



## **Massachusetts Physician Survey**

### **Pilot Survey of Primary Care Physicians in Massachusetts, 1998**

**BACKGROUND:** Inappropriate use of antimicrobial agents by clinicians should be targeted for change as a strategy to reduce the emergence and spread of antibiotic resistance.

**METHODS:** In July of 1998, all primary care physicians in Massachusetts (approximately 6,000) were asked to complete a one-page questionnaire indicating the importance of fifteen factors influencing their antibiotic prescribing.

**PRIMARY OBJECTIVE:** The purpose of the opinion survey was to document factors which may affect physicians' decision making and prescribing practices.

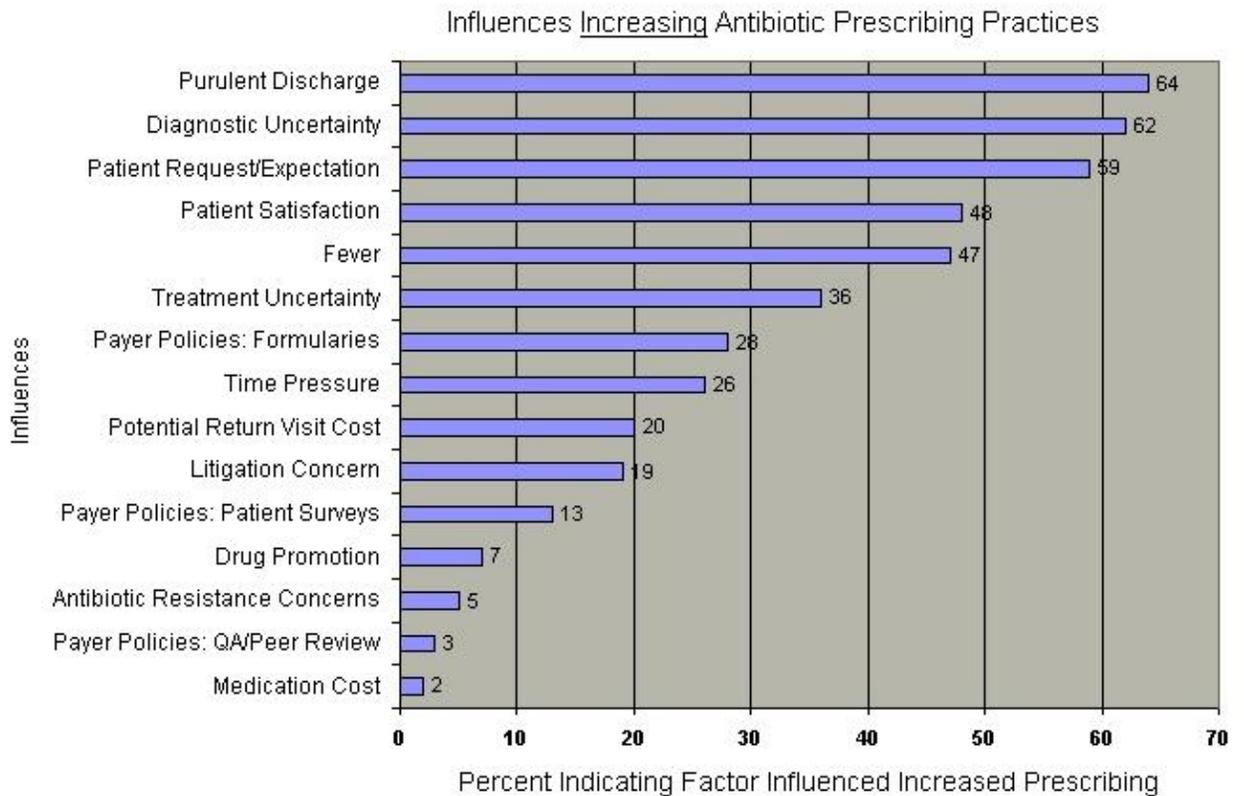
**RESPONDENTS:** Four hundred and ninety-nine usable questionnaires were returned (a response rate of 8%). 42% of respondents were internists and 32% pediatricians.

**FINDINGS:** 93% of respondents answered yes to the general question: Do you think physicians overprescribe antibiotics?

