GAO

United States
General Accounting Office
Washington, D.C. 20548

Health, Education and Human Services Division

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April 4, 1995

The Honorable William S. Cohen
United States Senate

Dear Senator Cohen:

In 1990, Maine enacted a law establishing a demonstration project in which physician practice guidelines would be established and compliance with these guidelines would represent a rebuttable presumption in malpractice suits that a physician had met the standards of care for the patient. It was hoped that this project would reduce the practice of defensive medicine--ordering unnecessary diagnostic tests and performing excessive procedures to establish a defense against malpractice claims. It was also hoped that reducing defensive medicine would lower health care costs by eliminating payments for the unnecessary tests and procedures.

In 1992, you and Senator George Mitchell asked us to examine the Maine Medical Liability Demonstration Project to describe its history, the factors essential to the project's establishment, and the focus of the physician practice guidelines. In October 1993, we responded by issuing a report entitled, Medical Malpractice: Maine's Use of Practice Guidelines to Reduce Costs (GAO/HRD-94-8), which explains how and why the guidelines were developed and provides a description of the guidelines' focus on physician behavior in four high-risk specialties. You also asked us to determine if there is any empirical evidence demonstrating the degree to which the use of practice parameters has reduced the number of procedures being performed by participating physicians.

The unavailability of reliable data from Maine Blue Cross and Blue Shield (BC/BS) prior to implementation of the practice guidelines has prevented us from establishing a trend line to reliably assess the effect of the guidelines. On December 21, 1994, we met with your staff and discussed the numerous data-related problems encountered in trying to determine whether the practice parameters have had an effect on defensive medicine in Maine. In addition, we informed your staff that even if data were available, other

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factors such as changes in the health care marketplace and trends in the practice of medicine would probably preclude us from isolating any effect the guidelines may have had on the number of tests and procedures performed. Your staff asked that we summarize in writing the data-related problems that prevent us from determining what effect practice parameters have had on the practice of defensive medicine.

DATA PROBLEMS WITH GUIDELINES SELECTED FOR REVIEW

We looked at 12 of the 20 Maine practice guidelines that appeared to have the potential to reduce tests or procedures and which we might be able to analyze empirically. The remaining guidelines were designed primarily as "risk management" protocols aimed at reducing the incidence of bad medical outcomes or were guidelines that could not be analyzed empirically. The selected guidelines pertain to (1) mammography, outpatient angiography, and barium enema examination versus colonoscopy in the radiology area; (2) caesarean section, hysterectomy (two guidelines), and four other procedures in the obstetrics and gynecology area; (3) cervical-spine X rays in the emergency medicine area; and (4) preanesthesia testing in the anesthesiology area.

In September 1994, we completed our preliminary analysis of data provided by Maine BC/BS. We had planned to do statistical analyses on each of the selected procedures based on data from each of the 5 years preceding implementation of the guidelines (1987 to 1991) to determine if there was a trend in use rates over time. We planned to compare that trend with the actual rates for subsequent years. We then would have attempted to determine if any changes to the trend lines were related to implementation of the practice guidelines. However, we will not be able to do these analyses because the data are not complete prior to 1992, the year the guidelines became effective.

To provide the requested data, BC/BS needed to consolidate information from six different claims systems, not all of which were compatible in format either within a year or across years. For example, there are problems with inconsistent provider numbers from database to database, missing patient and physician information, multiple patient identifiers for the same patient, and problems with integrating managed care plan information with the fee-for-

service claims data. Also, no data for 1987 were available. Meeting our data request was made more difficult because of prior Maine BC/BS computer system conversions that, between June 1989 and June 1992, consolidated three different claims systems into one and that, in January 1993, replaced a contracted managed care system with an in-house system. Claims histories for the replaced systems were not converted to the new system and information from the contracted managed care system cannot be accessed.

Another major problem encountered pertains to inconsistent recording of diagnostic and procedure codes over time. As part of its continuing systems upgrade between 1989 and 1993, BC/BS began collecting more detailed information on patient diagnosis and procedures. Our analysis showed large increases in all procedures reviewed from 1989 through 1992. These increases probably reflect ongoing improvements in claims and diagnostic coding rather than real increases in the number of procedures performed.

Furthermore, although data for years subsequent to 1992 are more complete, BC/BS of Maine only requires hospital-based physicians to include diagnostic codes on hospital claims, rather than both the diagnostic and procedure codes. Therefore, any analysis would be incomplete because some claims would lack information on the procedures performed.

DIFFICULTIES IN DETERMINING THE EFFECT OF PRACTICE GUIDELINES

If adequate data from Maine were available, other factors such as changes in the health care marketplace and regulatory requirements would make it difficult to determine whether the use of practice parameters reduced the number of procedures being performed. To illustrate, examples of problems encountered in our analysis of specific radiology and ob/gyn guidelines are discussed below.

Radiology Guidelines

The guideline for mammography screening was designed to ensure proper mammography and raise awareness of biopsy statistics with the hope that the number of missed lesions and the number of biopsies ordered for benign conditions would decrease. We were, however, forced to drop this guideline from our analysis. BC/BS of Maine only started covering screening mammograms in 1991, 1 year prior to the

guideline implementation. We would, therefore, expect an increase in the number of procedures done as more BC/BS beneficiaries began taking advantage of this benefit. Additionally, in October 1994, the Food and Drug Administration began implementing new federal mandatory quality control standards and a certification system for almost all facilities that perform and interpret mammograms. These federal standards are similar to the mammography demonstration guidelines, making isolating the effects of the guidelines difficult.

The guideline covering outpatient examination of blood-vessel disorders--outpatient angiography--was selected by Maine to give physicians confidence to perform this procedure on an outpatient basis, thereby reducing inpatient hospital costs. Over the last decade, however, the widespread trend has been to do more tests and procedures, including angiographies, on an outpatient basis. Because of this continuing trend, it would be difficult to factor out the possible effects on the current demonstration project.

Maine also developed a guideline for examination of the colon for carcinomas because missed colon carcinomas are a leading cause of malpractice claims for radiologists. The colon may be examined with barium enemas or colonoscopy. However, barium enemas are about one-third the cost of a colonoscopy procedure and carry less patient risk. Both procedures assume at least 90-percent sensitivity in detecting colon carcinoma. Internists and gastroenterologists rather than radiologists, however, typically determine which of the procedures is done. Thus, it is possible that this guideline will have no effect on the number of procedures done because it only applies to radiologists. In addition, more gastroenterologists are acquiring the necessary equipment to do colonoscopies in their offices and it is possible that more rather than fewer colonoscopies will be done in the future.

Obstetrics and Gynecology Guidelines

In conducting our analysis of ob/gyn guidelines, we identified further confounding factors. Caesarean section and hysterectomy rates had already been declining as a result of Maine Medical Assessment Foundation studies begun in 1982, thus making it difficult to isolate any effect of the practice parameter guidelines. In addition, physician reimbursement incentives for performing caesarean sections have been lessened because the payment rate difference

between caesarean and vaginal deliveries has been reduced. This payment change would also confound measuring the effect of the malpractice demonstration.

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Should you have any questions, please call me at (202) 512-7119 or Tom Dowdal, Assistant Director, at (410) 965-8021.

Sincerely yours,

Sarah F. Jaggar
Director, Health Financing
and Policy Issues

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