



Cite this as: *BMJ* 2023;381:p1163  
<http://dx.doi.org/10.1136/bmj.p1163>  
 Published: 25 May 2023

## Ann Robinson's research reviews—25 May 2023

Ann Robinson *NHS GP and health writer and broadcaster*

### Waking up to diversity

We've woken up to the fact that research that focuses on richer countries alone is of limited value. Most of what we know about the epidemiology of common conditions such as heart failure comes from high income countries rather than low and middle income countries.

This study of over 23 000 patients with heart failure from 40 low to high income countries found that the percentage of patients receiving optimal treatment was lower (45.7% v 61.9%), standardised mortality rates were higher (19.1 v 7.8/100 person-years), and the risk of dying within a month of first hospital admission was 3-5 times higher in low income compared with high income countries. There were substantial differences in causes, management, and outcomes in heart failure which need to be understood for planning and implementation. Any doctor working in a diverse city such as London will know that narrowly focused research is useless.

*JAMA* doi:10.1001/jama.2023.5942

### Huffing, puffing, and blowing your house down

This US cohort study of 123 children aged 5-17 years with persistent asthma found that a housing mobility programme, which rehoused families from poor, urban areas to a "low-poverty" neighbourhood, was associated with significantly fewer asthma exacerbations after the move (0.40 v 0.88 exacerbations/person-year). Of the children, 97.6% were Black, and, before the move, 81% lived in areas in which >20% of families were below the poverty line. Before moving 15% of children had at least one exacerbation in a three month period, compared with 8.5% after moving. About a third of the positive effect was attributed to moving to a safer, more socially cohesive and less deprived area. The impact on asthma is apparently comparable to biological agents and greater than inhaled corticosteroids. Housing mobility programmes are a much more drastic option than letting people stay put but improving their living conditions and air quality. This study adds to evidence that preventing and treating asthma is about far more than merely doling out puffers.

*JAMA* doi:10.1001/jama.2023.6488

### Patching the evidence gap in alopecia

Alopecia is a surprisingly common and distressing autoimmune condition, affecting 2% of the global population. The more extensive the hair loss, the less likely it is to grow back, and we generally have nothing but platitudes to offer. Baricitinib, a janus kinase (JAK) inhibitor also used to treat rheumatoid arthritis and eczema, is the only registered treatment

available, but, last week, it failed to gain NICE approval in England, to the outrage of patient groups.

This multicentre study involving 718 people over the age of 12 years with alopecia of at least 50% of scalp hair found significant hair regrowth with another JAK inhibitor, ritlecitinib. Over 48 weeks, there were no deaths, major cardiovascular events, or severe infections. This study was particularly useful because, unlike previous research with JAK inhibitors, it included adolescents. A long term study is ongoing which may provide campaigners with convincing evidence to present to NICE and offer an effective, safe solution for those living with alopecia.

*Lancet* doi:10.1016/S0140-6736(23)00222-2

### Vitamin B12 supplements in pregnancy: no benefit, could cause harm

Folic acid supplementation in pregnancy has been a great success, and we see far fewer cases of spina bifida than we used to as a result. Is there also a case for vitamin B12 supplementation, especially in low and middle income countries where pregnant women often have low levels?

This landmark study from Nepal, the first randomised trial to address this question, found that over two thirds of pregnant women had low or marginal B12 levels. Vitamin B12 supplementation (50 µg/day) for a year, starting in early pregnancy and continuing after birth, certainly boosted levels in mothers and infants, which may have unknown benefits, but it didn't improve infant growth or neurodevelopment. In fact, early motor performance at 2-3 months old worsened, a possible red flag that needs further study. Vitamin B12 didn't have any impact on pregnancy outcomes such as stillbirth and neonatal deaths. The findings support WHO recommendations against routine vitamin B12 supplementation in pregnancy.

*Lancet* doi:10.1016/S0140-6736(23)00346-X

### Divining the truth about leprosy

Leprosy still causes 200 000 new cases a year worldwide despite the availability of multidrug therapy for the past 40 years. Previous studies suggested that a single dose of rifampicin provides effective prophylaxis in close contacts of leprosy. This study from China found that a single dose of rifapentine, a more bactericidal variant of rifampicin, reduced the incidence of leprosy in 7450 household contacts over four years compared with rifampicin or no intervention, though numbers were very small (2 v 9 v 13 new cases). This study needs to be repeated in countries with higher endemic rates of leprosy to determine cost effectiveness and whether widespread prophylaxis might foster resistant strains.

*N Engl J Med* doi:10.1056/NEJMOa2205487

Competing interests: None declared

Provenance and peer review: Not commissioned; not peer reviewed