6. T. Lietman and S. Blower, *Clin. Infect. Dis.*, in press.
7. Using the model in (*6*), we have derived the following expression. To ensure the elimination of TB, it is sufficient that the average number of new infectious cases caused by a single infectious case is less than unity, or $R_0(1 - F_T)(1 - F_VE) < 1$, where R_0 is the average number of infectious cases caused by a single infectious case of TB in the absence of vaccination and treatment, F_T is the fraction effectively treated with antibiotics, F_V is the vaccination coverage level, and E is the efficacy of the vaccine. Thus, the effect of treatment $(1 - F_T)$ and the effect of vaccination $(1 - F_VE)$ have a multiplicative effect on reducing R_0. For the examples in the text, we have assumed vaccine coverage of 88% (*1*) and an R_0 of 6.0 (*5*).

Response

We appreciate the letters by Ridzon and Hannan and by Lietman and Blower because they contribute further material to the discussion about BCG. The future of BCG vaccination is currently under siege, both because the TB community recognizes the need for a better vaccine against TB and because newer vaccines (for hepatitis B and *Haemophilus influenzae* B, for example) may compete for resources within vaccination programs.

Ridzon and Hannan postulate that wild-type strains of *M. tuberculosis* may have evolved under the select pressure of eluding the protective immunity provided by BCG. In such a situation, BCG vaccines of the 1920s may have provided protection against wild-type isolates of that era, but would no longer be protective against contemporary strains of *M. tuberculosis*. Although many theoretical arguments may support or refute this postulate, the only relevant data are the randomized controlled trials. In populations where BCG vaccines had not been previously used, there are numerous examples of trials where vaccination did not provide protection (*1*, *2*).

Lietman and Blower extend their mathematical modeling to point out that the goal of an anti-TB vaccine need not approach 100% efficacy, because a less successful vaccine in conjunction with a treatment-based control program would provide important benefits. In this vein, it is important to reiterate the well-known strain variation between BCG vaccines and to recognize that the best BCG trials provided an efficacy on the order of 80% (*3*), well above the threshold of 67% described in Leitman and Blower's model. Although the search for an improved anti-TB vaccine is still the long-term goal, a thorough analysis of existing BCG vaccines may help uncover a sufficiently protective BCG strain among those already existing.

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1. C. E. Palmer *et al.*, *Am. Rev. Tuberc.* **77**, 877 (1958).
2. *Ind. J. Med. Res.* **72S**, 1 (1980).
3. M. A. Behr and P. M. Small, *Nature* **399**, 133 (1997).

CORRECTIONS AND CLARIFICATIONS

In the News article "Getting to the front of the bus" by Dan Ferber (3 Sept., p. 1514), the credit for the graphs on page 1515 listed the journal source but not the authors of the pertinent article. The full credit should have been, "C. C. Helbing, M. J. Verhoef, C. L. Wellington, *Research Evaluation* **7**, 53 (1998)."

The last letter in the 17 September issue, by G. Philip Robertson (*Science*'s Compass, p. 1852) should have stated that it was in regard to William H. Schlesinger's Policy Forum "Carbon sequestration in soils" (*Science*'s Compass, 25 June, p. 2095) and should have been entitled "Keeping track of carbon." The *Science* Online version reflects these corrections.