number of medications they are taking.²

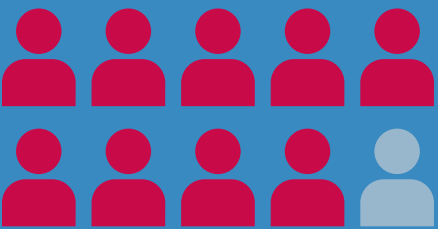
67%

What is Deprescribing?



Deprescribing refers to the thoughtful and systematic process of identifying problematic medications and reducing the dose or stopping these medications in a manner that is safe, effective, and helps people maximize their wellness and goals of care.

Deprescribing is not easy. Little is known about: how to best identify which medications are prime for deprescribing; how to safely and effectively stop them; and how to engage patients and families, clinicians, and the health system in this process in a seamless and patient-centered manner. These are the challenges our network seeks to address.



More than 9 in 10 would be willing to stop taking one or more of their medicines if their physician said it was possible.²

¹ Qato et al, <https://pubmed.ncbi.nlm.nih.gov/26998708/> ² Reeve et al, <https://pubmed.ncbi.nlm.nih.gov/30326004/>

Pilot and Grant Planning Awards



Led by **Drs. Sandra Simmons** and **Amanda Mixon**, our Pilot Core provides several varieties of grants.

Pilot Awards are 1-year awards designed for junior investigators to conduct small-scale or pilot projects that can lead to future, larger research opportunities. Grant Planning Awards are 1-year awards designed for more experienced investigators to support planning activities

for large-scale grants. Applications for next year's awards are due in January 2022. In addition, we fund small Collaboration Grants to facilitate discrete activities that will enhance new collaborations between and among investigators and stakeholder groups.

Our Pilot Core works closely with the Stakeholder Engagement Core and meets regularly with funded investigators to help them advance their work, troubleshoot problems, and identify best practices for partnering with stakeholders.

YEAR 2 AWARDEES

Sarah Szanton, PhD, ANP

Johns Hopkins University

Goal directed deprescribing and its effect on self-management in community-dwelling older adults with multiple chronic conditions

Ranjit Singh, MD, MBA & Robert Wahler, PharmD

University at Buffalo

Patient-driven deprescribing to enhance successful aging

Justin Lee, BScPhm, MD

McMaster University

Improving medication prescribing-related outcomes for vulnerable elderly in transitions: a pilot randomized controlled trial

Joshua Niznik, PharmD, PhD

University of North Carolina, Chapel Hill

Deprescribing bisphosphonates in nursing home residents with dementia

Sarah Vordenberg, PharmD, MPH

University of Michigan

Psychological and clinical factors that predict intent to deprescribe medications among older adults

Scott Pilla, MD, MHS

Johns Hopkins University

A national survey of physician perspectives on deprescribing diabetes medications for older adults



PROFILE: Joshua Niznik
Pilot Grant Awardee

Dr. Niznik is an Assistant Professor in the Division of Geriatric Medicine & Eschelman School of Pharmacy, Division of Pharmaceutical Outcomes and Policy at the University of North Carolina, Chapel Hill. His pilot project

evaluated real-world patterns of oral osteoporosis medication deprescribing in older nursing home residents with dementia. Using a variety of national Medicare data sources, Dr. Niznik first identified optimal methods of defining what constitutes a deprescribing event in this setting. Next, applying these learnings he found that the cumulative incidence of deprescribing bisphosphonates at the end of follow-up was approximately 20%, despite the lack of strong evidence for continued benefit in nursing home residents with dementia. Several factors were associated with increased deprescribing, including older age, being newly admitted to the nursing home, being dependent for mobility, and having a nurse practitioner as a primary provider (vs. physician). Supported by this work, Dr. Niznik recently received a K08 award from the National Institute on Aging to expand his research on the topic.

Niznik, J.D., Aspinall, S.L., Hanson, L.C. et al. **Patterns of oral bisphosphonate deprescribing in older nursing home residents with dementia.** Osteoporos Int (2021). <https://doi.org/10.1007/s00198-021-06141-9>



YEAR 3 AWARDEES

Matthew Duprey, PharmD, PhD

Brown University

Novel methods for estimating the effects of deprescribing using observational data

Maria Papaleontiou, MD

University of Michigan

Deprescribing thyroid hormone replacement therapy in older adults with dementia

Min Kwak, MD, MS, DrPH

The University of Texas Health Science Center

Intensity of heart failure pharmacotherapy among older adults

Jinjiao Wang, PhD, RN

University of Rochester

Interdisciplinary deprescribing via telehealth in home health care: an intervention development study

Nagham Ailabouni, BPharm, PhD

University of South Australia

Empowering people living with dementia and their caregivers to initiate deprescribing conversations by developing the PRIME tool

“ I had an excellent experience as an awardee of the USDeN pilot program. The quarterly meetings with pilot core leaders were incredibly beneficial to work through issues and generate new ideas for exploration that improved the quality of my work. I also really enjoyed the emphasis on stakeholder engagement, which generated new insights for my work. Most importantly, my pilot award allowed me to develop the methodological foundation and generate preliminary data for my K award so that I could hit the ground running.

