



Prevalence and average annual percent change of potentially inappropriate medication use in older adults before and during the COVID pandemic.

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Background & Objective

Potentially inappropriate medication (PIM) use in older adults increases the risk of injury, hospitalization, and adverse outcomes. The COVID-19 pandemic contributed to increases in antipsychotics and other PIMs in nursing homes, though less is known about the pandemic's impact on PIM use in the community-dwelling older adult population.

In this study we investigated select antidepressant, anticonvulsant, antipsychotic, and benzodiazepine use in older adults before and during the COVID-19 national emergency.

Data & Methods

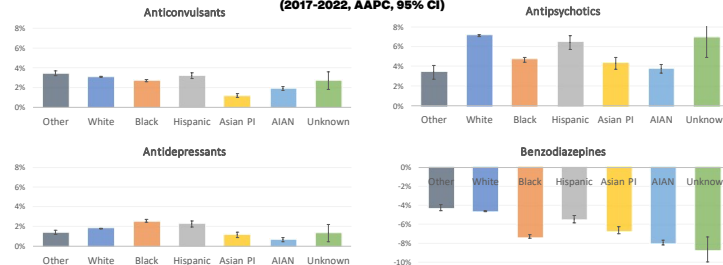
This is a retrospective, yearly, repeated cross-sectional study using Medicare and CVS Health linked data between January 2017 and December 2022. Community-dwelling individuals 65 years and older with Medicare Part D coverage and community pharmacy records were included.

We estimated prevalence and average annual percent change (AAPC) of PIM use during the pre-emergency period (2017-2019), emergency period (2020-2022), and by discrete years.

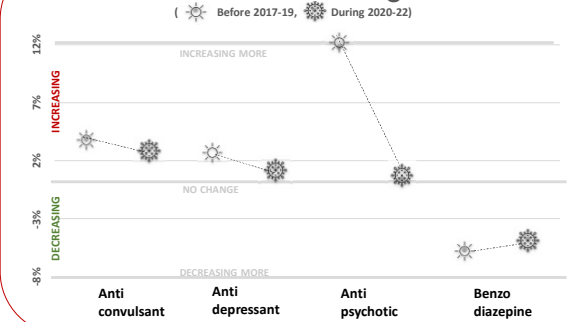
Population

	2017	2018	2019	2020	2021	2022
Total	12,676,359	14,112,568	15,521,682	16,695,346	17,551,529	17,540,995
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Age						
65-69	4,372,189 (34%)	4,711,168 (33%)	5,077,824 (33%)	5,407,979 (32%)	5,503,154 (31%)	4,935,355 (28%)
70-74	3,390,098 (27%)	3,720,952 (26%)	4,059,468 (26%)	4,387,805 (26%)	4,750,076 (27%)	4,852,258 (28%)
75-79	2,253,593 (18%)	2,570,195 (18%)	2,821,557 (18%)	3,017,234 (18%)	3,168,456 (18%)	3,487,687 (20%)
80-84	1,426,474 (11%)	1,612,496 (11%)	1,793,745 (12%)	1,918,442 (11%)	2,039,268 (12%)	2,149,505 (12%)
85-89	839,429 (7%)	968,422 (7%)	1,088,097 (7%)	1,172,548 (7%)	1,226,674 (7%)	1,247,419 (7%)
90 up	394,576 (3%)	529,335 (4%)	680,991 (4%)	791,338 (5%)	863,901 (5%)	868,771 (5%)
Sex						
Female	7,576,426 (60%)	8,380,419 (59%)	9,155,287 (59%)	9,799,654 (59%)	10,267,508 (58%)	10,245,816 (58%)
Race						
Unknown	278,642 (2%)	338,303 (2%)	397,038 (3%)	449,264 (3%)	495,016 (3%)	525,618 (3%)
White	10,237,327 (81%)	11,353,800 (80%)	12,443,335 (80%)	13,330,064 (80%)	13,961,197 (80%)	13,900,431 (79%)
Black	1,124,802 (9%)	1,262,990 (9%)	1,401,295 (9%)	1,519,128 (9%)	1,605,490 (9%)	1,597,666 (9%)
Other	309,984 (2%)	339,994 (2%)	367,647 (2%)	391,620 (2%)	413,310 (2%)	438,633 (3%)
Asian	405,628 (3%)	455,508 (3%)	506,896 (3%)	557,942 (3%)	598,431 (3%)	603,177 (3%)
Hispanic	304,501 (2%)	344,642 (2%)	386,473 (2%)	427,206 (3%)	457,380 (3%)	455,628 (3%)
North Am Native	15,475 (0%)	17,331 (0%)	18,998 (0%)	20,122 (0%)	20,705 (0%)	19,842 (0%)
PIM						
Anticonvulsant	1,164,563 (9%)	1,351,745 (10%)	1,545,838 (10%)	1,684,762 (10%)	1,851,383 (11%)	1,884,503 (11%)
Antidepressant	1,738,284 (14%)	1,977,885 (14%)	2,242,332 (14%)	2,421,226 (15%)	2,601,590 (15%)	2,610,815 (15%)
Antipsychotic	214,852 (2%)	266,107 (2%)	331,661 (2%)	389,535 (2%)	427,339 (2%)	419,422 (2%)
Benzodiazepines	982,861 (8%)	1,037,977 (7%)	1,073,868 (7%)	1,105,427 (7%)	1,108,263 (6%)	1,055,579 (6%)

AAPC During Study Period by Race



AAPC Before and During COVID



Conclusions

Sustained decreases of benzodiazepine use during our study period is a positive finding. However, increases in anticonvulsant, antidepressant, and antipsychotic use is concerning. Annual change in prevalence was less pronounced in all PIM categories during the emergency, flattening both positive and negative prevalence trends.

Racial categories appear to moderate the association between PIM class and AAPC.

AAPC
Average Annual Percent Change is a single summary measure that takes into account fluctuations in trends during a period through multiple weighted averages.

Chronic PIM Use
Chronic PIM use is having dispensed at least 30 days supply during the year.