

# SHORT CUTS

ALL YOU NEED TO READ IN THE OTHER GENERAL JOURNALS

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## Admissions for childhood asthma fell steadily after Scotland's smoking ban

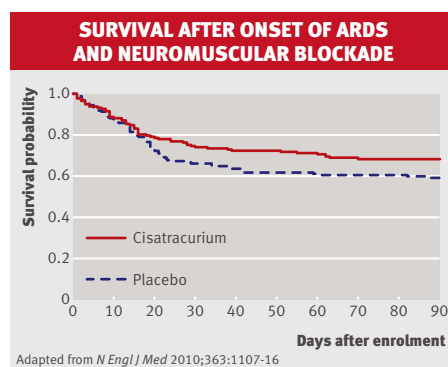
In March 2006 legislators banned smoking in public places and workplaces across Scotland, a country of five million people. Hospital admissions for asthma among children fell by 18.2% per year (95% CI 14.7% to 21.8%) after the ban, according to a time trend analysis. The reduction was significant and remained significant through adjustments for age, sex, year, month, social class, and urban or rural residence. Asthma admissions fell among schoolchildren (by 20.8%, 95% CI 16.6% to 25.1%) and preschool children (18.4%, 14.3% to 22.4%) in all regions of Scotland regardless of their level of affluence. Admissions had been rising steadily before the ban, by an average of 5.2% a year (3.9% to 6.6%).

The authors tracked hospital admissions for asthma between 2000 and 2009 using routinely collected data. Their study can't prove that banning smoking caused the trends, but the authors think other explanations unlikely. This new evidence should help lay to rest any residual worries that banning smoking in public places would drive smokers back home and increase children's exposure, they write. A substantial body of evidence links environmental tobacco smoke with an increased risk of asthma, and we already know that smoking bans are associated with improvements in respiratory symptoms among workers in bars, pubs, and clubs. This study suggests that the

benefits extend to children, who have the most to lose from exposure to cigarette smoke because of their small size, smaller airways, and a relatively high respiratory rate.

*N Engl J Med* 2010;363:1139-45

## Neuromuscular blockade reduces mortality in ARDS



Researchers from France recently reported a rare success story in the management of acute respiratory distress syndrome (ARDS). Early paralysis with cisatracurium besylate significantly reduced mortality in a placebo controlled trial (adjusted hazard ratio for death within 90 days 0.68, 95% CI 0.48 to 0.98).

The 340 participants had severe ARDS managed with a tightly controlled ventilation protocol designed to minimise further lung injury. They received cisatracurium or placebo infusions for 48 hours, starting soon after diagnosis. Those given the neuromuscular blocker were weaned from mechanical ventilation faster than the controls, and left the intensive care unit sooner. They were less likely than controls to develop organ failure, a pneumothorax (relative risk 0.34, 95% CI 0.15 to 0.78), or any other form of barotrauma (0.43, 0.2 to 0.93). In secondary analyses, patients with severe hypoxaemia seemed to benefit most from neuromuscular blockade (mortality at 90 days 30.8% v 44.6%,  $P=0.04$ ).

Neuromuscular blockade is not a new treatment for ARDS, says an editorial (pp 1176-80), although most units use it sparingly because of the potential for side effects such as lasting muscle weakness. There was no evidence of it in this trial: patients in both groups had matching scores on a validated measure of muscle strength when they left the intensive care unit.

*N Engl J Med* 2010;363:1107-16

## Researchers identify a COPD phenotype susceptible to exacerbations

People with chronic obstructive pulmonary disease (COPD) are a heterogeneous group. Characterising them better would help doctors target treatments at those most likely to benefit and help trialists recruit the right mix of patients for the intervention under study. With these aims in mind, one team took a close look at a cohort of 2138 adults with COPD, recruited for an observational study funded by GlaxoSmithKline. They identified what seemed to be a distinct phenotype—people who tend to get frequent exacerbations, whatever the severity of their underlying disease. The phenotype seemed relatively stable during three years of follow-up, and was independently associated with poor quality of life, a history of gastro-oesophageal reflux, and a high white cell count.

