

Journal Club

General Internal Medicine

7-14-06

1. Loeb M, Carusone SC, Goeree R *et al.* **Effect of a clinical pathway to reduce hospitalizations** in nursing home residents with pneumonia: a randomized controlled trial. JAMA 2006; 295(21):2503-10. Dr. Hiroshi Sato reviewed. Abstract: CONTEXT: Nursing home residents with pneumonia are frequently hospitalized. Such transfers may be associated with multiple hazards of hospitalization as well as economic costs. OBJECTIVE: To assess whether using a clinical pathway for on-site treatment of pneumonia and other lower respiratory tract infections in nursing homes could reduce hospital admissions, related complications, and costs. DESIGN, SETTING, AND PARTICIPANTS: A cluster randomized controlled trial of 680 residents aged 65 years or older in 22 nursing homes in Hamilton, Ontario, Canada. Nursing homes began enrollment between January 2, 2001, and April 18, 2002, with the last resident follow-up occurring July 4, 2005. Residents were eligible if they met a standardized definition of lower respiratory tract infection. INTERVENTIONS: Treatment in nursing homes according to a clinical pathway, which included use of oral antimicrobials, portable chest radiographs, oxygen saturation monitoring, rehydration, and close monitoring by a research nurse, or usual care. MAIN OUTCOME MEASURES: Hospital admissions, length of hospital stay, mortality, health-related quality of life, functional status, and cost. RESULTS: Thirty-four (10%) of 327 residents in the clinical pathway group were hospitalized compared with 76 (22%) of 353 residents in the usual care group. Adjusting for clustering of residents in nursing homes, the weighted mean reduction in hospitalizations was 12% (95% confidence interval [CI], 5%-18%; P = .001). The mean number of hospital days per resident was 0.79 in the clinical pathway group vs 1.74 in the usual care group, with a weighted mean difference of 0.95 days per resident (95% CI, 0.34-1.55 days; P = .004). **The mortality rate was 8% (24 deaths) in the clinical pathway group vs 9% (32 deaths) in the usual care group**, with a weighted mean difference of 2.9% (95% CI, -2.0% to 7.9%; P = .23). There were no significant differences between the groups in health-related quality of life or functional status. The clinical pathway resulted in an overall cost savings of US 1016 dollars per resident (95% CI, 207 dollars-1824 dollars) treated. CONCLUSION: Treating residents of nursing homes with pneumonia and other lower respiratory tract infections with a clinical pathway can result in comparable clinical outcomes, while reducing hospitalizations and health care costs. TRIAL REGISTRATION: clinicaltrials.gov Identifier: NCT00157612.

2. Lin OS, Kozarek RA, Schembre DB *et al.* **Screening colonoscopy in very elderly patients**: prevalence of neoplasia and estimated impact on life expectancy. JAMA 2006; 295(20):2357-65. Dr. Hiroshi Sato reviewed. Abstract: CONTEXT: Current guidelines do not include an upper age cutoff for colorectal cancer screening with colonoscopy. Although the prevalence of colonic neoplasia increases with age, life expectancy decreases. Thus, the benefit of screening colonoscopy in very elderly patients may be limited. OBJECTIVE: To compare estimated life-years saved with screening colonoscopy in very elderly vs younger persons. DESIGN, SETTING, AND PARTICIPANTS: Cross-sectional study conducted among 1244 asymptomatic individuals in 3 age groups (50-54 years [n = 1034], 75-79 years [n = 147], and > or =80 years [n = 63]) who underwent screening colonoscopy at a US teaching hospital and clinic. MAIN OUTCOME MEASURES: Prevalence of various types of colon neoplasia; estimated gain in life expectancy, calculated as life expectancy--(life expectancy during polyp lag time + life expectancy after colorectal cancer diagnosis); and comparison of mean gain in life expectancy across the 3 groups. Life expectancy and mortality data were derived from life tables, previous studies, and national databases. RESULTS: The prevalence of neoplasia was 13.8% in the 50- to 54-year-old group, 26.5% in the 75- to 79-year-old group, and 28.6% in the group aged 80 years or older. Despite higher prevalence of neoplasia in elderly patients, mean extension in life expectancy was much lower in the group aged 80 years or older than in the 50- to 54-year-old group (0.13 vs 0.85 years). In sensitivity analysis, with longer polyp lag times the mean extension in life expectancy decreased more in the elderly than in the younger patients; alternatively, if it was assumed that a smaller proportion of adenomas progress to colorectal cancer, the mean extension in life expectancy decreased less in the elderly than in the younger patients. CONCLUSIONS: **Even though prevalence of neoplasia increases with age, screening colonoscopy in very elderly persons (aged > or =80 years) results in only 15% of the expected gain in life expectancy in younger patients.** Screening colonoscopy in very elderly patients should be performed only after careful consideration of potential benefits, risks, and patient preferences.