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DNR, DNH Implementation in the DNA of the Care Process

Effectiveness of advance care planning (ACP) processes result in many benefits e.g., patient/ family satisfaction with care, care alignment with patient wishes, and decrease in cost of care. Do-not-resusciate (DNR) and do-not-hospitalize (DNH) are important elements of ACP and influence key decisions around acuity and end-of-life. Do formal processes for DNR/DNH implementation improve care in long-stay residents?

A recent study explored the prevalence of DNR/DNH at the time of admission among 49,390 patients in Ontario long-stay facilities. Researchers found that 60.7% patients had DNR orders, whereas 14% had DNH orders at the time of admission. Patients who were females, widowed, had cognitive impairment and had higher health instability were more likely to have these orders.

After risk adjustment for key factors, presence of DNR/DNH orders resulted in an odds ratio of 0.57 and 0.41 (statistically significant) for dying in hospital. The incidence rate ratio for days spent in hospital for DNR and DNH patients was 0.87 and 0.70 (stat. significant). Interestingly DNH orders were only slightly protective of acute care transfers meaning that they were not always followed.

This important study reminds us of the value of ACP, particularly addressing the patient/ family desires around delivery of acute care services. Physician leaders in the post-acute settings should take a lead to: 1) hold timely conversations with their patients and families about desires around hospitalizations, and 2) implement systems in their facilities that can help assure the compliance with patient/ family wishes.

Do-Not-Resuscitate and Do-Not-Hospitalize Orders in Nursing Homes: Who Gets Them and Do They Make a Difference? Tanuseputro, Peter et al. Journal of the American Medical Directors Association , Volume 0 , Issue 0

Diagnosing Infections in Older Patients; What's Hot and what's Not?

Infections result in more than 3 million annual visits by older adults to the emergency departments (ED) in US. There are many challenges in accurately diagnosing bacterial infections in older adults, given the absence of specific symptoms, which can result in over and under-diagnosis. Sometimes clinicians rely on non-specific symptoms to diagnose infections. How accurate is this strategy?

A recent study published in JAMDA aimed to determine if nonspecific symptoms and fever affect the posttest probability of acute bacterial infections in older patients. In this secondary analysis of a prospective study, records of 424 older patients (>65 years) who visited an ED were reviewed. Bacterial infections were determined by an agreement among two of three experts.

There were 77 episodes of confirmed bacterial infections. Fever > 38 degrees celsius was highly specific for an infection and actually presence of fever in ED had a positive likelihood ratio of 18.1. On the other hand, presence of altered mental status and malaise had minimal impact on ruling in but no impact on ruling out of infections.

This study emphasizes that for older patients, presence of non-specific symptoms by themselves should not be taken as a signal of an infection. It is critical that patients with vague symptoms get a detailed history and assessment to see if there are other clear and specific signs. Ordering labs or sending patients with vague symptoms to ED result in wasted resources, overtreatment and harm.

Caterino, Jeffrey M., et al. "Nonspecific symptoms lack diagnostic accuracy for infection in older patients in the Emergency Department." Journal of the American Geriatrics Society 67.3 (2019): 484-492.

You and I together, Improving UTI management!

The management of uncomplicated cystitis among older nursing home residents continues to present challenges with high prevalence of inappropriate antibiotic use. The Agency for Healthcare Research and Quality funded an initiative that brought together an expert panel of pharmacists, geriatric physicians and infectious disease experts for recommendations.

Using a comprehensive literature search around cystitis management, researchers drafted a Delphi survey. The survey had 31 recommendations and supporting references to be reviewed by experts to provide agreement using a Likert scale. The first round of survey provided consensus for three recommendations: use nitrofurantoin 100mg twice a day and trimethoprim/sulfamethoxazole (TMP) 160/800 mg twice a day for those without kidney disease, avoid Fosfomycin as first choice, and to avoid nitrofurantoin in patients with chronic kidney disease (Cr Clearance <60).

Additional recommendations were added after second-round: use TMP as drug of choice for empiric cystitis treatment if no sulfonamide allergy and normal kidney function, use nitrofurantoin as drug of choice for patients with sulfonamide allergy and normal kidney function, and use ciprofloxacin only at 250mg twice a day dose with kidney function <30. Panel recommended preventing interactions with key medications including warfarin, phenytoin and theophylline. Minimum treatment recommendations were 3 days in women and 7 days in men.

H*anlon, Joseph T., et al. "The IOU Consensus Recommendations for Empirical Therapy of Cystitis in Nursing Home Residents." Journal of the American Geriatrics Society 67.3 (2019): 539-545.*

Benefit of Sweeteners: A Bitter Truth

Do sweeteners carry health benefits? This is an important issue because many health groups including World Health Organization (WHO) recommend a reduction in daily sugar intake. Also, there is a progressively deepening belief in the value of artificial and natural non-sugar sweeteners. Many long-term care facility residents continue to use sweeteners.

A recent BMJ meta-analysis of 56 studies found no benefits from nonsugar sweeteners, particularly for generally health people and also concluded that harms could not be ruled out. Among the 27 observational and 29 controlled trials of adults and children, the evidence that sweeteners improved body mass index, glucose levels and other metrics, was of low certainty. Although there was no evidence of substantial harms, researchers could not rule out adverse outcomes, particularly with long-term use.

Even though the study did not include geriatric patients, it is an important study to know of, because the use of artificial and natural nonsugar sweeteners is ramping up in our society. These products are also being used by patients and residents in our post-acute facilities. It is important that physician and other practitioners are aware of the available data about the possible benefits and harms of these products.

Abbasi J. Quick Uptakes: No Compelling Evidence of Health Benefits From Nonsugar Sweeteners. JAMA. 2019;321(10):927–928. doi:10.1001/jama.2019.0430