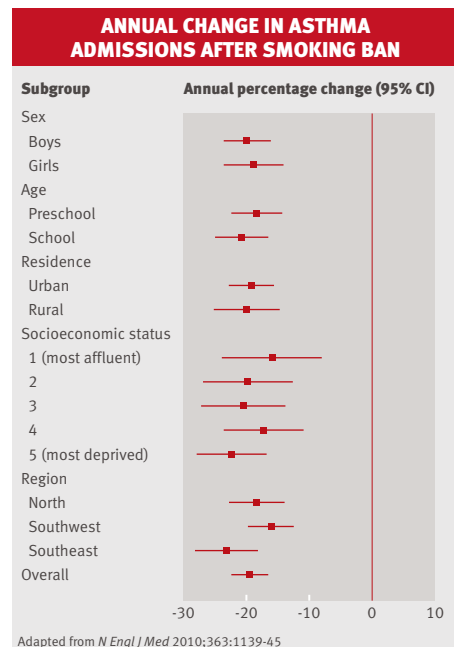
A history of exacerbations was the best predictor of future exacerbations in this analysis (odds ratio for frequent exacerbations 5.72, 95% CI 4.47 to 7.31). So the “frequent exacerbations” phenotype may be identifiable with a few simple questions, say the authors. They defined exacerbation as events that required treatment with antibiotics or corticosteroids, or both. The definition captured exacerbations treated in primary care and in hospital.

If this distinct phenotype is real, there must be an underlying mechanism triggering the exacerbations, says an accompanying editorial (pp 1183-4). Options include poor adherence to medication, increased susceptibility to respiratory tract infections, and microaspiration from gastro-oesophageal reflux.

*N Engl J Med* 2010;363:1128-38.

## Professional distress linked to unprofessional behaviour

When researchers surveyed students at seven US medical schools, more than half the respondents reported burnout, characterised by emotional exhaustion, feelings of depersonalisation, and a sense of low personal accomplishment (1354/2566, 52.8%). In cross sectional analyses, burnout was significantly associated with unprofessional behaviour and attitudes, including cheating at assessments and fibbing about missing test results (35% admitted to  $\geq 1$  unprofessional behaviours v 21.9% of students without burnout;



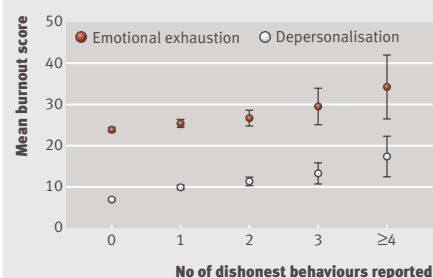
Adapted from *N Engl J Med* 2010;363:1139-45



**“For drug companies wanting big profits from chronic diseases, surrogate markers are Satan’s gift, saving them the trouble of looking at real end points and allowing them to sell billions of dollars’ worth of drugs before they are proved to be ineffective or harmful”**

Read Richard Lehman’s journal blog at [bmj.com/blogs](http://bmj.com/blogs)

### UNPROFESSIONAL BEHAVIOURS AND MEASURES OF BURNOUT



Adapted from *JAMA* 2010;304:1173-80

odds ratio 1.89, 95% CI 1.59 to 2.24). Students reporting burnout also seemed significantly less altruistic than their peers when asked directly about the needs of the “medically underserved.”

The medical students surveyed were generally ignorant of the American Medical Association’s guidance about links with drug companies, and those with burnout were no more ignorant than others. Almost half of all respondents thought it was acceptable to be wined and dined by a drug company (1176/2532, 46.4%), more than a quarter would accept a free skiing trip (688/2531, 27.2%), and just over a fifth felt \$500 (£320; €382) would be a reasonable fee for 10 minutes’ paperwork for an industry representative (567/2529, 22.4%). Overall, only 14% (362/2531) of respondents gave answers completely consistent with the AMA’s guidance. The authors conclude that US educators should do a better job teaching future doctors about conflicts of interest. Their survey had a 61% response rate (2682/4400).

