

### Screening adults for multiple immunization needs

TO THE EDITOR: The ambulatory-clinic-based screening program we previously reported on found many adults in need of additional immunizations when they presented for influenza A and B vaccination.<sup>1</sup> When we repeated the program, we found that the individual needs of some patients had been met, but that the general lack of immune protection recurred.

The comprehensive assessment of immunization protection adequacy, conducted at the Immunization Clinic of the Walter Reed Army Medical Center, assessed 1353 patients and employees during the 1984-85 influenza season<sup>1</sup> and 2451 during the 1985-86 season. The second immunization program served both repeat clients from the first program and new clients.

Specific interventions are listed in Table 1 for the two programs, for both the total sample and that portion greater than 59 years. Those over 59 years generally had greater relative need for pneumococcal vaccine and for tetanus and diphtheria toxoids than did younger clients. However, those under age 60 often had different immunization needs (e.g., hepatitis B, measles, rubella). Criteria for prescribing immunizations coincided with the guidelines of the Immunization Practices Advisory Committee of the Centers for Disease Control<sup>2-5</sup> and the American Thoracic Society.<sup>6,7</sup>

The mean age of persons screened was 56.0 years for the 1984-85 season and 48.4 years for the 1985-86 season. The mean number of total interventions needed per person for the total sample was 2.26 and 2.00, respectively, including the influenza vaccine. For the elderly (> 59 yr), the mean interventions were 2.51 and 1.75, respectively, for each program. Immunizations or immunologic tests in addition to influenza vaccine were administered to 72.0 percent of the individuals screened in 1984-85 and to 61.4 percent of those interviewed in 1985-86.

Patients making a visit to the clinic during the 1984-85 season reduced the portion of the sample needing pneumococcal vaccine or tetanus and diphtheria toxoids (adult formula) in 1985-86. Of 923 patients greater than 59 years presenting for influenza vaccine in 1985-86, 243 (26.3 percent) received both influenza and pneumococcal vaccines in 1984-85. These and other patients are repeat clients who benefited from our previous immunization evaluation.

In the 1985-86 program, of 462 patients reporting receipt of pneumococcal vaccine, 292 (63.2 percent) reported receiving it in 1984. Each of the preceding four calendar years, in which no special effort was made to vaccinate eligible individuals, accounted for an average 6.2 percent of previous doses.

For those patients of all ages indicating the date of their most recent adult tetanus and diphtheria toxoids dose (n = 2067), 54.0 percent had received a booster dose within the previous five years and 20.8 percent within six to ten years; 24.3 percent exceeded the ten-year interval and received a booster dose that day. Those greater than 59 years reporting a previous dose (n = 730) indicated rates of 43.0 percent, 12.7 percent, and 42.2 percent, respectively.

Formal referrals to our clinic constituted a minor but increasing source of patient visits. The vast majority of immunizations were administered because of our advocacy of comprehensive immunization assessment.

The means of interventions and the fractions of patients needing interventions other than influenza vaccine declined between our 1984-85 and 1985-86 programs, thus suggesting progress in meeting some individual immunization needs of a large ambulatory population. Multiple immunization needs continued to be indicated for large segments of the population screened. Annual repetition of this comprehensive screening program will likely be needed because of the large numbers of patients entering and leaving the population. The Centers for Disease Control has cited our method as a valid means of furthering adult immunization (personal communication, W.W. Williams, M.D., M.P.H., Division of Immunization, Centers for Disease Control, Atlanta, GA, 1987).

CPT JOHN D. GRABENSTEIN, B.S.Pharm.

Chief, Pharmacy Service  
U.S. Army Hospital-Bremerhaven, West Germany  
APO, New York 09069

CPT RALPH R. WATSON, M.S.

Clinical Pharmacist, Allergy-Immunology Service  
Walter Reed Army Medical Center  
Washington, District of Columbia

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Table 1. Patients Needing Initial or Booster Immunizations or Immunologic Tests, for 1984-85 and 1985-86 Programs

INTERVENTION	TOTAL POPULATION		PATIENTS >59 YEARS	
	1984-85 (n = 1353)	1985-86 (n = 2451)	1984-85 (n = 755)	1985-86 (n = 923)
Hepatitis B titer or vaccine	140 (10.3%)	498 (20.3%)	0 (0%)	2 (0.2%)
Influenza A and B vaccine, trivalent	1353 (100%)	2434 (99.3%)	755 (100%)	920 (99.7%)
Measles titer or vaccine	NE	256 (10.4%)	NE	0 (0%)
Pneumococcal vaccine, 23-valent	569 (42.1%)	384 (15.7%)	503 (66.7%)	319 (34.6%)
Poliomyelitis vaccine, inactivated, trivalent	3 (0.2%)	5 (0.2%)	3 (0.4%)	3 (0.3%)
Rubella titer or vaccine	NE	265 (10.9%)	NE	0 (0%)
Tetanus and diphtheria toxoids (adult)	497 (36.8%)	502 (20.5%)	397 (52.6%)	308 (33.4%)
Tuberculin skin test*	491 (36.3%)	566 (23.1%)	238 (31.6%)	62 (6.7%)
Patients needing intervention other than influenza vaccine	974 (72.0%)	1617 (66.0%)	NE	493 (53.4%)
Total interventions (mean per patient)	3053 (2.26)	4910 (2.00)	1896 (2.51)	1614 (1.75)

\*Criteria changed in 1985 to correspond to American Thoracic Society guidelines.  
NE = not evaluated.