

have mild symptoms of respiratory tract infection but are concerned that they might have influenza. There is no evidence to warrant deviating from current guidelines on managing influenza, in which antibiotic treatment is usually restricted to people with signs and symptoms of pneumonia, especially the very young and very old and those with underlying diseases. Widespread prophylactic or pre-emptive use of antibiotics could encourage antibiotic resistance and thereby counterbalance any apparent short term benefits.

Although influenza may be complicated by pneumonia in only a minority of patients, in severe cases it will be difficult to distinguish purely viral pneumonia from bacterial pneumonia.<sup>7</sup> Therefore, even though most patients with severe flu-like illness will have influenza, such patients must be treated with antibiotics, especially those treated in hospital.

Should current recommendations on empirical antibiotic treatment be adjusted? Patients should have antibiotics which are effective against *Staphylococcus aureus* and *Streptococcus pneumoniae*. Although all guidelines for the empirical treatment of community acquired pneumonia cover *Streptococcus pneumoniae*, *Staphylococcus aureus* poses more of a challenge. In the United States and Europe infections caused by community associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA) are emerging.<sup>8</sup> In some urban centres, as many as half of all *Staphylococcus aureus* samples recovered from skin and soft tissue infections among outpatients are CA-MRSA.<sup>9</sup> In such places CA-MRSA should be considered the causative pathogen in episodes of severe community acquired pneumonia that need admission to hospital. Furthermore, in areas with a high prevalence of penicillin resistant *Streptococcus pneumoniae* doctors should ensure that they give  $\beta$ -lactam antibiotics in adequate doses.

Finally, doctors might also need to consider other measures. Pneumococcal vaccination might offer some protection against secondary bacterial infections, although randomised trials do not indicate that polysaccharide pneumococcal vaccines would be protective in preventing pneumonia and death.<sup>10</sup> Recently introduced technology now allows rapid detection of *Staphylococcus aureus* carriage, which could be used to identify patients at increased risk for

secondary pneumonia.<sup>11</sup> Both measures would need substantial financial investments in the absence of evidence of efficacy.

Modern communication technology, rapid diagnostic testing, and better preparedness should yield real understanding of these questions in the first weeks and months of a pandemic. In the meantime we will have to rely on conventional wisdom.

Marc J M Bonten *professor of molecular epidemiology of infectious diseases*

(mbonten@umcutrecht.nl)

Division of Medicine, Infectious Diseases and Geriatrics, Eijkman Winkler Institute for Microbiology, Inflammation and Infectious Diseases, Julius Centre for Health Sciences and Primary Care, University Medical Centre Utrecht, 3584 CX Utrecht, Netherlands

Jan M Prins *internist and infectious diseases physician*

Department of Internal Medicine, Division of Infectious Diseases, Tropical Medicine and AIDS, and Center of Infection and Immunity Amsterdam, Academic Medical Centre, 1105 AZ Amsterdam, Netherlands