Responding to a second question, physicians indicated the factors which influenced them to increase antibiotic prescribing: (Figure 1)

- Purulent discharge, 64%
- Diagnostic uncertainty, 62%
- Patient request, 59%

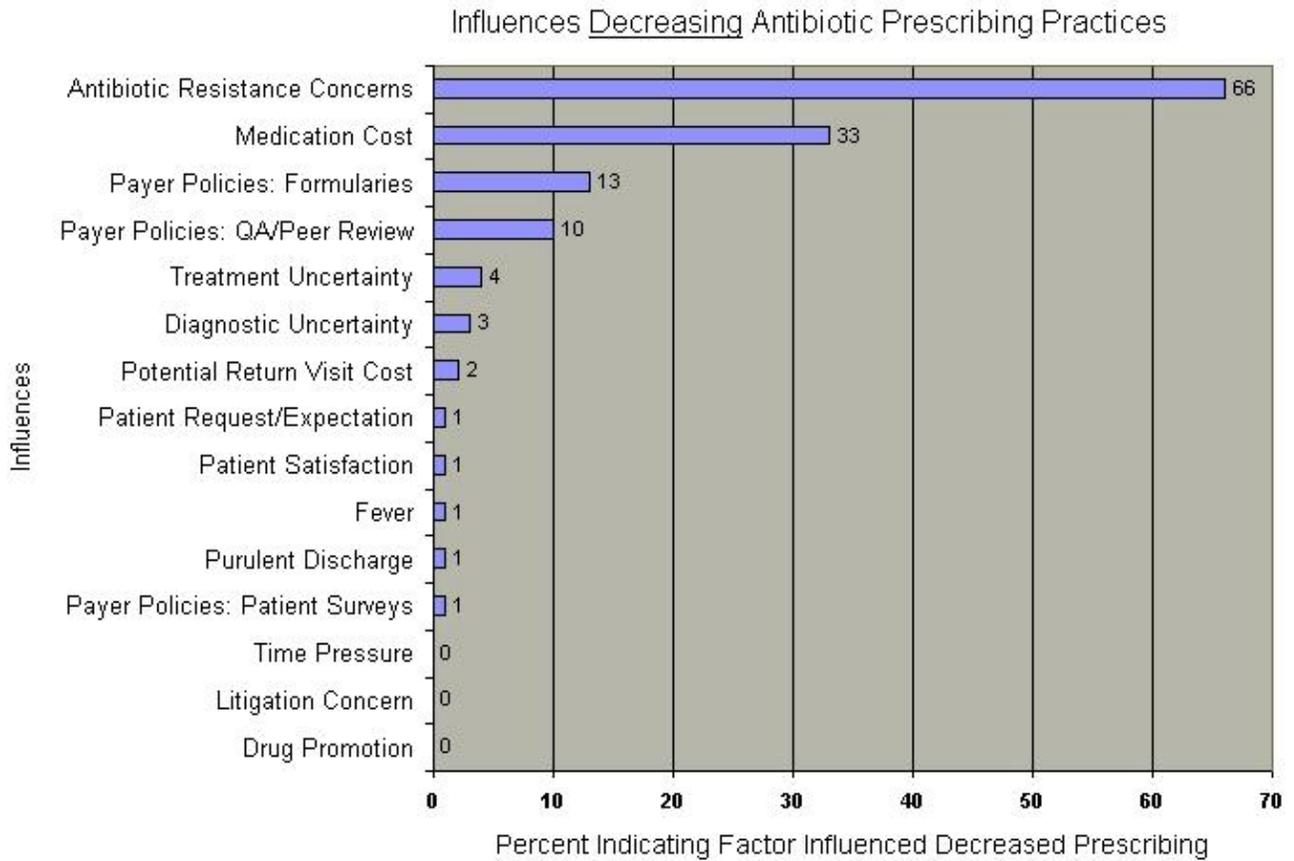
FIGURE 1:



Among the principal factors which they felt decreased their overall prescription of antibiotics:  
(Figure 2)

