Short cuts

What's new in the other general journals

Minority groups and Medicaid patients have surgery in low volume hospitals

For many complex surgical procedures, hospitals treating a lot of patients ("high volume hospitals") are considered better than hospitals treating just a few (low volume hospitals). Observational evidence supports this view. Even in the US, however, there aren't enough high volume hospitals to treat everyone, and a recent state-wide study from California suggests that patients with safety net insurance (Medicaid, federally funded insurance for people on low incomes) and those from non-white cultural backgrounds are missing out.

Using routinely collected discharge data from all Californian hospitals, the authors showed that people with Hispanic, Asian, or black cultural identities are up to 60% less likely than white Californians to be treated in high volume hospitals for a range of complex procedures such as knee replacement, hip fracture repair, coronary artery bypass grafting, and carotid endarterectomy. Patients with Medicaid or no insurance are up to 80% less likely to go to these hospitals than patients with Medicare insurance (federally funded insurance for all people aged over 65). These differences are unexplained by differences in age, sex, income, comorbidity, or proximity to a high or low volume hospital.

JAMA 2006;296:1973-80

Outbreak of hepatitis C traced to contaminated vial of radionuclide

When two elderly residents of Maryland developed acute hepatitis C in November 2004, the local health department suspected a common source and launched an investigation. Both adults had had

myocardial perfusion studies on the same day in the previous month (15 October), so investigators focused on the pre-prepared solution of technetium-99m sestamibi used in the studies. It was contaminated with hepatitis C virus. All 14 of the other patients treated from this vial were also infected: most had symptoms, 11 had jaundice, and one died of liver failure and sepsis 10 weeks after the technetium study.

Further investigation led the team to a nursing home patient with hepatitis C, HIV infection, and a history of hepatitis B whose blood had been processed for white cell radiolabelling by the same laboratory the day before. Hepatitis C viral RNA from the source patient matched viral RNA from the patients in the outbreak, and both were distinct from viral RNA isolated from controls.

The investigators were unable to trace the precise moment of cross contamination, but are fairly convinced it involved the multidose vials of saline used for dilution coupled with the laboratory's poor hygiene practices such as leaving capped needles lying around, and reusing syringes. It's clear from this outbreak that hepatitis C virus can survive outside the human body for at least 21 hours. None of the patients became infected with HIV.

JAMA 2006;296:2005-11

Promising preliminary results with rituximab for pemphigus vulgaris

Pemphigus vulgaris is a serious autoimmune disease that causes blistering of the skin and mucous membranes. Treatment is aimed at damping down the immune system with high doses of corticosteroids and other immunosuppressive agents. The monoclonal antibody rituximab is a potential alternative when conventional treatments fail. Rituximab depletes the B lymphocytes that produce the pathogenic autoantibodies associated with the disease.

Evaluation is at a preliminary stage, but US researchers recently reported success with 11 patients. All had had severe extensive pemphigus vulgaris for years and had tried a series of standard treatments—including high doses of corticosteroids, intravenous immunoglobulin, and other immunosuppressive agents—without success. Six months' treatment with rituximab plus intravenous

immunoglobulin produced a sustained remission in nine of the patients. The other two had relapses after initial treatment, but both responded well to further infusions of rituximab. None of the 11 patients reported side effects from either the rituximab or the immunoglobulin, and all were eventually able to stop all their treatments.

This series brings to 28 the number of patients treated so far. There are no controlled trials, and the long term effects of rituximab for this and other autoimmune diseases are unknown.

N Engl J Med 2006;355:1772-9

D-Dimer test identifies patients who should continue with anticoagulation

A simple blood test could help doctors and patients decide how long they should take oral anticoagulants such as warfarin after a first deep vein thrombosis or pulmonary embolus. In a randomised controlled trial, researchers did a qualitative D-dimer test one month after patients had completed their standard anticoagulation treatment. Those with a normal test result continued without anticoagulants, whereas those with an abnormal test result were randomly allocated to remaining without anticoagulants or to resuming treatment for an average of 1.4 years.

Among the 223 (37%) patients with an abnormal test result, those who stopped treatment had a high rate of recurrent venous thromboembolism (15%, 18/120). Patients who resumed treatment had a combined rate of thromboembolism or major bleeding of only 3% (3/103), significantly lower. Overall, patients who stopped taking anticoagulants were four times more likely to have a recurrent event than those who resumed treatment (adjusted hazard ratio 4.26 (95% CI 1.23 to

14.6)). Event rates among patients with a normal D-dimer test result were between the two (6%, 24/385).

These results suggest a net benefit associated with resuming anticoagulants for patients whose D-dimer test is abnormal one month after the end of their treatment. But the study wasn't big enough to give an accurate assessment of the bleeding risk associated with continuing anticoagulation.