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- 1 Jefferson T, Demicheli V, Rivetti D, Jones M, Di Pietrantonj C, Rivetti A. Antivirals for influenza in healthy adults: systematic review. *Lancet* 2006;367:303-13.
- 2 Beigel JH, Farrar J, Han AM, Hayden FG, Hyer R, de Jong MD, et al. Avian influenza A (H5N1) infection in humans. *N Engl J Med* 2005;353:1374-85.
- 3 De Jong MD, Tran TT, Truong HK, Vo MH, Smith GJ, Nguyen VC, et al. Oseltamivir resistance during treatment of influenza A (H5N1) infection. *N Engl J Med* 2005;353:2667-72.
- 4 Kaiser L, Wat C, Mills T, Mahoney P, Ward P, Hayden F. Impact of oseltamivir treatment on influenza-related lower respiratory tract complications and hospitalizations. *Arch Intern Med* 2003;163:1667-72.
- 5 Kaiser L, Keene ON, Hammond JM, Elliott M, Hayden FG. Impact of zanamivir on antibiotic use for respiratory events following acute influenza in adolescents and adults. *Arch Intern Med* 2000;160:3234-40.
- 6 Schwarzmann SW, Adler JL, Sullivan RJ Jr, Marine WM. Bacterial pneumonia during the Hong Kong influenza epidemic of 1968-1969. *Arch Intern Med* 1971;127:1037-41.
- 7 Call SA, Vollenweider MA, Hornung CA, Simel DL, McKinney WP. Does this patient have influenza? *JAMA* 2005;293:987-97.
- 8 Zetola N, Francis JS, Nuermberger EL, Bishai WR. Community-acquired methicillin-resistant *Staphylococcus aureus*: an emerging threat. *Lancet Infect Dis* 2005;5:275-86.
- 9 Hota B, Ellenbogen E, Acharya A, Aroutcheva A, Rice T, Hayden MK, et al. The epidemiology of community-acquired methicillin-resistant *Staphylococcus aureus*: the role of incarceration and public housing. *Abstracts of 45th Interscience Conference on Antimicrobial Agents and Chemotherapy*. Washington, DC: American Society for Microbiology, 2005:383. (Abstract L-142.)
- 10 Dear K, Holden J, Andrews R, Tatham D. Vaccines for preventing pneumococcal infection in adults. *Cochrane Database Syst Rev* 2003;(4): CD000422.
- 11 Diekema DJ, Dodgson KJ, Sigurdardottir B, Pfaller MA. Rapid detection of antimicrobial-resistant organism carriage: an unmet clinical need. *J Clin Microbiol* 2004;42:2879-83.

## Collaborative care for depression

*Is effective in older people, as the IMPACT trial shows*

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Over the past decade, trials based in primary care have shown the effectiveness of collaborative care models in treating depression. Essential elements of these collaborative care programmes are the use of evidence based protocols for treatment, structured collaboration between primary care providers and mental health specialists, active monitoring of adherence to treatment and of outcomes, and (in some cases) structured programmes of psychotherapy delivered in primary care. A paper by Hunkeler and colleagues (p 259) extends the evidence for collaborative care in depression in three important

ways, finding that such care is acceptable to older patients, is effective, and has benefits that are sustained over at least two years.<sup>1</sup>

The initial studies on collaborative care for depression showed the value of psychiatrists or psychologists working in primary care settings to improve the quality of pharmacotherapy or provide brief psychotherapy.<sup>2-3</sup> Subsequent programmes attempted to improve the availability and efficiency of collaborative care through structured telephone calls with participants and nurses and bachelor-level mental health workers.<sup>4-5</sup> Studies of disseminating and implementing collaborative care

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proved the acceptability and effectiveness of these strategies for quality improvement and care management strategies in a range of healthcare settings and patient populations.<sup>6 7</sup>

The IMPACT study shows that the strategies for quality improvement and care management proved effective in younger adults with depression can be extended to older people. Acceptability of the IMPACT treatment programme was high, and clinical benefits were at least as large as those seen in younger or mixed age samples. Clearly, depression is not an inevitable consequence of ageing, functional limitation, and chronic illness. The belief that older people have “good reason to be depressed” has sometimes led to misplaced nihilism regarding treatment for depression.

These data show that relatively modest levels of continuity of care and of maintenance treatment yield important and sustained benefits. Initial evaluations of collaborative care for depression showed that short term interventions produced only short term benefits.<sup>8</sup> The IMPACT stepped care programme allowed for varying intensity of long term treatment. Follow-up and monitoring for most patients who were responding well to initial treatment was provided through brief monthly phone calls from their depression care manager (usually a primary care nurse). Those not responding were offered augmented treatment and consultation with a specialist. Patients in the intervention group maintained important clinical gains through the 12 month intervention period and the following year.

These findings suggest that the value of improving care for depression should be judged over a period of two years or more. The largest investments in improved treatment are made in the first three to six months, but the maximal benefits do not occur until six

or 12 months. When you're measuring the number of miles travelled per gallon of gas, you have to include the time that you spend coasting (an analogy useful beyond US and UK readers).

It is refreshing that the paper by Hunkeler and colleagues does not end with the customary call for additional research. The evidence base is now sufficient for the emphasis to shift from research to dissemination and implementation.