DR. JOSHUA NIZNIK



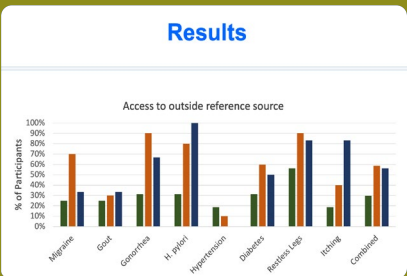
Investigator Development



Led by **Drs. Kenneth Boockvar** and **Jennifer Tjia**, our Investigator Development Core is focused on building a community of learning, collaboration, and support for investigators interested in deprescribing.

JUNIOR INVESTIGATOR INTENSIVE PROGRAM

Thirteen early-career physician-, pharmacist-, and PhD-investigators comprise our second Junior Investigator Intensive (JII) cohort. The JII program provides an interdisciplinary community of learning with virtual works-in-progress conferences, core curriculum, office hours, and special careers. Applications for our next cohort are due in February 2022.



WEBINARS

In our second year, we organized or co-hosted 10 webinars with over 649 participants. Topics ranged from stakeholder-driven research to multi-site deprescribing trials. More than 94% of attendees rated the sessions as very good or excellent. Visit our website to learn more and view archived sessions.

ANNUAL MEETING

The capstone of our investigator development activities is our annual meeting, which this year attracted over 150 attendees. Engaging speakers and small group breakouts spoke about opportunities, challenges, and future directions for deprescribing research. More than 97% of attendees rated the event as very good or excellent. Visit our website to view archived sessions and plans for our next annual meeting in May 2022.



“The USDeN JII Program has not only opened my eyes to some of the most active areas of deprescribing research, but also allowed me to identify gaps that we still need to address. Furthermore, I have had the wonderful opportunity to meet both senior and junior researchers with whom I hope to collaborate in the future. I highly recommend the program!”

Anna Hung, PharmD, PhD



Research in Dementia

The network has received supplemental funding from the National Institute on Aging to conduct dedicated research on Alzheimer’s Disease and related dementias. The following projects have been supported by this funding mechanism and provide additional opportunities to advance research on deprescribing.



Ariel Green, MD, MPH, PhD
Johns Hopkins University School of Medicine

Identifying Caregivers to Support Care and Research for Patients with Memory Disorders

Few deprescribing interventions have specifically identified or engaged family and unpaid caregivers of people living with dementia. Purposeful engagement of caregivers is critically important for implementing deprescribing for people living with dementia, but many pragmatic clinical trials lack the means to reliably identify who are these caregivers.

In this project, Dr. Green will iteratively refine a tool for identifying caregivers of people living for dementia through the electronic health record, employing a user-centered design process involving in-depth interviews with patient-caregiver dyads and direct care staff, clinicians and health system leaders, and then testing the resultant tool.



Daniela Moga, MD, PhD
University of Kentucky College of Pharmacy

Assessment of Medication Optimization in Rural Kentucky Appalachian Patients with Mild Cognitive Impairment or Dementia: The AMOR-Kentucky Study

Medication-related problems are often the cause of emergency room visits, hospitalizations, and transition to higher levels of care in older adults experiencing Alzheimer’s Disease or other cognitive impairments. Medication complexity adds to caregiver burden and often results in negative health outcomes and diminished quality of life for both the patient with dementia and the caregiver. These pose challenges in the best of circumstances, and even more

so in the underserved, lower socioeconomic populations in rural Appalachian Kentucky. Dr. Moga will study opportunities to enhance deprescribing and medication optimization for these populations by performing a single arm study of a telemedicine-based medication therapy management intervention among cognitively impaired Kentuckians living in rural communities who are using potentially inappropriate medications.

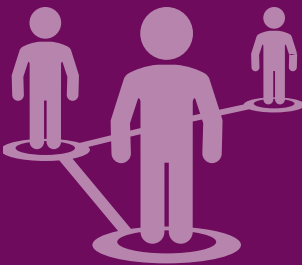
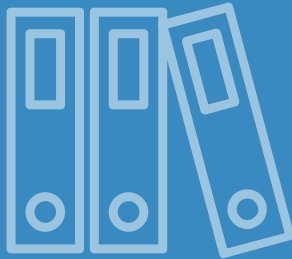
Data and Resources



Led by **Drs. Elizabeth Bayliss** and **Sascha Dublin**, the Data and Resources Core offers a variety of resources and expert guidance to support deprescribing research, with additional resources currently under development. In addition, the network has convened a series of Working Groups to develop high-value resources and best-practice guidance to advance the field.

