

# Longer-term outcomes of program to reduce unnecessary antibiotic prescriptions

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The initial benefits of an outpatient antimicrobial stewardship intervention designed to reduce the rate of inappropriate antibiotic prescriptions were lost after discontinuation of audit and feedback to clinicians, according to a study published in *JAMA*. The study is being released early online to coincide with the IDWeek 2014 meeting.

Antibiotics are the most frequently prescribed medications for children; most are prescribed for outpatient acute [respiratory tract infections](#). Because [antibiotic prescribing](#) is often inappropriate, Jeffrey S. Gerber, M.D., Ph.D., of Children's Hospital of Philadelphia, and colleagues recently conducted a randomized trial of an outpatient antimicrobial stewardship [intervention](#) that found a nearly 50 percent relative reduction in prescribing rates for broad-spectrum antibiotics, according to background information in the article.

To assess the durability of this intervention, the researchers followed antibiotic prescribing across intervention and control sites after termination of audit and feedback. The [randomized trial](#) was conducted within 18 community-based pediatric primary care practices using a common electronic health record. The intervention included clinician education, comprising a 1-hour review of current prescribing guidelines for the targeted conditions; and audit and feedback of antibiotic prescribing. Nine practices received the intervention and 9 practices received no intervention. Twelve months after initiating the study, the researchers stopped providing antibiotic prescribing audit and feedback to clinicians in the intervention group. As planned prior to the end of the

intervention, the observation period was extended by an additional 18 months, bringing the total observation time to 50 months.

As previously reported, following the 12-month intervention of prescribing audit and feedback, broad-spectrum antibiotic prescribing decreased from 26.8 percent to 14.3 percent among intervention practices vs 28.4 percent to 22.6 percent in controls. Following termination of audit and feedback, however, prescribing of broad-spectrum antibiotics increased over time, reverting to above-baseline levels. After restandardization of the data set for the additional 18 months of data, antibiotic prescribing increased from 16.7 percent at the end of intervention to 27.9 percent at the end of observation in the [intervention group](#) and from 25.4 percent to 30.2 percent in controls.

"These data suggest that audit and feedback was a vital element of this intervention and that antimicrobial stewardship requires continued, active efforts to sustain initial improvements in prescribing. Our findings suggest that extending antimicrobial stewardship to the ambulatory setting can be effective but should include continued [feedback](#) to clinicians," the authors write.

**More information:** [DOI: 10.1001/jama.2014.14042](https://doi.org/10.1001/jama.2014.14042)

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