Gregory Simon *investigator*

(simon.g@ghc.org)

Center for Health Studies, Group Health Cooperative, 1730 Minor Avenue, Suite 1300, Seattle, WA 98101, USA

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- 1 Hunkeler EM, Katon W, Tang L, Williams JW Jr, Kroenke K, Lin EHB, et al. Long term outcomes from the IMPACT randomised trial for depressed elderly patients in primary care. *BMJ* 2006;332:259-62.
- 2 Katon W, VonKorff M, Lin E, Walker E, Simon GE, Bush T, et al. Collaborative management to achieve treatment guidelines: impact on depression in primary care. *JAMA* 1995;273:1026-31.
- 3 Katon W, Robinson P, VonKorff M, Lin E, Bush T, Ludman E, et al. A multifaceted intervention to improve treatment of depression in primary care. *Arch Gen Psychiatry* 1996;53:924-32.
- 4 Simon G, VonKorff M, Rutter C, Wagner E. A randomized trial of monitoring, feedback, and management of care by telephone to improve depression treatment in primary care. *BMJ* 2000;320:550-4.
- 5 Hunkeler E, Meresman J, Hargreaves W, Fireman B, Berman WH, Kirsch AJ, et al. Efficacy of nurse telehealth care and peer support in augmenting treatment of depression in primary care. *Arch Fam Med* 2000;9:700-8.
- 6 Wells K, Sherbourne C, Schoenbaum M, Duan N, Meredith L, Unutzer J, et al. Impact of disseminating quality improvement programs for depression in managed primary care: a randomized controlled trial. *JAMA* 2000;283:212-30.
- 7 Dietrich A, Oxman T, Williams J, Schulberg HC, Bruce ML, Lee PW, et al. Re-engineering systems for the treatment of depression in primary care: a cluster randomised controlled trial. *BMJ* 2004;329:602-10.
- 8 Lin E, Simon G, Katon W, Russo JE, Von Korff M, Bush TM, et al. Can enhanced acute-phase treatment of depression improve long-term outcomes: a report of randomized trials in primary care. *Am J Psychiatry* 1999;156:643-5.

## The incidence of gastroschisis

*Is increasing in the UK, particularly among babies of young mothers*

**G**astroschisis is the evisceration of the fetal intestine through a defect in the paraumbilical anterior abdominal wall with herniation of gastrointestinal structures into the amniotic cavity. Babies born with this condition are more likely to be born prematurely and to have had poor fetal growth. The anomaly requires immediate postnatal surgery, which has a good outcome in more than 90% of cases.<sup>1</sup> It is a distressing condition for parents, however, and often requires a prolonged stay in a paediatric unit.

Ten years ago our group reported in the *BMJ* that the national system for notifying congenital malformations (collated by the Office for Population and Census Surveys, now called the Office for National Statistics, ONS) showed an increasing trend in the number of babies born with gastroschisis in England and Wales between 1987 and 1993.<sup>2</sup> No such marked increase was apparent for other congenital anomalies such as exomphalos.

Gastroschisis was associated with a lower overall maternal age: the incidence among mothers aged under 20 is 4.71 per 10 000 total births compared with

0.26 per 10 000 total births to mothers aged 30-34. Furthermore, the incidence of gastroschisis was markedly higher in the northern regions of the United Kingdom (1.55 per 10 000 total births) than in the southeast (0.72 per 10 000 total births).<sup>2</sup>

The notification system is voluntary, however, and under-notification and misclassification of malformations may therefore be considerable, leading to under-ascertainment.<sup>3</sup> This also favours over-notification of very visible anomalies such as gastroschisis while probably grossly underestimating non-visible lesions, such as heart defects. Nevertheless, even gastroschisis seems to be underestimated in ONS statistics.<sup>4 5</sup>

In contrast, regional registers for congenital anomalies aim to include all data from abortions, fetal loss, and infant deaths, as well as cross referenced information from paediatric surgical units. Such data sources have consistently shown better and more complete registration of congenital anomalies and have confirmed both an increasing incidence of gastroschisis among babies of teenage mothers and an overall increase year on year.<sup>6</sup> This discrepancy between

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