Challenges of deprescribing and minimizing use of anticholinergic medications

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Medications with anticholinergic properties have been consistently associated with a wide range of adverse outcomes for older adults including cognitive impairment, yet these drugs continue to be commonly prescribed for depression, urinary incontinence, irritable bowel syndrome and Parkinson's disease.

In an editorial published in the peer-reviewed journal *Frontiers in Pharmacology,* co-authors Noll Campbell, PharmD, M.S., and Malaz Boustani, M.D., MPH, of the Regenstrief Institute (U.S) and colleagues Roy Soiza, MBChB, of the University of Aberdeen (UK) and Arduino Mangoni, M.D., Ph.D., of Flinders University (Australia) highlight the complexity of gaining a better understanding of how to safely deprescribe anticholinergic medications given the risks they convey and the significant difficulty encountered across cultures in decreasing their use.

Anticholinergics affect the brain by blocking acetylcholine, a nervous system neurotransmitter that influences memory, alertness and planning skills. These medications are used by approximately one in four older adults each year in the United States.

The editorial authors observe that physician and pharmacist awareness of the dangers of anticholinergic therapy is growing, propelling research on these medications and on opportunities for deprescribing. However, there is currently no simple or reliable way for patients to know if the anticholinergics they use today will convey adverse effects in the future. Nor are there high-quality studies explaining how to identify which current users should stop these medications and what will happen if they do.

"While we at Regenstrief Institute and other researchers throughout the world have identified a strong and consistent link between anticholinergic drugs and cognitive impairment from observational studies, randomized clinical trials represent the only rigorous method to definitively establish a causal relationship between these frequently used drugs and various dementias," said editorial co-author Dr. Campbell, an expert in deprescribing. "We are nearly mid-way through a large multiyear randomized, controlled anticholinergic deprescribing trial that will help us understand whether these medications have a causal link

with cognitive impairment as well as other outcomes associated with deprescribing."

He adds that "what we learn about how to make changes at both the provider and the patient level for anticholinergics may well be applicable to other high-risk drug classes like benzodiazepines and opioids."

"Physicians should review with older patients all prescription as well as over-the-counter medications to determine anticholinergic exposure and discuss options that are less harmful to the aging brain," said Dr. Boustani, a geriatrician and co-author of the editorial. Dr. Boustani is a pioneer in aging brain care research and clinical practice. He and Regenstrief Institute colleagues developed the Anticholinergic Burden Scale.

"Editorial: Deprescribing and Minimizing Use of Anticholinergic Medications" is published in the open access journal *Frontiers in Pharmacology*.

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