

Correspondance

Group B streptococcal infection risk factors

The authors of the Canadian Task Force on Preventive Health Care statement on the prevention of neonatal invasive group B streptococcal (GBS) infection¹ have reviewed the literature to produce recommendations for prevention. They advocate selective intrapartum chemoprophylaxis based on a combination of screening and risk factors. However, they do not note that only 50% of the mothers of infants with GBS infection have the risk factors that they list. Thus, given the difficulties in following a complex protocol in clinical practice and the fact that many mothers deliver too quickly to benefit from any strategy of intrapartum chemoprophylaxis, the maximum potential benefit of the strategy they propose would be a reduction in neonatal GBS infection of about 40%. The benefit of adding universal screening to the risk-factor approach is to reduce the number of mothers who receive intrapartum chemoprophylaxis while in labour, but this will inevitably also lead to a slight reduction in the program's effectiveness.

The authors concentrate on the "number needed to treat," which will of course be smaller with a more focused approach, but they do not address the proportion of total cases that will be prevented. Data on over 600 000 deliveries collected through an ongoing US Centers for Disease Control and Prevention surveillance program have shown that the screening-based approach is greater than 50% more effective than a risk-factor approach.² An approach based on risk factors plus screening cannot be more effective than an approach based on risk factors alone.

Although it is a laudable goal to reduce the number of women receiving intrapartum antibiotics, there is no a priori reason why that goal (efficiency) should take precedence over the goal of preventing the largest number of cases (effectiveness). With the use of

penicillin rather than ampicillin, ongoing analysis of resistance patterns and the use of cefazolin instead of erythromycin or clindamycin for penicillin-sensitive mothers, the risks to the population of this very brief course of focused therapy should be minimized.

The strategy suggested by the task force may be one of the most efficient approaches, but it is one of the least effective.

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References

1. Prevention of group B streptococcal infection in newborns. Recommendation statement from the Canadian Task Force on Preventive Health Care. *CMAJ* 2002;166(7):928-30.
2. Factor SH, Whitney CG, Zywicki SS, Schuchat A. Effects of hospital policies based on 1996 group B streptococcal disease consensus guidelines. The Active Bacterial Core Surveillance Team. *Obstet Gynecol* 2000;95(3):377-82.

[The Canadian Task Force on Preventive Health Care responds:]

We thank Keith Barrington for his interest in the recommendation statement on GBS infection in newborns.¹ As noted at the end of the article, the statement published in *CMAJ* is based on a technical report available online at www.ctfphc.org or from the task force office at ctf@ctfphc.org.² In that report, we systematically review the evidence relating to the effectiveness of 3 different strategies for the prevention of early-onset GBS infection in the newborn. We state that 2 strategies reduce the incidence of GBS colonization and early-onset infection: 1) universal screening for GBS at 35–37 weeks followed by selective intrapartum chemoprophylaxis given to colonized women with risk factors and 2) universal screening for GBS at 35–37 weeks and intrapartum chemoprophylaxis of all colonized women. However, based on the number of women who need to

be treated, strategy A appears to be more efficient. (To our knowledge, strategy C, which is based on risk factors only, has not been evaluated.)

Barrington misquotes the surveillance study by Factor and colleagues,³ who concede in their discussion section, "We did not have a large enough sample to differentiate between types of policies, such as screening and risk-based approaches."³ Although the authors show that there was a temporal association between the adoption of guidelines for the prevention of GBS infection in the newborn and a reduction of early-onset infection, the incidence of GBS infection was reduced from 1.29 cases per 1000 live births to 0.58 per 1000 live births ($p = 0.006$). From this study, one cannot conclude that a given strategy is better than another.

No trial comparing strategy A against B has been conducted to determine which is most effective in reducing early-onset GBS infection. As it is a very rare occurrence, a very large number of pregnant women would need to be enrolled in such a trial.

