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ARC West Midlands News Blog



29 September 2023

More on Trade-Offs Between Total Utility and Dis-utility of Inequality

Richard Lilford, ARC WM Director

In your latest ARC West Midlands News Blog, I compared different types of new treatment or programmes with respect to *who* benefits, not just total benefit.[1] I pointed out that it would be hard to exclude adoptions in the service if it made all groups better off, even if it had a greater benefit among more privileged groups than among less privileged groups. I used the example of a ‘technology’ that could reduce the probability of sudden infant death in all groups, but not to equal magnitude across groups. If such a treatment was cost-effective, then any argument that it should not be adopted on the grounds of widened disparities would have to accept preventable deaths, including deaths among the under-privileged. On the other hand, if one treatment actually made things worse for another group, then that would suggest that it should not be used (in theory the people who lose out could be compensated to provide [Pareto efficient](#) allocations).

However, more subtle trade-offs may be involved. Here, welfare economics should consider people who are affected indirectly by what happens to other people. Issues of fairness/justice must now be considered. Such considerations involve a trade-off between utility maximisation and inequality. Such trade-offs can be included in a health economic model through a social-utility function.

For example, treatment A may reduce mortality (a single outcome of interest) by 20 percentage points (pp) among a rich group, and only 10 pp among an equally sized, poor group (average utility 15). However, B may reduce mortality by 10

pp among both groups (average utility 10), and C may reduce mortality by 12 pp and 10 pp across groups respectively (average utility 11). The social welfare function could help us make the trade-off between equity and average population utility gains across the above scenarios. The social utility function would provide a measure of how much gain in utility among potential beneficiaries we should forfeit to achieve social aims across a wide range of scenarios.

Of course, eliciting such a function is not a straightforward issue. Not only are there issues concerning identifying representative respondents, but also in asking questions in a non-directive way to avoid heuristic (mental) biases. And that is before we come to deeper problems with choice that arise from [Arrow’s Impossibility theorem](#).

The ARC WM Director has written on the similar issue that arises when society has differences in values (preferences).[2]

References:

1. Lilford RJ. [Health Disparities – Utility vs. Justice](#). *NIHR ARC West Midlands News Blog*. 28 July 2023; 5(7): 1-2.
2. Lilford RJ. [Informing and Facilitating Choice in Maternity Care: What Do We Know & Where Are the Research Gaps?](#) *NIHR ARC West Midlands News Blog*. 30 June 2023; 5(6):3-6.



Doctors Acting as a Patient Advocate for Social Care in the Consulting Room: An Open Question

Richard Lilford, ARC WM Director

An interesting article in the New England Journal of Medicine describes the virtues of social advocacy on the part of individual patients.[1] The article describes a scenario in the USA, where a doctor completes a form to register a patient as disabled, so that they can continue to stay in their subsidised accommodation after the death of their terminal mother. The patient is thereby enabled to take better care of their diabetes.

Is this method transferable to the UK? Is it practical? Should students and general practitioners be taught how to do this as part of that training?

I refer these questions to the social care and primary care initiatives in the ARCs in both the West Midlands and beyond. However, in your next News Blog I will provide a less-supportive view of the idea that health workers should engage in provision of social care.

References:

1. Vanjani R, Reddy N, Giron N, et al. [The Social Determinants of Health — Moving Beyond Screen-and-Refer to Intervention.](#) *New Engl J Med.* 2023; **389**: 569-73.



Treatment for Infertility: Research Desert

Richard Lilford, ARC WM Director


Sir [Robert Edwards](#) won a Nobel Prize shortly before his death for the world's first IVF baby. Now, Louise Brown is 45 years old and 9% of all live births in Denmark result from IVF. Yet, according to a recent feature article in the Economist,[1] IVF is massively under-researched. This is despite the massive advances in basic biology; techniques such as *in vitro gametogenesis* are now a real possibility in humans. Basic understanding of embryo biology is poorly funded, as is clinical epidemiological research on fertility.