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No change in strokes or serious bleeds after switch to generic warfarin

Most generic drugs work just as well as their more expensive, brand name alternatives, and switching to generic drugs is one way for cash limited health systems to save money. In June 2001, all patients in Ontario were switched to a generic warfarin unless they agreed to pay extra for the brand Coumadin or could prove that they developed side effects from the generic. Most didn't, and, by September, 87% of patients were taking one of two generic drugs. Researchers then examined routine prescription, laboratory, and hospital discharge data before and after the change to look for any trends in drug monitoring (international normalised ratio, INR), serious haemorrhage, or stroke.

They found none. Hospitalisations for both serious haemorrhage and thrombotic stroke remained steady for the nine months after June. Nor were there any discernible changes in drug monitoring frequency, indicating that switching to generic warfarins did not cause any wild fluctuations in INR.

This analysis was confined to elderly patients (≥ 66 years old), and the authors were unable to look for trends in deep vein thrombosis, pulmonary embolism, or bleeding from the lower gut because of worries about unreliable coding in discharge summaries. Even so, the authors say their results are reassuring. The switch probably saved substantial amounts of money: generic warfarins costs 30% less than Coumadin in Canada.

JAMA 2006;296:1969-72

Extensively drug resistant tuberculosis emerges in KwaZulu Natal

Worldwide efforts to control tuberculosis are in crisis, overwhelmed by the HIV pandemic, and the emergence of drug resistance fuelled by the unregulated misuse of drugs, writes one commentator. The latest evidence comes from KwaZulu Natal, South Africa, where a recent study found that 6% (30/475) of patients with culture confirmed tuberculosis had a strain resistant to isoniazid, rifampicin, and at least two second line drugs. Such extensively resistant tuberculosis was rapidly and almost universally fatal: of the 53 patients affected, 52 died, mostly within about a month. All those tested were co-infected with HIV. The authors suspect the outbreak began in and spread from the local hospital, where infection control is poor and 40% of inpatients have HIV.

This outbreak is not an isolated event, writes the commentator, who estimates that extensively resistant tuberculosis now accounts for about 0.4% of the global burden of the disease (doi: 10.1016/S0140-6736(06)69575-5). New drugs, diagnostics, or vaccines may help in the long term, but, for now, our best hope is to strengthen basic control measures for tuberculosis, which are currently let down by poor infection control, poor prescribing, low quality drugs, and low adherence.

Lancet 2006 doi: 10.1016/S0140-6736(06)69573-1

The world's poorest women have little or no access to caesarean section

Caesarean section can be a lifesaving obstetric intervention, and experts estimate that national rates between about 5% and 10% of births are associated with the best outcomes for mothers and neonates. Rates above 15% probably do more harm than good, and rates below 1% represent unmet need, untreated complications, and deaths.

An analysis of data from standardised surveys conducted in 42 low and middle

income countries found serious inequalities of access to caesarean section. In 20 countries (mostly in sub-Saharan Africa), the poorest fifth reported rates below 1%. In Chad, Ethiopia, and Pakistan the poorest fifth had no access to caesarean section, and in only five countries did the poorest women have a caesarean section rate above 5%. These figures suggest an unmet need adding up to about 80 000 maternal deaths a year, say the authors.

At the other end of the spectrum were seven countries, mostly in South America, where caesarean section rates far exceeded the maximum 15%. In Columbia, the Dominican Republic, and Brazil more than one in four live births are by caesarean section. Rates peak in Brazil, where 77% of babies born to the country's richest women are delivered surgically.

Lancet 2006;368:1516-23

Rimonabant promotes weight loss in people with type 2 diabetes

Rimonabant, a selective cannabinoid type 1 receptor blocker, promotes weight loss and improves cardiovascular risk factors in people who are overweight or obese. It also worked for patients with type 2 diabetes in a recent large clinical trial. Patients taking 20 mg of the drug—along with a “mild hypocaloric diet,” one oral hypoglycaemic agent, and advice about taking more exercise—lost more weight over one year than patients taking a placebo (5.3 kg weight loss *v* 1.4 kg, $P < 0.0001$). They also lost more off their waistline, and had greater improvements in glycaemic control and serum lipid profiles, driven largely by a greater increase in serum concentrations of high density lipoprotein cholesterol (15.4% increase *v* 7.1%, $P < 0.0001$). The authors don't say how much exercise the patients did or what they ate, but those taking the drug reported fewer cravings for sweets and fatty food. All were overweight or obese at baseline.

Patients with diabetes often struggle to lose weight. Is rimonabant the answer? It's too early to say, according to a linked commentary (doi: 10.1016/S0140-6736(06)69572-X). We still don't really know how rimonabant works, or how it compares with other anti-obesity drugs such as sibutramine and orlistat. A third of the patients failed to complete the trial, making it harder to interpret the results, and safety remains an unresolved issue. The commonest reason that patients gave for stopping treatment with 20 mg rimonabant was depression.

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Alison Tonks associate editor
atonks@bmj.com

RATES OF INR TESTING AND HOSPITAL ADMISSION WITH WARFARIN TREATMENT