

## Study Population

We have selected three medication-based patient cohorts based upon variations in 1) type of potentially inappropriate use, 2) medication factors (potential benefit and harms of continued use), and 3) anticipated interest in deprescribing by patients and providers (Table 1). Via this approach, we will evaluate the relative impact of medication, patient, and provider factors on deprescribing.

### 1. Proton Pump Inhibitor Cohort (PPI)

The PPI cohort will be defined as patients with prescriptions for any PPI at any dose for 90 consecutive days in patients of any age.

### 2a & 2b. Diabetes – Hypoglycemia Risk & Overtreatment Cohorts (DM-HR & DM-OT)

To create our two diabetes sub-cohorts, we will first identify overly-controlled patients with diabetes based upon International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes, most recent HbA1c <7%, as well as one or more of the following criteria: 1) age 65 or older, 2) renal insufficiency defined as creatinine >2 mg/dL, or 3) cognitive impairment defined by a diagnosis of cognitive impairment and/or prescription for an acetylcholinesterase inhibitor (e.g., donepezil).

### 3. Gabapentin (Gaba)

The gabapentin cohort will include patients prescribed a total daily dose of gabapentin >1800mg for a minimum of 90 days.

## Study Intervention

The intervention is an evidence-informed practice: an EMPOWER medication brochure designed to educate and activate patients. These brochures provide detailed medication information, allow self-testing of indications for use, prompt reflection of experiences with potential side effects, discuss alternative therapies (medication and non-pharmacologic options), and provide a vignette of a patient who successfully stopped the medicine. They were designed for a 6th grade reading level and were based upon theories of patient activation, adult learning, and cognitive dissonance. The visually appealing brochure repeatedly emphasizes that patients should not make any medication changes without first consulting their health care provider.