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## Refusal Rates of the Birth Dose of Hepatitis B Vaccine

To the Editor,

We read the article by Vasireddy et al. (1) regarding the factors that affect the refusal rates of the birth dose of hepatitis B vaccine with great interest. In their article, the authors stated that although the hepatitis B birth dose vaccination coverage has increased to 68.6% compared with that in previous years, it has not reached national goals yet. In their study, Caucasian and English-speaking mothers were found to have higher vaccine refusal rates. Pediatric immunizations are responsible for preventing 3 million deaths in children each year worldwide (2). Despite this success, some parents continue to refuse immunizations for their children. The number of pertussis cases has increased steadily in the United States over the past 20 years with the aid of websites. Although immunization is prominently criticized on the Internet, it remains a source that many parents rely on for health information (3). It is ironic that the remarkable success of vaccine programs has resulted in a situation in which most parents have no memory of the devastating effects of illnesses such as poliomyelitis, measles, and other vaccine-preventable diseases, thereby making it more difficult for them to appreciate the benefits of immunization (4).

The benefits provided by most vaccines extend beyond the benefit to the individual who is immunized. There is also a significant public health benefit. Parents who choose not to immunize their own children increase the potential of harm to other persons (4).

There are certain concerns about vaccines that tend to fall into several different categories but are not limited to these categories. Some of the concerns are as follows: vaccines cause diseases, including autism and autoimmune diseases; vaccines contain toxins, which can harm the body in unknown ways; too many vaccines administered together can overwhelm the immune system; and vaccines are unnecessary and/or do not work.

In a study addressing the question "what would be the cost to individuals and the society if vaccination had been ceased in Turkey," it was predicted that there would be 14,296 deaths per year in the pediatric age group alone arising from the return of vaccine-preventable diseases (5).

The role of the physician in these situations is to provide parents with the risk and benefit information necessary to make an informed decision and to attempt to correct any misinformation or misperceptions that may exist.

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## Author's Reply

To the Editor,

We thank Dr. Parlakay for her interest in our article (1).

In our study, we have shown that having a written hospital policy for a birth dose of hepatitis B vaccine is not sufficient to ensure high rates of neonatal hepatitis B vaccine administration (1).

In the United States, providing parents with clear information about the risks and benefits of vaccines and taking advantage of non-preventive visits for immunization are some strategies that are suggested to address the challenges (2).

Another challenge faced in the United States is that some states not only offer medical and religious exemptions to immunization requirements but also philosophical exemptions for parents who choose not to immunize their children. Policy makers must balance the need to provide individual choice with the need to protect children's health (3).

In a study by Fu et al. (4), quality improvement activities occurred from September 2007 to May 2008 at six

health centers serving a low-income minority population in Washington DC. The interventions included family reminders, education, expanding immunization access, reminders and feedback for providers, and coordination of activities with community stakeholders. These interventions were shown to cause a 16% overall increase in immunization rates and a 14% increase in on-time immunization by 24 months of age at all six health centers.

It is an ongoing challenge for pediatricians around the globe to get their patients vaccinated on time. Utilization of better quality improvement strategies will hopefully help us prevent an outbreak of vaccine-preventable diseases.

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## Complications of Varicella in Healthy Children

Dear Editor,

We read the article titled "Evaluation of Hospitalized Varicella and Zona Patients who were followed up in our Pediatric Clinic" by Çalıřkan et al. (1) with great interest. This particular case that we encounter usually in the pediatric practice has been studied and the importance of varicella vaccine was emphasized once again. Even though varicella is known to be a disease with a benign course, it may cause serious complications not only in immunosuppressed, but in immunocompetent patients as well (2). In the study we carri-

ed out between 1997 and 2009, previously healthy 426 patients (patients who did not have an underlying immune deficiency or who did not have immunosuppressive therapy) who were hospitalized and treated in the pediatric clinic due to varicella complications were evaluated. It was found in this study that varicella complications were often seen in children under 5 years old, and infectious complications such as impetigo, cellulite, skin abscess, pneumonia were the most frequent ones (42.5%). Sepsis developed in five patients. In their blood culture, Group A streptococci were isolated in three patients and staphylococcus aureus isolated in two patients. The second most frequent one was the neurological complications (37.7%); 38 patients were diagnosed with encephalitis. It was found that the third most frequent ones were hematological complications such as thrombocytopenia and pancytopenia. 192 patients were included in Çalıřkan et al.'s study (1) and 68% of these cases were immunocompetent patients. They found that the most frequent one was neurological complications and the second most frequent infectious ones. Similar to our study, the age medium of the complication-developing patients was 5.2±3.5 year. While average hospital stay of the patients in our study was 5.5±3.4, it was found 9.4±8.0 in Çalıřkan et al.'s study. The fact that the longer hospital stay did not cause the development of complications may be put down to the hospitalization of immunosuppressed patients for treatment. Three patients died in our study. One of those patients was followed up for purpura fulminans, the other for encephalitis and the last one for pneumonia complication. No immune deficiency was present in any of the patients who died. While 3 patients died due to immune deficiency in Çalıřkan et al.'s study (1), 3 patients who developed encephalitis complication recovered with a neurological sequellae. Both studies had a similar seasonal distributions; the period of January and March was the peak period for hospitalizations.

There was no routine administration of the varicella vaccine in our country during the time of both studies. Both studies emphasized that varicella could cause serious complications and mortality, and how important the varicella vaccine was. As is commonly known, the varicella vaccine was included in the national vaccination calendar as a single doze in 2013. After the administration of the single doze varicella vaccine, following up varicella cases and hospitalizations, and evaluating the data before and after the vaccination will be enlightening for the necessity of the second doze. In this connection, we are of the opinion that for the comparison of the data before and after vaccination, these two studies in question will be helpful just like the other before-vaccination studies done in our country (3).

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