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References

1. Prevention of group B streptococcal infection in newborns. Recommendation statement from the Canadian Task Force on Preventive Health Care. *CMAJ* 2002;166(7):928-30.
2. Shah V, Ohlsson A, with the Canadian Task Force on Preventive Health Care. *Prevention of early-onset group B streptococcal (GBS) infection in the newborn: systematic review and recommendations*. Available: www.ctfphc.org (accessed 2002 July 31).
3. Factor SH, Whitney CG, Zywicki SS, Schuchat A. Effects of hospital policies based on 1996 group B streptococcal disease consensus guidelines. The Active Bacterial Core Surveillance Team. *Obstet Gynecol* 2000;95(3):377-82.

Risks of Friday discharges: Meaningful?

Carl van Walraven and Chaim Bell studied more than 2.4 million patient discharges from hospital.¹ They found that patients discharged on Fridays were significantly more likely to experience an event (hazard ratio 1.04, 95% confidence interval 1.02–1.05).

Maybe I'm overlooking something, but a hazard ratio of 1.04 does not look very important, although the huge number of patients makes it significant. The hazard is the slope of the survival curve: a measure of how rapidly subjects are readmitted (or die). If the hazard ratio is 2.0, then the rate of readmission or death in one discharge-day group is twice the rate in the other group. If the hazard ratio is 1.02 to 1.05, readmission or death is 1.02 to 1.05 times more likely on Fridays than on Wednesdays. Although this is not nothing, neither is it as dramatic an issue as the title suggests.

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Reference

1. Van Walraven C, Bell C. Risk of death or readmission among people discharged from hospital on Fridays. *CMAJ* 2002;166(13):1672-3.

[One of the authors responds:]

Axel Ellrodt is correct when he points out the small absolute differences in adjusted 30-day death or ur-

gent readmission. Overall, the event rate was 7.1%. A 4% relative increase brings the event rate up to 7.2%. This is a small increase. The table in our study shows that day of discharge has a weaker association with outcome than the other factors we studied.¹

We believe that the importance of our findings will stem from an exploration of why such differences exist. We believe that further study is required to determine if the care of patients discharged on a Friday systematically differs from that of patients discharged on other days and, if so, whether this explains the difference in outcomes. We hope this will shed more light on why bad things happen to some patients and identify interventions to improve patient outcomes.

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Reference

1. Van Walraven C, Bell C. Risk of death or readmission among people discharged from hospital on Fridays. *CMAJ* 2002;166(13):1672-3.

Emergency department overcrowding

As an emergency physician who has worked for many years in an urban

tertiary care centre, I absolutely support the notion raised by Jane Upfold in her commentary¹ that it is unethical for an emergency department to go on critical-care bypass and refuse a critically ill patient. In the same issue, Anne Walker clearly outlines the duty of both the hospital and the physician to provide emergency care.²

In 1990, I published a review of 4 years of critical-care bypass statistics. The most striking finding was the more than 8-fold increase in overwhelmed status over the previous 4 years. The 3 most frequent reasons for the department "going on bypass" were insufficient nursing staff, no beds and no cardiac monitors. Often, 2 of these reasons were combined.

One decade later, the Canadian Association of Emergency Physicians and the National Emergency Nurses Affiliation published a position statement on emergency department overcrowding. It stated that overcrowding is a cause of inadequate patient care, prolonged delays in the treatment of pain and ambulance diversions. Overcrowding was again caused by, in part, a lack of beds for admitted patients and a shortage of nursing staff, in addition to a shortage of physician staff. According to the position paper, "the cause of ED overcrowding generally lies outside the ED. Efforts to maximize ED efficiency are important, but overcrowding is a symptom of system failure."³

It is unreasonable and unethical to hold physicians liable for not delivering adequate care to patients they never get to see (because they are diverted to another site), that they see too late (because of patient backlog or space) or that they see without the staff or diagnostic and therapeutic tools required to assess and treat in a timely fashion. Hospital cutbacks have created an environment where emergency physicians cannot reliably deliver the standard of care that is legally and ethically expected of them.

Walker noted that the "Ontario Court of Justice confirmed that, if a hospital wishes to discontinue or curtail its emergency services, it has a duty to take reasonable steps to notify the pub-

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