2. Borst CG. Obstetrics and the family physician: a medical historian's perspective. J Am Board Fam Pract 1994; 7:530-4.
3. Larimore WL, Davis A. Relationship of infant mortality and low birth weight to the availability of pregnancy care in rural Florida. Presented at the Annual Meeting of the Society of Teachers of Family Medicine, Atlanta, GA, 2 May 1994.

Immunization Rates

To The Editor: Congratulations to Alto, et al.[1] for their informative study regarding the effectiveness of mail and telephone contacts to improve vaccination compliance. We attempted a similar study but stopped after we discovered our vaccination rate was quite high compared with the national average (11 to 55 percent); median, 44 percent.[2]

We analyzed our population at Schofield Barracks, Hawaii, in an attempt to quantify the percentage of children completely immunized. We proceeded on the presumption that our population was about as well immunized as the general civilian population, and we wanted to test particular interventions (such as telephone calls, letters, and campaigns in the post newspaper) to see whether they had any effect on immunization compliance.

We began by collecting, with the help of our Composite Health Care System (CHCS) — (the computer system in which every military beneficiary on Oahu is registered), the names of all 14- to 15-month-old children whose charts were at Schofield Barracks Health Clinic. (We collected charts of only 14- and 15-month-old children to assess immunizations during the first year. In our highly mobile military population, trying to assess more was considered unrealistic.) Of the 64 charts available for review, 49 were considered complete (defined as having completed all required shots at 2, 4, and 6 months, and the tuberculin test [only] at 12 months. We counted the hepatitis B series shots but did not include it in our definition of complete, because it is, at this point, only recommended and not required.) Telephone contact was attempted for all patients whose records were incomplete, and only 8 children were found to be behind in their immunizations. The parents of 7 children could not be contacted because of moves or wrong or disconnected telephone numbers.

The numbers indicate that 49 of 57, or 85 percent of our patients, had completed their immunizations by 15 months of age. Even if we assume that all 7 of those patients with whom no contact could be made had incomplete charts, the immunization rate is still high at 77 percent (49 of 64). Unfortunately, only 18 of 57 (31.5 percent), finished their hepatitis series. Interestingly, 48 began the hepatitis series, but only 18 saw it through completion.

Although we were disappointed with the hepatitis immunization rate, we were so surprised with the excellent result obtained by our required shots screening that we decided not to pursue any focused intervention, as it probably was not going to improve our compliance much, if at all.

Reasons for our unexpected excellent compliance might include free immunizations, relatively easy access to our immunization clinic, the emphasis of preventive care practiced by our health care providers, or that all child care centers on post refuse to admit youngsters without documented proof of immunization. In addition, we did not account for the required fourth dose of diphtheria-pertussis-tetanus (DPT). It was noted by Bobo, et al.[3] that compliance was 10 percent greater if the fourth DPT was excluded, which our study might reflect.

We also noted that we missed many opportunities to protect children against hepatitis. The hepatitis immunization rate improved once our providers and our immunization clinic became aware of this shortcoming and became more aggressive in immunizing youngsters.

It is encouraging to see studies, such as that by Alto, et al., which actually do show a difference in compliance rates with specific interventions. We encourage other family physicians — especially those with "closed" patient populations — to check their own immunization compliance rates and implement appropriate interventions. Perhaps with stricter enforcement by preschool and elementary school authorities that all immunizations be up to date, we can improve our dismal record of immunization compliance.

Brian J. Crisp, MD
Major, Medical Corps
Gary W. Clark, MD
Major, Medical Corps
US Army

References

1. Alto WA, Fury D, Condo A, Doran, Aduddell M. Improving the immunization coverage of children less than 7 years old in a family practice residency. J Am Board Fam Pract 1994; 7:472-7.
2. Zell ER, Dietz V, Stevenson J, Cochi S, Bruce RH. Low vaccination levels of US preschool and school-age children. Retrospective assessments of vaccination coverage, 1991-1992. JAMA 1994; 271:833-9.
3. Bobo JK, Gale JL, Thapa PB, Wassilak SG. Risk factors for delayed immunization in a random sample of 1163 children from Oregon and Washington. Pediatrics 1993; 91:308-14.

The above letter was referred to the author of the article in question, who offers the following reply:

To The Editor: Drs. Crisp and Clark are to be congratulated on their achievement of an 85 percent immunization coverage by 15 months within a military-dependent population. It would be of interest to determine why the other 15 percent of these toddlers were not completely immunized. The answers to this question might allow them to improve on their already excellent accomplishment.

William Alto, MD, MPH
Augusta, ME