IRB AND DATA SAFETY MONITORING RESOURCES

Deprescribing research poses special challenges for regulatory review and data safety monitoring. For example, if a medication is stopped and a study subject experiences a clinical event that could be prevented by that medication, does that count as a safety event? We have compiled a compendium of successful IRB applications and data safety monitoring plans that demonstrate how experienced investigators have navigated these challenges.



CONSULTATION SERVICES

Investigators can request a free, one-hour consultation with a subject matter expert to provide guidance on a specific issue in their research. This service is open to all. In addition, we strongly encourage Pilot and Grant Planning Award awardees and Junior Investigator Intensive awardees to make use of this resource.

LITERATURE SEARCH STRATEGY GUIDANCE

The field of deprescribing has evolved over the past thirty years, and investigators conducting deprescribing research need to know what other studies are in their area to gain insights, facilitate collaborations, harmonize measures across studies, and avoid duplication of efforts. To further support these efforts, we have developed a literature search strategy guidance tool that can use broad and narrow search parameters tailored to an investigator's purpose for the literature search.



HIGH-VALUE TARGETS FOR DEPRESCRIBING

This Working Group, led by Dr. Shelly Gray, is developing a systematic review and meta-analysis of deprescribing studies to identify what types of interventions, medications, and care settings yield the greatest impact for deprescribing and associated clinical outcomes. This will help inform priority areas for future research and implementation.



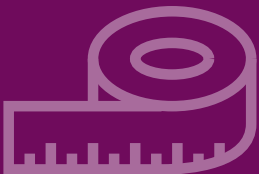
DATA HARMONIZATION WORKING GROUP

Dr. Sascha Dublin leads this Working Group, which is developing and refining methods around creating, operationalizing, and implementing measures relevant to deprescribing studies across 5 institutions with different data systems, including: Kaiser Washington, Duke, University of Pennsylvania, Kaiser Colorado, and the Durham VA Health Care System. This work will develop infrastructure for multi-site research including preparing study sites



for future deprescribing trials and inform the creation of a “user’s guide” for using electronic health data for deprescribing research. The use of diverse sites and the user’s guide will lay a roadmap for other sites to participate in single- and/or multi-site research efforts in deprescribing that use electronic health data.

MEASUREMENT IN DEPRESCRIBING RESEARCH



Led by Dr. Elizabeth Bayliss, this Working Group is conducting a literature review and expert Delphi process to identify what outcome measures are most important to measure in studies of deprescribing, and then it will define the current state of science about these high-priority measures.

Results from this effort will guide efforts to harmonize outcome measurement across studies of deprescribing interventions and identify areas development and validation of new areas.

Stakeholder Engagement



Engaging with the users of deprescribing research – including patients and caregivers, clinicians, and health system and policy leaders – is a key principle that underlies the work of the network. Led by **Drs. Nicole Brandt** and **Catherine Sarkisian** and **Ms. Carmen Reyes**, the Stakeholder Engagement Core supports a number of initiatives that amplify this theme. Stakeholder representatives and core leaders participate in the development and review of pilot and grant planning awards, meet with network awardees and participate in pilot and grant planning awards, engage with Junior Investigator Intensive awardees, and more.

STAKEHOLDER ENGAGEMENT COUNCIL

The Stakeholder Engagement Council comprises older adults and their caregivers as well as health care professionals and health systems representatives. The Council provides input on network activities, helps select network awardees, and serves as a conduit for disseminating network-sponsored research to communities of interest.



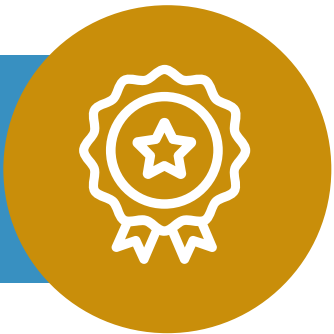
“ I appreciate the USDeN’s commitment to meaningful engagement with stakeholders with the goal of ensuring the network reflects input from older adults, their family caregivers, and health professionals, and the opportunity to provide input on funding proposals with a focus on the ways patients are engaged in the research. This attention to the consumer voice is critically important to the overall effort to advance our knowledge and implementation of deprescribing. ”



Nancy E. Lundebjerg, MPA,
American Geriatrics Society, CEO

Second Year Highlights:

6 pilot and grant planning awards awarded
(additional 5 planned for year 3)



13 participants in the Junior Investigator Intensive program

114 papers published by network-supported investigators



704 network members

**25,000 website impressions;
1,591 Twitter followers**



Collaborations with the AGING Initiative, Clin-STAR program, American Geriatrics Society, Research Centers Collaborative Network, Network for Investigation of Delirium: Unifying Scientists (NIDUS), and more



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