

Anticholinergic Burden: A Study in a Psychiatry of Later Life Cohort



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Building a
Better Health
Service

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Introduction

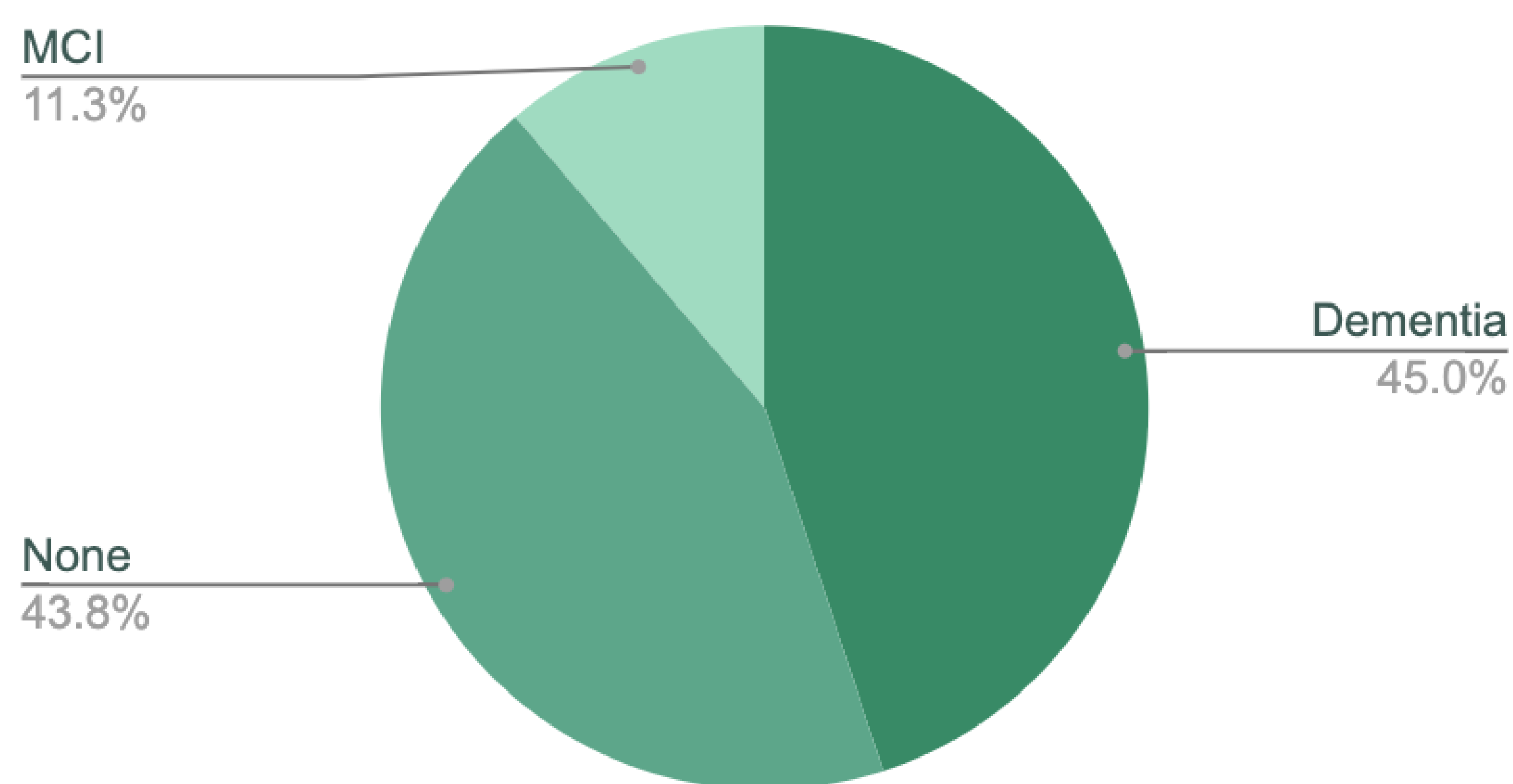
Medications with anticholinergic activity are widely prescribed for a variety of medical, surgical, and psychiatric illnesses. There is strong evidence that the cumulative anticholinergic properties of such medications (i.e., the anticholinergic burden) contributes to significant longer-term adverse effects, including dementia, impaired mobility, and increased mortality. Despite this, the anticholinergic burden is often not given due consideration when clinicians prescribe or review medications in routine clinical practice. This is of particular relevance to services working with elderly patient populations, who are both more likely to experience polypharmacy and more vulnerable to medication adverse effects. Greater awareness of the risks of anticholinergic prescribing may lead to improvements in longer-term cognitive and physical functioning, and subsequently decreased disease burden on individuals and society as a whole.