The ARC WM Director was the inaugural editor of the Cochrane Subfertility group back in 1992. Working with Patrick Vandekerckhove we found that infertility lagged far behind maternity care in putting treatments to an experimental test. [2] The Economist article finds that this is still the case. Assisted reproduction is a 'disruptive technology' if ever there was one. It should therefore be a suitable candidate for ARC attention. It is also a topic of interest in Middle-

Income Countries where (according to the Economist) tubal blockage is a more common cause of subfertility than in High-Income Countries. Success rates in Low- and Middle-Income Countries should be much higher because of the strong association between IVF success and age. Whether or not it would be cost-effective depends entirely on underpinning assumptions, as I have argued previously.[3]

References:

1. The Economist. [Making Babymaking Better](#). July 22.
2. Vanderkeekhove P, et al. [Infertility treatment: from cookery to science. The epidemiology of randomised controlled trials](#). *Br J Obstet Gynaecol*. 1993; **100**(11): 1005-36.
3. Girling AJ. [Modeling payback from research into the efficacy of left-ventricular assist devices as destination therapy](#). *Int J Technol Assess Health Care*. 2007. **23**(2): 269-77.



Student Assessments of Teaching Correlate Negatively with the Effectiveness of the Teaching

Richard Lilford, ARC WM Director

I thank Gus Hamilton for sending these papers to me.[1,2] They show that the teachers who are given the best marks from their students' assessments, also provide an inferior teaching experience on average. The students of teachers assigned the best marks go on to have lower achievement in subsequent assessments. This is not the result of selection bias since these studies are based on random assignment of teachers to students.

What is going on here? The authors theorise that students mark the teachers on how they feel immediately after the teaching experience. This, in turn, is a function of the effort they have had to expend during the lecture; the less effort, the better they feel. The notion that well-being correlates with student scores is supported by the additional finding that students tend to mark teachers down on dull and rainy days.

These experiments are very important, since student perception is often used to grade and even reward teachers. This so-called participant criterion, it turns out, is not a good measure of teaching excellence assuming that learning is the point of teaching, not making the student

feel good. The research also questions one of the tenets of the Kirkpatrick model of causality [3] through four stages:

Student → Knowledge → Performance on the job → Outcome (for patients/ clients)

It would seem that the model holds up, but with negative correlation between the first two, so-called Kirkpatrick levels.

References:

1. Carrell SE & West JE. Does Professor Quality Matter? Evidence from Random Assignment of Students to Professors. *J Pol Econ.* 2010; **118**(3):409-32.
2. Braga M, Paccagnella M, Pellizzari M. Evaluating students' evaluations of professors. *Econ Educ Rev.* 2014; **41**: 71-88.
3. Alliger GM, Janak EA. Kirkpatrick's Levels of Training Criteria: Thirty Years Later. *Pers Psychol.* 1989; **42**: 331-42.

Wealth and Health; Health and Wealth

Richard Lilford, ARC WM Director

The association between wealth and health has been known, at least, since the work of [Friedrich Engels](#) in the middle of the 19th century, and even earlier thanks to the work of the famous social statistician [Adolphe Quetelet](#). Recently, your ARC West Midlands News Blog has reported on contemporary evidence of the strong association, whereby increasing wealth is associated with better health, even between the 98th and 99th centiles.[1]

But what about the reverse association, that improving health improves wealth? At a very coarse-grained level, some have drawn a causal association between greater health expenditure and improving economic performance in Thailand.[2]

At a more fine-grained level, a recent important modelling study in England finds that accumulating hospital waiting lists have resulted in negative consequences for the British economy.[3]

But what about studies at the individual level? A fascinating randomised trial published in JAMA,[4] showed that a lifestyle intervention was effective in improving the health of patients with diabetes. Long-term follow-up then showed

that the intervention patients were also more likely to be employed over 15 years.

Health economics does not usually consider returns to the economy from treatments targeted at individual patients. To do so raises awkward ethical questions about fairness and discrimination against people who cannot enter the labour market. However, it is getting harder to defend not including the labour market benefits that might flow from treatment. Economic growth benefits all in society. The willingness-to-pay threshold for a new treatment should therefore take this into account. Including health benefits does not entail the necessity of focusing technology purely on people who can reap those benefits. However, it would put a premium on treatment for diseases common in younger age groups. For example, cancer and cardiovascular diseases may achieve a level of priority compared with dementia. Nevertheless, patients with dementia will benefit from a stronger economy in the longer term. Personally, I favour including potential productivity gains in health economic models, even though it will result in discrimination against older people (like the ARC WM director).

