All you need to read in the other general medical journals
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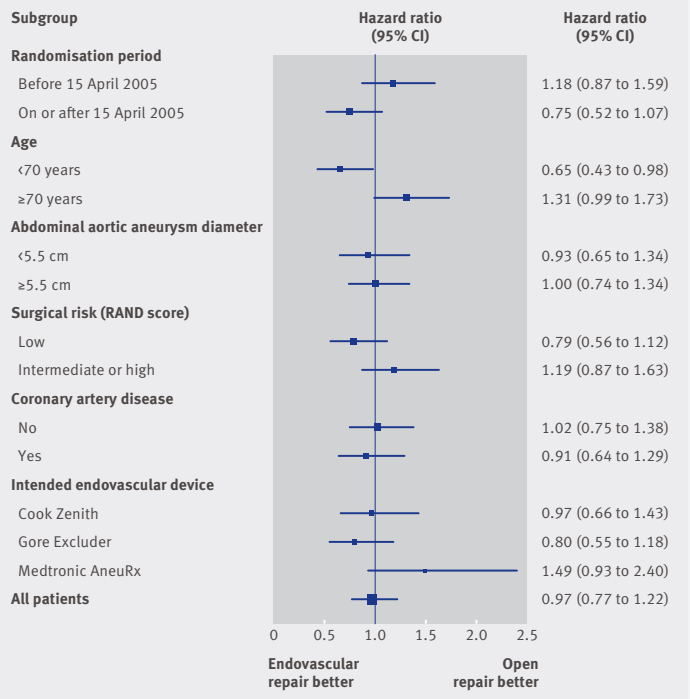
"I am an authority on criminality in Sweden, having watched all the episodes of *Wallander* at least twice. I can tell you there are only two swear words in Swedish, that murder is very common, and that almost everybody has seasonal affective disorder throughout the year"
Richard Lehman's blog at www.bmj.com/blogs

Risk of death according to baseline characteristics



Adapted from *N Engl J Med* 2012;367:1988-97

Endovascular or open repair for abdominal aortic aneurysm?

Elective endovascular repair of abdominal aortic aneurysm is associated with lower perioperative mortality than open repair, and the survival advantage persisted for three years in the biggest and most recent head to head trial. By five years, however, there was no difference in all cause mortality between the two procedures, thanks to an excess of late deaths after endovascular repair (long term mortality 146 deaths/444 (32.9%) *v* 146/437 (33.4%); hazard ratio 0.97, 95% CI 0.77 to 1.22).

Few patients in either group died of their aneurysm, and endovascular repair remains a reasonable alternative to open surgery, say the authors. The two types of repair have similar long term mortality for patients who can choose. The participants in this US trial were almost exclusively white men who were current or ex-smokers. They had a mean age of 70 years when recruited, a high prevalence of smoking related cardiovascular and pulmonary disease, and aneurysms measuring a mean of 5.7 cm across. Endovascular repair looked a better option for younger patients in subgroup analyses.

These latest results are consistent with long term follow-up from two European trials, says a linked editorial (p 2041). Endovascular repair looks safer than open repair in the short and medium term, but mortality catches up later. It is not yet clear why, although the authors suspect that this pattern is the result of the frailest patients dying earlier after open repair and later after endovascular repair.

N Engl J Med 2012;367:1988-97
Cite this as: *BMJ* 2012;345:e8028

Atrial fibrillation linked to sudden cardiac death

Adults with atrial fibrillation were two to three times more likely to die suddenly of a presumed cardiac arrhythmia than similar adults without atrial fibrillation in an analysis of two large US cohorts. The association seemed independent of other risk factors for sudden cardiac death, including hypertension, diabetes, coronary heart disease, heart failure, and left ventricular hypertrophy. In the younger cohort (45-64 years at baseline), incidences of sudden cardiac death were 2.89 per 1000 person years for adults with atrial fibrillation and 1.30 per 1000 person years for adults without atrial fibrillation. Absolute risks were higher in the older cohort, all of whom were at least 65 years of age when recruited. The authors report a fully adjusted hazard ratio of 2.47 (95% CI 1.95 to 3.13) for both cohorts combined, during an average follow-up of 13 years. The link between atrial fibrillation and sudden cardiac death was similar in men and women.