Methods

This was a cross-sectional observational study. Chart reviews were carried out on all patients open to the service at the time of the study in November 2020. Each patient's medication regime was analysed to calculate its overall score on the Anticholinergic Effect on Cognition Scale (AEC), using an online tool developed by South London and Maudsley NHS Foundation Trust. Other variables such as each patient's age, sex, and cognitive status (categorized as no cognitive impairment; mild cognitive impairment (MCI); or dementia) were also documented. Data was anonymised on collection. AEC scores of 2 or more were deemed to be at threshold for 'review and withdraw or switch' of medications.

Results

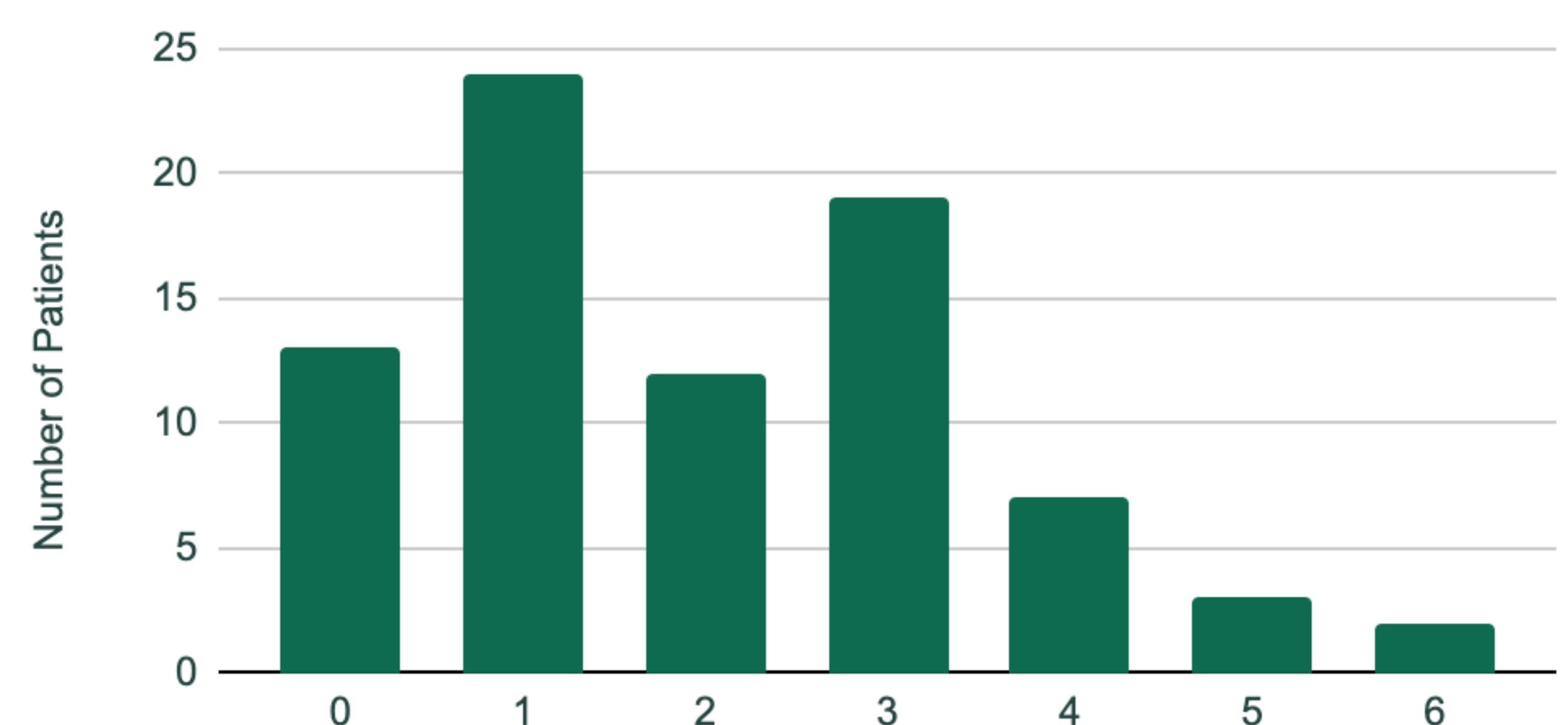
Cognitive Impairment Status



1. Demographics and Cognitive Impairment Status

A total of 80 patients were included in the study (48 female; mean age 77 [SD = 6.5] years. 45% of patients had a documented diagnosis of dementia, 11% had a documented diagnosis of MCI and 44% had no documented cognitive impairment.

