

employees seen in our Employee Health Service with sore throat complaints. The results are summarized in Table 1. These values are significantly different ( $P < 0.005$ ) from the reported value of 6.2% positive cultures.<sup>1</sup>

Streptococcal pharyngitis is usually associated with tonsillar erythema, or exudate; fever; or enlarged anterior cervical nodes.<sup>2</sup> The American Heart Association (AHA) lists tender anterior cervical lymph nodes, pharyngeal exudate and scarlatiniform rash as clinical signs suggestive of streptococcal infection.<sup>3</sup> However, we have found the following signs as summarized in Table 2 for data available from 1984. In no patient was a rash documented.

Three patients out of 49 had no objective findings. The most prevalent objective findings were erythema (85%) and enlarged anterior cervical nodes (55%). Fifty-one percent of those who were positive had both findings. Nine patients out of the 42 patients (21%) with erythematous tonsils had no other accompanying findings. In our study only 18% had exudative tonsils in contrast of 70% as reported by Pantell.<sup>4</sup> Hence the most reliable findings for choosing candidates in a Hospital Employee Health setting for throat culture is erythematous tonsils. It is important that hospital employees who are in constant

contact with patients do not inadvertently transmit streptococcus infection to patient and co-workers.

#### REFERENCES

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*Dr. Chatrchai Watanakunakorn responds to Dr. Wu's comments.*

The higher rate of positive throat cultures for group A streptococcus from hospital employees reported by Dr. Wu and her colleagues is of interest. There are obvious differences between our studies. For instance,

with only 3200 employees in our hospital, 323 throat cultures were done during a three month period in 1984, or 34 throat cultures per 1000 employees per month. In contrast, with 4300 employees in their hospital, only 457 throat cultures were done during a twelve-month period in 1984, or 9 throat cultures per 1000 employees per month. Obviously there were significantly less throat cultures done on employees at their hospital. Perhaps employees with a mild sore throat at their hospital did not seek treatment at the Employee Health Service. Or perhaps only employees with a severe sore throat were cultured.

I agree that it is important that hospital employees who are in constant contact with patients do not inadvertently transmit group A streptococcus from their throat to patients and co-workers. This did not happen in our hospital during the past six years that we have data. To my knowledge there have been no reports of its occurrence at others hospitals either.

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## Influence of Multiple Isolates on Antimicrobial Susceptibility Patterns from Blood Cultures

To the Editor:

We recently reported that there was no practical differences between including multiple isolates versus only one isolate per patient when calculating the antibiotic susceptibility profiles of bacteria identified from the specimens submitted to a clinical microbiology laboratory.<sup>1</sup> We speculated, however, that the effect might be much greater if one considered only specimens, such as blood cultures, where repetitive cultures are especially common. Blood cultures are of special interest because of the clinical importance of empiric therapy.

We have now completed an analysis, using the same methodology as referenced above, of positive blood cultures. A total of 221 isolates from positive blood cultures obtained over

**TABLE 1**  
**CULTURE POSITIVE GROUP A STREPTOCOCCUS PHARYNGITIS**

Year	No. of Positive/ No. of Cultures	% Positive
1982	99/732	13.5%
1983	64/650	12.9%
1984	56/457	12.3%
1/85-5/85	35/190	18.4%

**TABLE 2**  
**SIGNS ASSOCIATED WITH CULTURE POSITIVE GROUP A STREPTOCOCCUS (TOTAL CULTURES 49)**

Signs	Number (total)	Percent of total
Temperature >99.5°F	10 (49)	20%
Erythema	42 (49)	85%
Edema of tonsils	8 (49)	16%
Exudate	18 (49)	37%
Enlargement of cervical nodes	27 (49)	55%