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Tom Nolan's research reviews—20 January 2022

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There's no place like home

Older patients with acute illness are often on the borderline between needing admission and being able to manage at home. When talking through these options with them, we often cite the risk of adverse events from hospital admission (hospital acquired infections, pressure sores, deconditioning, and so on) as one good reason to stay at home. A cluster randomised controlled trial of a structured, ward based, improvement programme called "Eat Walk Engage" sought to reduce hospital acquired complications among older people.[1] No reduction in hospital associated complications was observed between patients on the four wards that received the intervention (aimed at improving nutrition, hydration, mobility, and cognitive and social engagement) and the four control wards. The overall rates of complications give a sense of how big a consideration this is for patients: of the over 65 year olds admitted to the study wards for at least three days, 49% suffered delirium, disability, incontinence, fall, or pressure injury associated with their hospitalisation.

The cost of living

The £9.35 prescription charge in England is enough to put many people off collecting their prescriptions—an estimated 800 000 a year according to a 2008 Ipsos MORI poll. How much higher would this be if those over 60 years old weren't exempt from prescriptions charges and if their annual prescriptions costs were over £1000? In the US, researchers calculated "out-of-pocket" costs for patients who use Medicare—the federal health insurance for people aged 65 or older.[2] The good news was that costs for patients with common chronic conditions prescribed medications recommended by guidelines has gone down slightly between 2009 and 2019. And the bad news? For an older adult with COPD, hypertension, osteoarthritis, osteoporosis, and type 2 diabetes enrolled in any Medicare prescription drug plan, the median out-of-pocket cost in 2019 was $1999 a year.

Gene genie

How often does the plan to await some test results roll over from one ward round to the next? A team at Stanford University collaborating with Google shows that it doesn't have to be that way, even if you're awaiting genetic sequencing that usually takes weeks.[3] Twelve patients in critical care with a clinical presentation consistent with a genetic disease were selected to pilot ultrarapid nanopore genome sequencing. Diagnostic variants were found in five of the 12 patients, and the shortest time from the blood sample arriving in the laboratory to an initial diagnosis from genome sequencing was just 7 hours 18 minutes. A big timesaver was using cloud storage to help with the data crunching (the "postsequencing run time"). The report demonstrates that we have the technology to do amazing things very quickly; it's the limited capacity and overstretched resources that often delay diagnostic testing and keep those ward round plans stuck.

GLP-1 agonists weigh-in to obesity management

Might we soon see more drugs licensed for treating obesity? In 2020, NICE approved the GLP-1 agonist liraglutide for managing overweight and obesity, but only under quite narrow conditions—including being under the care of a specialist multidisciplinary tier 3 weight management service, having non-diabetic hyperglycaemia, and being at high cardiovascular risk. Another weight loss drug, the appetite suppressant phentermine-topiramate isn't licensed in the EU and UK because of safety concerns. A new meta-analysis concludes: "In adults with overweight and obesity, phentermine-topiramate and GLP-1 receptor agonists proved the best drugs in reducing weight; of the GLP-1 agonists, semaglutide might be the most effective."[4] The study estimated weight reduction with lifestyle modification alone at 3.38% a year, with an additional 11.41% weight reduction when semaglutide is added. However, the researchers found high levels of gastrointestinal side effects, and semaglutide has to be given as a once weekly injection—at a higher dose than for type 2 diabetes.

Semaglutide and liraglutide go head to head

Hot on the heels of the Lancet meta-analysis, the STEP 8 randomised clinical trial of once weekly semaglutide injections versus once daily oral liraglutide (both in combination with diet and lifestyle counselling) for weight loss has appeared in JAMA.[5] The main headline is that weight loss with semaglutide seems greater: 15.8% mean body weight change versus 6.4% with liraglutide after 68 weeks. Participants were adults with body mass index of ≥30, or ≥27 with one or more weight related comorbidity, without diabetes. How the 338 participants for this study were recruited isn't described in the paper or study protocol. A 16-week dose titration for semaglutide (from 0.25 mg to 2.4 mg) and monthly counselling on diet and activity will be challenges to applying this intervention to clinical practice, and, outside of a clinical trial, will the >80% incidence of gastrointestinal side effects (although over half of those in the placebo groups also reported these) translate to higher discontinuation rates than the 19.8% seen here?

Competing interests: none declared

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