References:

1. Lilford RJ. [Wellbeing and Income: New Evidence That There is No Asymptote Where Further Wealth Causes No Further Gain in Wellbeing](#). *NIHR ARC West Midlands News Blog*. 27 January 2023; 5(1): 8.
2. Limwattananon S, et al. [Universal coverage with supply-side reform: the impact on medical expenditure risk and utilisation in Thailand](#). *J Public Econ*. 2015; 121: 79-94.
3. Williamson A & Patel P; on behalf of The Commission on Health and Policy. [Waiting for Prosperity Modelling: The Economic Benefits of Reducing Elective Waiting Lists in the NHS](#). London: Institute for Public Policy Research; 2023.
4. Huckfeldt PJ, et al. [Association of Intensive Lifestyle Intervention for Type 2 Diabetes With Labor Market Outcomes](#). *JAMA Intern Med*. 2023.



Deep Brain Stimulation to Improve Function Many Years After a Stroke: A Coming Example of a Disruptive Technology

Richard Lilford, ARC WM Director; Peter Chilton, Research Fellow

The ARC WM Director is always looking for eminent disruptive technologies; that is technologies that require substantial service change to be implemented. A recent article published in *Nature Medicine* reported a phase I trial of deep brain stimulation to improve motor function for up to three years after a stroke.[1] Patients all had a first-time stroke that resulted in moderate to severe impairment in their upper-extremities (shoulders, elbows, forearms, etc), which had lasted for between 1-3 years. Nine out of 12 patients experienced clinically important improvements in motor function and decreases in impairment.

Of course, these results need to be confirmed in larger studies. However, in cases where we can be reasonably sure that the outcome could not arise in a counterfactual sense, the above study provides strong causal evidence.

Therefore, even at this early stage, it may be worth modelling potential benefits and costs, and determining the proportion of patients for whom this therapy may be appropriate. It is estimated that up to 85% of people who suffer a stroke have some impairment of their upper extremities, and of these, 45-75% do not go on to achieve functional recovery. We should work out the operational requirements for surgical facilities and potential concentration of neurosurgical facilities.

References:

1. Baker KB, Plow EB, Nagel S, et al. [Cerebellar deep brain stimulation for chronic post-stroke motor rehabilitation: a phase I trial](#). *Nat Med.* 2023.

Database Analysis of Gender-Affirming Studies

Peter Chilton, Research Fellow

Following changes to laws in the USA, transition-related care, such as gender-affirming surgeries, were required to be covered by health insurance (to various degrees). The authors of a recent paper in JAMA [1] looked at the numbers of patients undergoing various gender-affirming surgeries in the USA from 2016-2020, using the Nationwide Ambulatory Surgery Sample and the National Inpatient Sample. Database analysis looked for patients coded with gender identify disorder, transsexualism or a history of sex reassignment, and the performance of a gender-affirming surgery.

Over the five-year period, approximately 48,000 patients underwent a form of gender-affirming surgery, of which around half were 19-30 years old. The majority of patients were treated at teaching hospitals (88.4%), and were predominantly in the West (45.9%) and Northeast (25.8%) of the country. Approximately two-thirds of patients underwent a single procedure, and the most common types of surgery were breast/chest procedures (56.6%), followed by genital reconstruction (35.1%), and facial or cosmetic procedures, such as liposuction or

rhinoplasty (13.9%). When stratified by age, breast/chest procedures were more common in younger patients, and genital reconstruction more common in older patients. There has been a rising trend in these procedures over time, from 4,552 in 2016, to 12,818 in 2020, with a peak of 13,011 in 2019.

This study does not tell us how much benefit people derived from their surgery; which patients benefit most; or when the operation is best performed. In fact, measuring such benefit would be a tricky matter, although the issue could be tackled by a preference-based trial where only equipoised patients are randomised. [2]

References:

1. Wright JD, et al. [National estimates of Gender-Affirming Surgery in the US](#). *JAMA Network Open*. 2023; 6(8): e2330348.
2. Chard JA, Lilford RJ. [The use of equipoise in clinical trials](#). *Soc Sci Med*. 1998; 47(7): 891-8.

ARC WM Quiz

Friday 29th September is [World Heart Day](#), which aims to reduce deaths due to cardiovascular disease from 20.5 million. But, on what day of the week are deadly heart attacks more common?

email your answer to: ARCWM@warwick.ac.uk

Answer to previous quiz: It is thought that cats may cause schizophrenia in humans through parasites, such as *Toxoplasma gondii*.

Congratulations to Alan B Cohen and Alan Hargreaves who were first to answer correctly.





Costs of Manufacturer Payments to Practitioners

Peter Chilton, Research Fellow

Age-related macular degeneration is a progressive disease that is the leading cause of blindness in older adults in the USA. There are currently three treatments that are recommended, and evidence has shown that there is no clinically significant difference between them. However, there is a substantial difference in cost: in 2020 the off-label drug (bevacizumab) cost around \$70, while the others (ranibizumab and aflibercept) cost ~\$333 and ~\$920. These costs are borne by both the Medicare programme, as well as the patients, who are liable for 20% of treatment costs.

