

QUALITY IMPROVEMENT

Caregiver teamwork improved psychotropic drug prescribing in nursing homes

Schmidt I, Claesson CB, Westerholm B, et al. *The impact of regular multidisciplinary team interventions of psychotropic prescribing in Swedish nursing homes.* *J Am Geriatr Soc* 1998;46:77–82.

Question

Does a multidisciplinary team intervention in addition to drug use guidelines affect psychotropic drug prescribing in nursing homes (NHs)?

Design

12 month randomised controlled trial.

Setting

36 NHs in Sweden.

Patients

1854 permanent NH residents (mean age 84 y, 70% women) of whom 39% had a diagnosis of dementia, 4.3% had a psychotic disorder, and 6.4% had a diagnosis of depression. NHs were eligible if they were typical of the region, were under the jurisdiction of 1 of 18 randomly selected regional pharmacy directors, and the supervising physicians were not geriatric specialists.

Intervention

NHs were allocated to an experimental intervention group (15 NHs, 626 residents) or a control group (18 NHs, 1228 residents). The experimental intervention involved 1 visit each month by a pharmacist who organised team meetings of the NH physician and nursing personnel to discuss drug use in individual residents. The aim was to minimise non-recommended drug use as defined by the guidelines of the Swedish Medical Product Agency (SMPA). Control group NHs received no special efforts to influence drug prescribing except the SMPA guidelines which were distributed to all physicians at the start of the intervention.

Main outcome measures

Quantitative outcomes were rates of psychotropic (antipsychotic, hypnotic, anxiolytic, and antidepressant) drug prescrib-

ing, polymedicine (≥ 2 drug classes), and therapeutic duplication (≥ 2 drugs in the same class); qualitative outcomes were recommended and non-recommended drug prescribing.

Main results

Total rates of psychotropic drug prescribing, polymedicine, and therapeutic duplication did not change from baseline in experimental group NHs but in control group NHs therapeutic duplication increased by 17% ($p=0.04$) and the mean number of drugs prescribed increased by 7% ($p=0.02$). Prescription of antipsychotic drugs decreased by 19% ($p=0.007$) in experimental group NHs compared with a non-significant decrease of 7% in control group NHs. In experimental group NHs, use of non-recommended hypnotic drugs decreased by 37% ($p<0.001$) and use of acceptable hypnotic drugs increased by 70% ($p<0.001$); no change was seen in control group NHs. No change in prescription of non-recommended anxiolytic drugs was seen in either group but the prescription rate of acceptable anxiolytic drugs increased by 50% in experimental group NHs ($p=0.002$). Statistically significant decreases in use of non-recommended antidepressant drugs occurred in both experimental group NHs (59%, $p<0.001$) and control group NHs (34%, $p=0.002$) and use of recommended antidepressants increased by 584% and 315%, respectively ($p<0.001$).

Conclusion

An intervention involving teamwork of physicians, pharmacists, and nurses decreased the prescribing of antipsychotic and non-recommended hypnotic drugs in nursing homes.

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Commentary

Psychotropic drugs should be used with care in the elderly because of adverse side effects including sedation, and undesirable interactions with medications for physical illnesses. SMPA treatment guidelines for prescribing psychotropic drugs in the demented elderly were distributed in 1994 to all Swedish physicians, recommending minimal use of antipsychotics, certain benzodiazepines, and tricyclic antidepressants with anticholinergic properties. Schmidt *et al* examine the effect of the guidelines, thus extending various uncontrolled studies of psychotropic drug use in NHs in the US.¹

The authors had to contend with different sizes of NH facilities and changes in residents. Firstly, despite randomisation, experimental NHs were smaller than control NHs (mean 51 v 80 beds). Even where

staff:resident ratios are equivalent, if all staff members care for all residents then home size necessarily affects the *quality* of social interactions. Such psychosocial factors contribute to behavioural and mental health problems. Secondly, there was a 10.2% reduction in experimental NH residents by 12 months compared with a 1.2% increase in control NH residents. Death rate or endpoint data by diagnostic category or functional status were not provided. Resident turnover may affect prescribing practice because those who died or moved home could also be those maintained on the older, non-recommended drugs; deaths can upset staff and residents, potentially increasing behavioural or mental health problems; and new residents may have been admitted because of behavioural or mental health problems.²

Education and support are necessary for NH staff members to implement non-medication interventions for behavioural and mental health problems,³ and passive dissemination of guidelines tends not to change professional practice.⁴ Schmidt *et al* show that externally facilitated case-reviews involving a pharmacist trained in communication skills, problem solving, and staff support are more successful than written guidelines alone.

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- 2 Morriss RK, Rovner BW, German PS. *Int J Geriatr Psychiatry* 1996;11:243–9.
- 3 Rovner BW, Steele CD, Shmueli Y, et al. *J Am Geriatr Soc* 1996;44:7–13.
- 4 NHS Centre for Reviews and Dissemination. *Effective Health Care* 1994;8:1–12.