*JAMA* 2010;304:1173-80

### Educating women saves their children

Girls and women worldwide are being educated for longer than ever before and, by 2009, were spending almost as many years in school as boys and men, according to the latest estimates. Developing countries have made the best progress, particularly for women of childbearing age, although the overall figures disguise the widening gap between countries at the top and bottom of the educational league table. In 2009, women in Afghanistan, Burkina Faso, Chad, Mali, Niger, and Yemen had been in school for less than one year on average, compared with 12 years in countries at the top.

The difference matters, say researchers, because educating mothers reduces child mortality. This study, which tracked maternal education for 40 years in 175 countries, suggests that child mortality falls by around 10% for every extra year young women spend in education. Over four million more children survived to their fifth birthday in 2009 than in 1970. Around half the increase was directly attributable to improvements in educating women of childbearing age, they write.

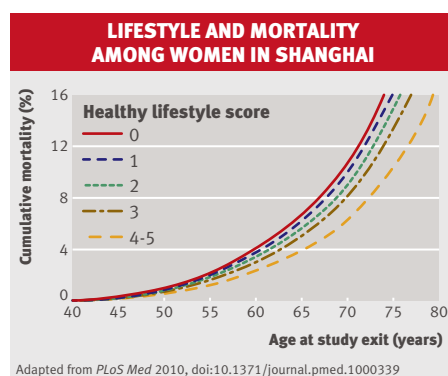
The association between education and survival through childhood is linear and has no threshold, says a linked commentary (pp 933-4), so even a few months of primary school can make a difference. Education gives women the power to control their fertility and the resources to access services such as vaccinations for the smaller families that usually follow.

*Lancet* 2010;376:959-74

### Don’t smoke or drink? Diet and exercise still matter

The components of a healthy lifestyle are well known, and large cohort studies from Europe and the US have shown that sticking to all the rules is associated with a longer, healthier life. Questions remain about women in China, however, few of whom smoke or drink. What do they have to gain from taking more exercise and eating more vegetables? Substantial protection from cancer, cardiovascular disease, and an early death, according to a study from Shanghai.

The 71 243 women in the study did not smoke or drink, so researchers rated their lifestyles from 0 to 5 with a point each for taking daily exercise, eating plenty of fruit and vegetables, having a normal weight, having a normal waist to hip ratio, and avoiding any exposure to secondhand smoke from their husbands. In fully adjusted analyses,



Adapted from *PLoS Med* 2010, doi:10.1371/journal.pmed.1000339

the researchers found a clear inverse association between overall score and risk of death during nine years of follow-up (hazard ratios comparing women scoring four or five with women scoring zero: 0.57, 95% CI 0.44 to 0.74, for total mortality; 0.29, 0.16 to 0.54, for death from cardiovascular disease; and 0.76, 0.54 to 1.06, for death from cancer).

They further estimated that a relatively unhealthy lifestyle, or scoring less than four, contributed to a third of all deaths (33.4%), a fifth of cancer deaths (18.9%), and 59% of cardiovascular deaths among non-smoking, non-drinking women in Shanghai.

*PLoS Med* 2010, doi:10.1371/journal.pmed.1000339

### Health journalists do it better

News stories about healthcare interventions are regular fodder for newspapers, broadcast media, websites, and other news outlets. Some stories are better than others, and at least one study suggests that specialist health journalists generate the best copy.

Researchers analysed content from an Australian website that monitors the quality of health news by rating stories according to their accuracy, balance, and completeness. In general, stories scored highly if they were evidence based, didn’t rely too heavily on a press release, and reported harms, costs, and availability, as well as benefits.

Stories by specialist health journalists had significantly higher scores than those written by general journalists. News organisations such as Associated Press also did reasonably well. The worst performers were human interest items on current affairs television programmes and in some Australian tabloids. These results aren’t terribly surprising, say the authors, but they do flag up a problem that is likely to get worse as cash-strapped editors drop the experts in favour of cheaper alternatives. Traditional media are already in a state of flux, thanks to fast changing technology and an economic crisis. Newsrooms across the globe are shrinking. Lead investigators, institutions, funding bodies, and journals could all do more to help the jobbing generalist get it right, say the researchers. They could start by eradicating all hyperbole and self promotion from their own press releases.

*PLoS Med* 2010, doi:10.1371/journal.pmed.1000323

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