



## KEY POINT SUMMARY

### OBJECTIVES

The objective of the study was to assess the relationship of a wander garden with scheduled psychiatric medications and its impact on changes in fall number and severity.

### DESIGN IMPLICATIONS

The decrease in agitation in residents with dementia with access to a wander garden may contribute to a number of benefits: (1) a reduction in fall number and severity, (2) a reduction in psychiatric PRN medications and high and intermediate-dose antipsychotics, and (3) an improved quality of life for residents with dementia. Therefore, designers may consider adding a wander garden to a new or an existing dementia unit.

## Scheduled Medications and Falls in Dementia Patients Utilizing a Wander Garden

Detweiler, M. B., Murphy, P. F., Kim, K., Myers, L., Ashai, A.  
 2009 | *American Journal of Alzheimer's Disease and Other Dementias*  
 Volume 24, Issue 4, Pages 322-332

### Key Concepts/Context

Among dementia residents, fall risk is often compounded by the side effects of the medications routinely used to treat comorbid medical issues, in addition to treating concurrent depression, agitation, psychosis, anxiety, and insomnia. Of all the types of medications involved in increased fall risk, psychotropic medications have been identified as having the highest risk. Studies suggest that dementia patients using a wander garden may have decreased indices of agitation and reduced use of as-needed (pro re nata [PRN]) medications. In addition, the wander garden has been reported to be a positive environmental intervention to reduce falls in residents with dementia. However, further studies are needed to explore such advantages of a wander garden. If exposure to the wander garden decreases agitation, would there be a reduction in scheduled psychiatric medications? Would a reduction in PRN use then contribute to fewer falls? This study explores the relationship of a wander garden with scheduled psychiatric medications and its impact on changes in fall number and severity.

### Methods

This 2-year, before-and-after study observed 28 residents of a dementia unit, who were divided into high and low wander garden user groups and assessed for the number and the severity of falls among the residents. The type and dose of scheduled psychiatric medications were also monitored for 12 months before and 12 months after the wander garden was opened.

Descriptive statistics and crosstabs were used to compare the total number of falls and the fall severity scores by year, garden usage group, fall grades within usage groups, ambulation category and garden usage group, and ambulation category and



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year. Similar procedures were used to examine amounts of scheduled medications by year and garden usage group (high user group [HUG] versus low user group [LUG]). The unit of analysis was person months. Likelihood ratio tests were used to determine the statistical significance of differences observed.

## Findings

The high wander garden user group experienced reduced falls and lower fall morbidity than the low wander garden user group. The study observed a decrease in the raw number of falls for both the HUG and the LUG, but the decrease was much more significant for the HUG, which had a decrease of 82 falls (38.7% decrease) compared to 6 fewer falls (7.9% decrease). In addition, the HUG achieved a 36.5% reduction in the total fall severity score after the garden opened, while the LUG saw a 9.3% decrease in total fall severity score.

The HUG had a significant reduction in high-dose antipsychotics, whereas there was relatively no change in antidepressant, hypnotic, and anxiolytic use. The HUG required fewer scheduled medications than the LUG. The most significant changes in scheduled psychiatric medications were reductions in scheduled antipsychotics and an increase in residents requiring no antipsychotics.

## Limitations

The authors identified some limitations: (1) the study had a small and convenience sample and (2) more detailed and accurate recording of time spent in the garden and activities engaged in by the participants needs to be employed in future studies.