As part of the Medicare Part B programme, health care practitioners are reimbursed for drugs administered based on average sales prices. However, there is also a percentage-based add-on payment, which means that prescribing a higher-cost product gains the practitioner almost double the profit over the lower-cost product.

A recent cross-sectional study in JAMA Health Forum looked at data from more than 21,000 ophthalmologists,[1] and found

that those who had accepted consulting or research payments from one of the two drug manufacturers (amounting to around a quarter of ophthalmologists) were significantly less likely to prescribe the lower-cost drug (28.0%, 95 CI 24.6-42.5%) than those who did not accept such payments (45.8%, 95% 44.5-47.1%).

In 2020 both aflibercept and ranibizumab had a combined annual cost of more than \$4 billion (and were the 2nd and 6th most expensive drug for the Medicare Part B programme) and accounted for more than 10% of all Medicare Part B drug spending. The authors estimated that there would have been a saving of \$642 million had all ophthalmologists prescribed the lower-cost drug at the same rate as those who did not accept payments. This amounts to around \$5,231 per Medicare beneficiary per year.

Reference:

1. Dickson SR & James KE. [Medicare Part B Spending on Macular Degeneration Treatments Associated With Manufacturer Payments to Ophthalmologists](#). *JAMA Health Forum*. 2023; 4(9): e232951.



Stepped-Wedge Cluster Trial on Dignity Therapy

Peter Chilton, Research Fellow

Patients with terminal diagnoses often want to address central spiritual/existential issues and tasks before it is too late. Dignity Therapy follows a set process to facilitate personal reflection and recognition, aiming to allow patients to make meanings of their experiences, and produce a legacy document. Although patients have reported that this is beneficial, Dignity Therapy has not been shown to produce a consistent improvement on measured quality-of-life outcomes.

A recent study published in the *Journal of Palliative Medicine* [1] caught the ARC WM Director's eye, as it utilises his work on stepped-wedge design to evaluate Dignity Therapy.[2] In a stepped-wedge cluster trial all sites eventually transition to the intervention arms but do so in random order. This trial involved six US sites that transitioned from usual outpatient palliative care to Dignity Therapy at 12-month intervals. The Dignity Therapy was administered by either a chaplain or a nurse. A total of 579 patients who had been diagnosed with cancer were assessed using the seven-item Dignity Impact Scale (DIS), which asks patients, for example, how much they agree that their care has reduced

their sadness/depression, made them feel life was more meaningful, etc.

Results (adjusted for age, sex, race, education, income) showed that patients in both chaplain-led and nurse-led Dignity Therapy groups reported significantly improved DIS scores compared to patients who had received usual care ($p=0.02$ and $p=0.005$ respectively). There were no significant improvements in other outcomes, such as 'life completion' or 'peaceful awareness of terminal illness'.

How should we interpret this lack of improvement in other outcomes; that the DIS scale is no good or that the therapy is no good?

References:

1. Wilkie DJ, et al. [Engaging Mortality: Effective Implementation of Dignity Therapy](#). *J Palliat Med*. 2023.
2. Brown CA, Lilford RJ. [The stepped wedge trial design: a systematic review](#). *BMC Med Res Methodol*. 2006; 6: 54.

Latest News and Events

Black History Month Seminar

ARC West Midlands, together with other NIHR centres in the Midlands, are hosting an online webinar for Black History month, entitled *Celebrating Our Sisters - Sustaining Black Women in Research*.

The session will be held on **Monday 16 October from 12-2pm**.

To register, please visit: eventbrite.co.uk/e/celebrating-our-sisters-supporting-and-sustaining-black-women-in-research-tickets-717804832577.



Latest National NIHR ARC Newsletters

The latest issues of the national NIHR ARC newsletter is now available online.

- August: <http://eepurl.com/iwloak>
- September: <http://eepurl.com/iwToHY>

These feature research on the long-term impacts of childhood anxiety; supporting parent carer mental health; a toolkit to support charities and not-for-profit organisations to demonstrate and measure impact; evaluating children's physical activity, health and wellbeing; and a toolkit to address health inequalities caused by dental decay.

To subscribe to future issues, please visit: <https://tinyurl.com/ARCnewsletter>.