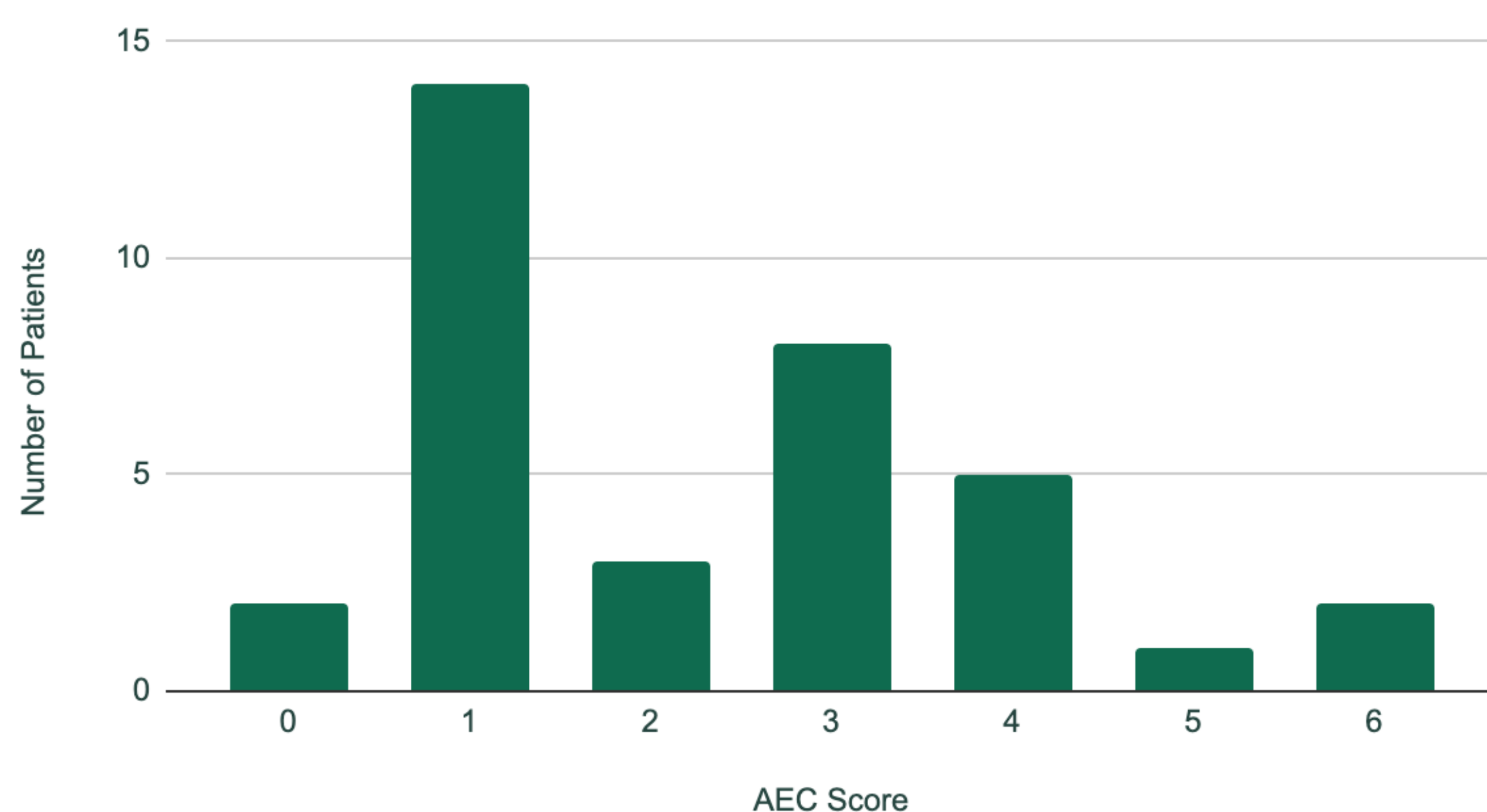
AEC Scores of All Patients



2. AEC Scores of All Patients

More than half of patients (53.75%) were found to have an AEC score of 2 or greater (AEC range 0-6, mean 2.5 [SD = 1.5]).