Sudden cardiac death can be added to the list of serious outcomes already associated with atrial fibrillation, such as stroke, heart failure, and death from all causes, says a linked editorial (doi:10.1001jamainternmed.2013.1774). But doctors can do little to reduce risk until we know whether atrial fibrillation is a predictor or a cause of lethal ventricular arrhythmias. Both options are still possible.

These authors were unable to capture asymptomatic atrial fibrillation or atrial fibrillation managed exclusively in outpatient or primary care clinics. Most cases of new atrial fibrillation in these cohorts were identified from hospital discharge records.

Arch Intern Med 2012;
doi:10.1001/2013.jamainternmed.744
Cite this as: *BMJ* 2012;345:e8029

Prediction tools for kidney disease aren't mature enough for clinical use

Researchers have been busy developing tools to help predict who will develop chronic kidney disease. Systematic reviewers recently found 30 prediction models, most of which included age, sex, body mass index, diabetes, systolic blood pressure, serum creatinine, a measure of proteinuria, and serum albumin or total protein. The same reviewers found another 17 models that researchers hoped would predict which adults with chronic kidney disease are most likely to progress to end stage renal failure.

Both sets of models were in the early stages of development and usually still expressed as mathematical formulas, rather than easy to use scores or calculators. Few had been tested in populations beyond the sample used to derive them. Those that were externally validated generally looked less reliable afterwards. None of the models had been road tested in controlled trials to make sure it did more good than harm in practice.

Reliable and accurate prediction of chronic kidney disease may prove useful one day, perhaps to direct screening more efficiently. But we still have a long way to go, say the authors. Researchers in the field should probably focus on further validation of existing models, rather than on developing new ones. Only then can we debate how best to use them.

PLoS Med 2012;9:e1001344
Cite this as: *BMJ* 2012;345:e8031

Dismal forecast for preterm births

Prematurity is a leading cause of death in young children, second only to pneumonia. Fifteen million babies are born too early every year, and national rates are unlikely to fall much by 2015, say researchers. A relative reduction of just 5%—from 9.59% of live births to 9.07%—is the best that even the richest countries can hope for, according to their forecast. To achieve this small reduction, all 39 developed countries in the analysis would have to match the best performers by implementing on a large scale the only five interventions known to have any effect—smoking cessation, a halt to multiple embryo transfers, cervical cerclage, progesterone supplementation, and reduction of unnecessary iatrogenic preterm delivery. Caesarean sections and inductions with no clear medical indication accounted for 20% of the increase in preterm births recorded in the US between 1989 (10.6% of live births) and 2004 (12.5% of live births).

Why can't we do better? Our understanding of the problem is inadequate, says a linked comment (doi:10.1016/S0140-6736(12)61956-4). We don't know much about what causes preterm labour, and we can't yet identify women at risk beyond those with a history. What little we do know doesn't translate well into effective action. We are currently tinkering around the edges, with little help from drug companies who need encouragement to engage in the treatment of pregnant women, says the comment.

The researchers describe their forecast more bluntly: "Surely this humbling and shocking finding must lead to strategic prioritisation of research into prevention of preterm births."

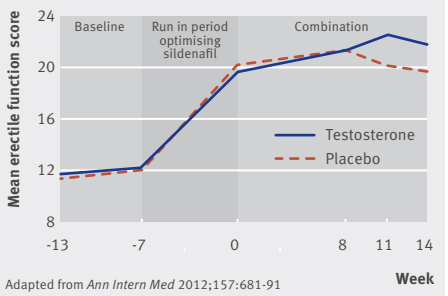
Lancet 2012; doi:10.1016/S0140-6736(12)61856-X

Cite this as: *BMJ* 2012;345:e8014

No need to add testosterone to sildenafil

Erectile dysfunction and low serum concentrations of testosterone often coexist, so researchers designed a double blind placebo controlled trial to test whether men with both should add testosterone gel to their regular treatment with sildenafil. The extra testosterone made no difference to erectile function scores or any other measure of sexual wellbeing in middle aged men, despite serum concentrations of testosterone increasing to within normal limits.