Targets for Referral to Treatment Leading to Unintended Consequences for Patient Care

An ARC West Midlands study ([Quinn, et al. BMJ Qual Saf. 2023](#)) of more than 120 English NHS Trusts has found that current targets for referral to treatment are leading to unintended consequences for patient care. The results showed evidence of a threshold effect, suggesting that while targets change behaviour, they do so in

a selective way, focusing on the threshold rather than a pervasive improvement in practice.

This research has been picked up by a number of UK newspapers, and you can read a press release at: birmingham.ac.uk/news/2023/unintended-consequences-of-treatment-targets-see-fewer-patients-treated-in-18-week-window.

National Early Warning Score 2: NIHR Evidence Alert

A paper worked on by researchers from ARC West Midlands, alongside ARC East Midlands, ARC North East & North Cumbria, and others is the focus of a recent NIHR Evidence Alert.

Their research shows that the National Early Warning Score (NEWS2) can effectively identify worsening conditions in care home residents admitted to hospital as an emergency.

Read more at: <https://evidence.nihr.ac.uk/alert/news2-patient-score-can-predict-worsening-condition-in-care-home-residents/>

Systematic Reviews of Mixed Methods Evidence CPD Course

University of Exeter are hosting a CPD Course on Systematic Reviews of Mixed Methods Evidence on **25-26 January 2024**. This course will focus on approaches, tool and methodologies; how to formulate mixed methods review questions; and approaches to searching, study selection, data extraction and critical appraisal.

More information is available at: medicine.exeter.ac.uk/cpd/systematicreviews/

Early bird discount is available until 31 October 2023.

Congratulations Dr Sue Molesworth

Congratulations to Dr Sue Molesworth (Keele University), who has recently been invited to join the NIHR Dementia Portfolio Development ECR (Early Career Researchers) Subgroup.

The Dementias Portfolio Development Group aim to identify research gaps, as well as support writing groups to formulate and prepare grant applications for clinical studies and health & social care research.

Working Effectively with Public Contributors - Webinar

ARC West are hosting a webinar on **31 October 1-2pm** about how to work effectively with public contributors. This will be presented by public contributors from ARC West, as well as Bristol Biomedical Research Centre.

This webinar builds on the recently published guide and diagram developed by public contributors at ARC West (<https://bit.ly/3Ovxupu>)

To book a place, please visit: <https://bit.ly/3LjXTER>.

NIHR Pre-Application Support Fund

The first round of the NIHR Pre-Application Support Fund scheme has recently opened. This scheme provides extra support for up to 12 months to those who need it to enhance their chances of making a successful application to an NIHR career development scheme in the future.

Further information is available at: nihr.ac.uk/funding/funding-post-for-the-nihr-pre-application-support-fund-round-1/34439

The deadline is 13:00 on **30 November 2023**.

Recent Publications

Cox N, Hawarden A, Bajpai R, Farooq S, Twohig H, Muller S, Scott IC. [The relationship between pain and depression and anxiety in patients with inflammatory arthritis: a systematic review protocol](#). *Rheumatol Int*. 2023.

Crawford H. [Social Anxiety in Neurodevelopmental Disorders: The Case of Fragile X Syndrome](#). *Am J Intellect Dev Disabil*. 2023; **128**(4): 302-318.

Grey E, Griffin T, Jolly K, Pallan M, Parretti H, Retzer A, Gillison F. [Extended brief interventions for weight management and obesity prevention in children: A rapid evidence review](#). *Obes Rev*. 2023; e13633.

Healey EL, McBeth J, Nicholls E, Chew-Graham CA, Dent S, Foster NE, Herron D, Pincus T, Hartshorne L, Hay EM, Jinks C. [The acceptability and feasibility of conducting a randomised controlled trial to test the effectiveness of a walking intervention for older people with persistent musculoskeletal pain in primary care: A mixed methods evaluation of the iPOPP pilot trial](#). *Musculoskeletal Care*. 2023.

Kirchhof P, Toennis T, Goette A, Camm AJ, Diener HC, Becher N, Bertaglia E, Blomstrom Lundqvist C, Borlich M, Brandes A, Cabanelas N, Calvert M, Chlouverakis G, Dan GA, de Groot JR, Dichtl W, Kravchuk B, Lubiński A, Marijon E, Merkely B, Mont L, Ozga AK, Rajappan K, Sarkozy A, Scherr D, Sznajder R, Velchev V, Wichterle D, Sehner S, Simantirakis E, Lip GYH, Vardas P, Schotten U, Zapf A; NOAH-AFNET 6 Investigators. [Anticoagulation with Edoxaban in Patients with Atrial High-Rate Episodes](#). *N Engl J Med*. 2023.

