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and less treatment at comprehensive cancer centers. Young adults are also more likely to be uninsured.

The survival of all NHL patients is dependent on their receiving appropriate cancer therapy. Efforts to improve NHL survival rates among adolescents and young adults should include increasing their enrollment in clinical trials and improving their access to insurance and optimal cancer services.

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COMMENTS

Varicella Vaccine Refusal May Not Be Bad

The purpose of the article by Glanz et al is to help clinicians counsel families and to encourage acceptance of the varicella vaccine. As a counselor and parent, I need to know the absolute risk, rather than the relative risk, of catching varicella if I refuse the vaccine. Approximately 1.6% of the almost 87 000 children in the Kaiser system do not get the vaccine because of parental refusal (10 children of 626 cases and controls); 5.26% of varicella disease was associated with vaccine refusal. Thus, 1390 children whose parents refused the vaccine (eg, “refusers”) were at risk and an estimated 16 refusers got varicella, for an attack rate of 1.17%. Similarly, the attack rate for children not vaccinated for reasons other than refusal (“acceptors”) is 0.34% (293 cases among 85 600 acceptors, a rate similar to the annual rate reported in Portland). Including children who were seen with a history of, but not active, varicella would represent a truer attack rate and estimation of resource consumption.

I do agree that information on costs of home care of a sick child may be relevant to some parents, but a discussion of the likelihood of severe complications is more relevant to the parent trying to “protect” his child from harm. Among the estimated 4 000 000 annual cases of wild varicella in the 1980s, about 4000 children were hospitalized and 50 to 100 died. According to data from the Vaccine Adverse Event Reporting System (VAERS), about 2.6 serious adverse events (death, meningitis, zoster, and convulsions) per 100 000 vaccine doses occur at all ages.

From a societal perspective, the vaccine makes sense, since herd immunity keeps the risk of varicella low (1.17% vs over 90%, 4 000 000 cases per year with approximately 4 000 000 births per year). However, from an individual’s perspective, the risk of a serious adverse event after the vaccine at 2.6 per 100 000 is perhaps higher than after a potential case of varicella at 1.17 hospitalizations (100 of 100 000 cases of varicella × 1.17% risk of varicella) and 0.03 deaths (2.5 × 1.17%) per 100 000 children during the period of observation in the study by Glanz et al. It is not so obvious that refusal of vaccine is an inappropriate decision, as long as the risk of getting varicella is kept low by the 95% of children who get the vaccine.

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In reply

We thank Dr Harkavy for his letter. We agree with Dr Harkavy that the absolute risk of contracting varicella is low. However, we must also acknowledge that the author’s attack