Change in erectile function



Adapted from *Ann Intern Med* 2012;157:681-91

The 140 men spent three to seven weeks optimising their sildenafil before randomisation, then 14 weeks using the same dose of sildenafil plus three tubes a day of testosterone or placebo gel. Their sex lives improved significantly during the run in period. Men in both groups reported similar sexual activity, satisfaction, and quality of life for the rest of the trial. The extra testosterone failed to work for any subgroup identified by age, body mass index, or baseline concentration of testosterone. Adherence was good, although six men dropped out because of side effects. Five were using the active gel.

These participants were fairly typical of middle aged men presenting to surgeries and clinics with erectile problems and low concentrations of testosterone, say the researchers. Sildenafil alone worked well for them, and doctors may want to rethink the common practice of routinely adding exogenous testosterone in the hope of even better outcomes.

Ann Intern Med 2012;157:681-91

Cite this as: *BMJ* 2012;345:e8016

Immunity wanes after vaccination against whooping cough

There is a growing feeling among experts that modern acellular vaccines against *Bordetella pertussis* are not as durable as the old whole cell ones. A case-control study of children from California seems to support this theory, with odds of infection rising and vaccine efficacy falling with each year since completion of the vaccination schedule. Estimated efficacy of five doses of the acellular vaccine fell from 98.1% (95% CI 96.1% to 99.1%) in the 12 months after the last dose to 71.2% (45.8% to 84.8%) after five years.

The authors compared the vaccination histories of 682 people reported to have whooping cough with 2016 uninfected controls. All were recruited in 2010, during the biggest outbreak for 60 years, in which 10 infants died. This study and others were launched in response to particularly high rates of whooping cough among preadolescents, despite high coverage of the recommended DTaP (diphtheria, tetanus, and acellular pertussis) vaccine.

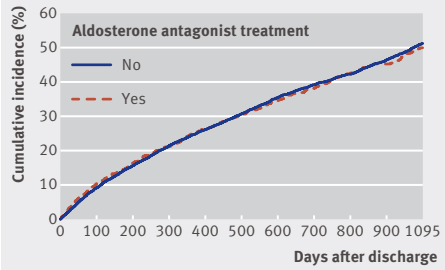
The new analyses add to other circumstantial evidence from California and elsewhere that current vaccine strategies aren't working for long enough to protect vulnerable groups of older children, says a linked editorial (p 2149). Whooping cough can be serious for these children and deadly for any young unvaccinated infants who they come into contact with. Better vaccines might be needed in the long run. Meanwhile, public health authorities should consider redesigning schedules to make smarter use of the vaccine that we have, which works considerably better than nothing.

JAMA 2012;308:2126-32

Cite this as: *BMJ* 2012;345:e8027

Evidence for and against aldosterone antagonists in heart failure

Effect of aldosterone antagonist treatment on mortality



Adapted from *JAMA* 2012;308:2097-107

Randomised trials and observational studies often disagree. Usually, observational studies suggest that an intervention works but rigorous trials fail to confirm this. The opposite occurred in studies evaluating spironolactone and other aldosterone antagonists for adults with heart failure. Trials show that these drugs can save lives and reduce hospital admissions. But a new observational evaluation of patients treated in everyday clinical practice found that survival was no better in people given aldosterone antagonists than in matched patients managed without them. Treated patients were less likely to be admitted with heart failure and more likely to be admitted with hyperkalaemia. All participants had a reduced ejection fraction.

The new study linked a well established heart failure register with claims data from Medicare, federally funded care for US adults aged 65 years and over. The authors used comprehensive matching to compare what happened over three years to cohorts of similar adults managed with and without these agents. The study was big, powerful, and statistically sophisticated, says a linked editorial (p 2144). Should we believe it? Trials and observational studies are complementary, even when they seem to contradict each other. Randomised trials are still the reference standard, however. We know that these drugs can work in trial participants. The new observations tell us that we can't always detect a positive signal in large populations of real patients who are older, sicker, and less closely monitored. Spironolactone is still a good treatment for heart failure. We just need to use it more carefully and selectively.

JAMA 2012;308:2097-107

Cite this as: *BMJ* 2012;345:e8024