Lee SI, Hanley S, Vowles Z, Plachcinski R, Moss N, Singh M, Gale C, Fagbamigbe AF, Azcoaga-Lorenzo A, Subramanian A, Taylor B, Nelson-Piercy C, Damase-Michel C, Yau C, McCowan C, O'Reilly D, Santorelli G, Dolk H, Hope H, Phillips K, Abel KM, Eastwood KA, Kent L, Locock L, Loane M, Mhereeg M, Brocklehurst P, McCann S, Brophy S, Wambua S, Hemali Sudasinghe SPB, Thangaratinam S, Nirantharakumar K, Black M; MuM-PreDiCT Group. [The development of a core outcome set for studies of pregnant women with multimorbidity](#). *BMC Med*. 2023; **21**(1): 314.

Mason KJ, Jordan KP, Heron N, Edwards JJ, Bailey J, Achana FA, Chen Y, Frisher M, Huntley AL, Mallen CD, Mamas MA, Png ME, Tatton S, White S, Marshall M. [Musculoskeletal pain and its impact on prognosis following acute coronary syndrome or stroke: A linked electronic health record cohort study](#). *Musculoskeletal Care*. 2023; **21**(3): 749-76.

Ochalek J, Gibbs NK, Faria R, Darlong J, Govindasamy K, Harden M, Meka A, Shrestha D, Napit IB, Lilford RJ, Sculpher M. [Economic evaluation of self-help group interventions for health in LMICs: a scoping review](#). *Health Policy Plan*. 2023; czado60.

Omigbodun AO, Agboola AD, Fayehun OA, Ajisola M, Oladejo A, Popoola O, Lilford R. [Trends in Clinical Stage at Presentations for Four Common Adult Cancers in Ibadan, Nigeria](#). *medRXiv*. 2023.

Osuh ME, Oke GA, Lilford RJ, Osuh JI, Lawal FB, Gbadebo SO, Owoaje E, Omigbodun A, Adedokun B, Chen YF, Harris B. [Oral health in an urban slum, Nigeria: residents' perceptions, practices and care-seeking experiences](#). *BMC Oral Health*. 2023; **23**(1): 657.

Quinn L, Bird P, Remsing S, Reeves K, Lilford R. [Unintended consequences of the 18-week referral to treatment standard in NHS England: a threshold analysis](#). *BMJ Qual Saf*. 2023.

Retzer A, Baddeley E, Sivell S, Scott H, Nelson A, Bulbeck H, Seddon K, Grant R, Adams R, Watts C, Aiyegbusi OL, Kearns P, Rivera SC, Dirven L, Calvert M, Byrne A. [Development of a core outcome set for use in adult primary glioma phase III interventional trials: A mixed methods study](#). *Neurooncol Adv*. 2023; **5**(1): vdado96.

Shantsila E, Shantsila A, Williams N, Lip GYH, Gill PS. [Left ventricular hypertrophy and mortality in ethnic minority groups in the UK: e-ECHOES study](#). *J Hypertens*. 2023.

Sokhal BS, Matetić A, Abhishek A, Banerjee A, Partington R, Roddy E, Rashid M, Mallen CD, Mamas MA. [Impact of Frailty on Emergency Department Encounters for Cardiovascular Disease: A Retrospective Cohort Study](#). *Am J Cardiol*. 2023; **206**: 210-218.

Swaithes L, Campbell L, Anthierens S, Skrybant M, Schiphof D, French H, de Wit M, Blackburn S, Dziedzic K. [Series: Public engagement with research. Part 4: Maximising the benefits of involving the public in research implementation](#). *Eur J Gen Pract*. 2023; **29**(1): 2243037.

Taxiarchi VP, Chew-Graham CA, Pierce M. [Substantially more children receiving antidepressants see a specialist than reported by Jack et al](#). *BMC Med*. 2023; **21**(1): 345.

Vadegar S, Buckle A, Hooper A, Booth S, Deakin CD, Fothergill R, Ji C, Nolan JP, Brown M, Cowley A, Harris E, Ince M, Marriott R, Pike J, Spaight R, Perkins GD, Couper K. [Trends in use of intraosseous and intravenous access in out-of-hospital cardiac arrest across English Ambulance Services: A registry-based, cohort study](#). *Resuscitation*. 2023: 109951.