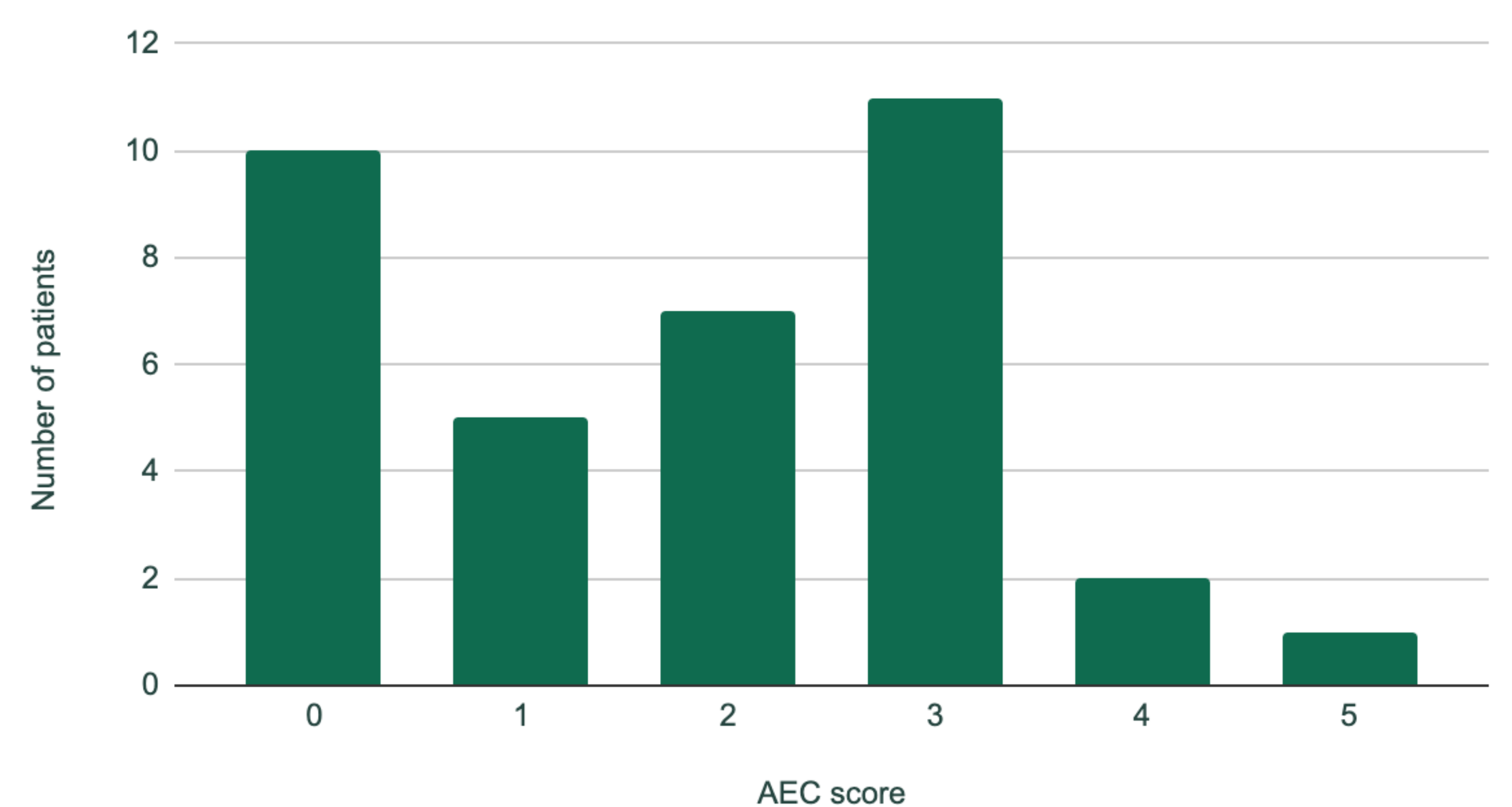
AEC Scores of Patients With No Cognitive Impairment



3. AEC Scores of Patients With No Cognitive Impairment

Among patients with no documented cognitive impairment, 19 out of 35 (54%) were found to have an AEC score of 2 or greater (AEC range 0-6, mean 2.3 [SD = 1.6]).

AEC Scores of Dementia Patients



3. AEC Scores of Dementia Patients

An even higher proportion (58%) of dementia patients (n = 36) were found to have an AEC score of 2 or greater (AEC range 0-5, mean 1.8 [SD 1.4]).

Discussion

Medications with anticholinergic activity are widely prescribed, as evidenced in this sample of 80 patients attending a Psychiatry of Later Life service. While several anticholinergic rating scales exist, the AEC specifically rates medications in terms of their effect on cognition. It is therefore particularly notable that patients with dementia were found to be more likely to have an AEC at or above threshold, when compared to patients with no documented cognitive impairment. Greater awareness of the adverse effects associated with the anticholinergic properties of a wide variety of commonly prescribed medication may lead to more selective and informed prescribing, with a possible reduction in iatrogenic contribution to cognitive impairment.

Declarations

The authors declare no conflict of interest.
No financial sponsorship was received for this study.

The authors assert that ethical approval was not required for this observational study and that all activities were carried out in accordance with ICH guidelines on Good Clinical Practice, and the Declaration of Helsinki.

Permission was granted by the relevant Clinical Director to carry out this study and present the results.