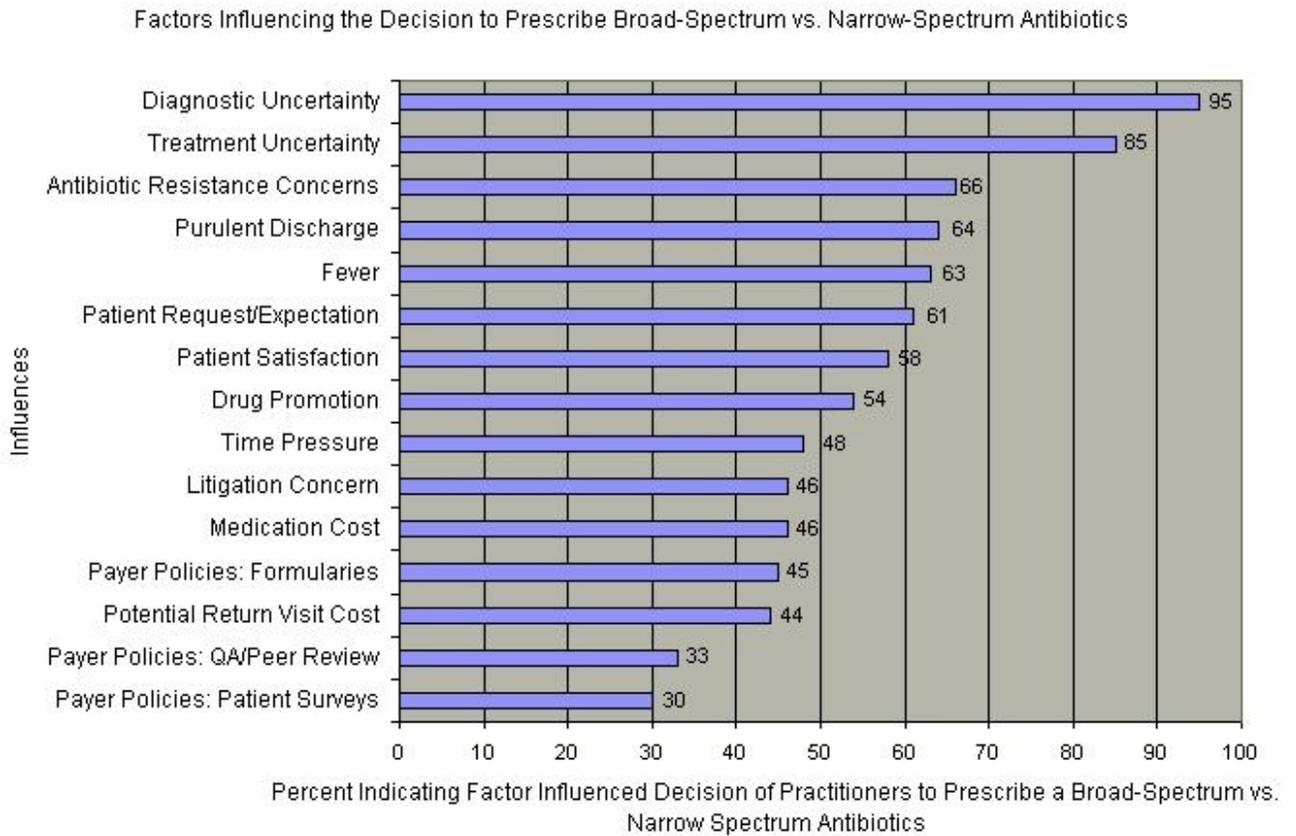
- Concern over emerging antibiotic resistance, 66%
- Medication cost, 33%

FIGURE 2:



When asked specifically why physicians prescribe broad-spectrum antibiotics when narrow-spectrum would be effective, they again cited diagnostic uncertainty, treatment uncertainty and purulent discharge as influential factors.

FIGURE 3:



## CONCLUSION:

Primary care physicians who responded to this opinion survey about their own practice indicated that purulent discharge and diagnostic uncertainty were the most important factors leading to increased antibiotic prescribing. Patient request also represented a noteworthy influence on the tendency to increase prescribing of antibiotics, but was not as influential. External regulatory factors such as drug formularies and peer review were said to exert little influence on prescribing behaviors. Findings suggest that improved diagnostic methods and targeted educational campaigns aimed at improving diagnostic skills and increasing awareness of the antibiotic resistance problem will foster more appropriate antibiotic use.

As Dr. Stuart Levy, President of APUA, notes: "We need to relearn the use of antibiotics and advocate for a more controlled application of antibiotics for therapeutic use only, so that bacterial strains susceptible to drugs will reemerge.

\*This survey was conducted by the Alliance for the Prudent Use of Antibiotics (APUA) in cooperation with the Massachusetts Infectious Disease Society (MIDS) and the Massachusetts Department of Public Health.