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EDITORIAL

Blood, Sweat, and Tears: Wasted by Medicare's Missed Opportunity

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Medicare's failure to include clinical pharmacists among its list of providers is costing the United States health care system several billion dollars annually and is contributing to several hundred thousand strokes, heart attacks, and deaths each year. The recent report by Drs. Bond and Raehl[1] adds to the extensive data of more than 100 articles supporting this waste. Their report found that the absence of clinical pharmacy services for hospitalized Medicare patients requiring anticoagulation cost more than 60,000 units of *blood*, $3 billion (*sweat*) in additional hospital charges, and more than 25,000 avoidable deaths (*tears*) annually for Medicare patients alone.

As sobering as these findings are, it should be recognized that even more patient harm and waste are occurring in non-Medicare patients, ambulatory patients, patients receiving other forms of medical therapy, and millions of patients who are not receiving recommended therapy. The failure of Medicare to recognize clinical pharmacists as providers is the primary reason that these benefits are not being realized by most patients in the United States and by the U.S. health care system. In some instances, other professionals (who are not as well trained to provide clinical pharmacy services) are being used, under clinical pharmacist supervision, because the provider status of these other professionals allows them to bill Medicare.

Failure to recognize clinical pharmacists as providers under Medicare severely limits the provision of these services and, thereby, harms and even kills thousands of patients annually, increases health care costs, limits the return on the resources invested in clinical pharmacists' education and training, and represents an unfair business practice within the health care arena. What possible justification can there be for not allowing clinical pharmacy professionals to provide the beneficial and cost-saving services for which they are trained and licensed? In view of the available data, one has to question how Congress, Medicare, the pharmacy profession, and any other group committed to improving health care can allow such extensive waste and patient harm to continue.

Legislation to secure Medicare provider status for clinical pharmacists was introduced in 2001 in both houses of the U.S. Legislature (House bill HR2799 and Senate bill S974), but neither bill made it to the floor for a vote. In its June 2002 report to the Congress,[2] the Medicare Payment Advisory Commission gave a favorable review to the issue of having Medicare pay for clinical pharmacy services; in June 2004 House bill HR4724 was introduced in a renewed effort to secure provider status for clinical pharmacists. At the time of this writing (October 2004), submission of a similar bill in the U.S. Senate is pending.

Examples of the Impact of Clinical Pharmacy Services on Major Medical Centers

As mentioned earlier, the report by Drs. Bond and Raehl[1] is simply a recent addition to an extensive body of similar literature that has been reported over the past 30 years. The following summarizes just a few studies conducted at major medical centers in just the last few years; it is not in any way a comprehensive review.

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Anticoagulation Management of Ambulatory Patients at the University of Texas Health Science Center, San Antonio, Texas

Just as Drs. Bond and Raehl evaluated the impact of clinical pharmacy services on hospitalized patients requiring anticoagulation,[1] others have examined the impact of these services on ambulatory patients requiring such therapy. The results of such studies led the American College of Chest Physicians Consensus Conference on Antithrombotic Therapy to recommend that patients receiving long-term anticoagulation should be managed in specialized anticoagulation clinics.[3] In support of this recommendation, the group cited four studies that showed a 50–90% reduction in major complications and a health care cost savings of up to $4000/patient/year. Further, the recommendations of this group also indicated that the failure to use available anticoagulation clinics increases medical legal liability.[4]

Of the four studies cited, one was an Italian study that did not clearly report what types of practitioners were providing the service. The other three reports were from clinical pharmacy–managed clinics in the United States. The findings of one of these clinics (University of Texas Health Science Center, San Antonio, TX) allowed the authors to calculate that making clinical pharmacists' services available to all outpatients receiving anticoagulation each year could prevent 340,000 blood-clotting events (e.g., strokes, heart attacks) and 92,000 major-to-fatal bleeding events, possibly avoiding 116,000 deaths, and saving at least $6.4 billion through fewer hospitalizations and emergency department visits.[5] This cost estimate, however, is very conservative because the analysis did not include numerous other expenses such as the cost of outpatient evaluation and management of bleeding or clotting events, and the cost for stroke rehabilitation. Of importance, these estimated benefits[5] are in addition to those projected by Drs. Bond and Raehl[1] because the former involved only outpatients and the latter included only hospitalized patients.

Management of Heart Failure in Ambulatory Patients at Duke University Medical Center, Durham, North Carolina

Heart failure affects several million U.S. citizens and is one of the most common reasons for hospitalization in the United States. Even so, a large portion of the millions of patients with heart failure do not receive adequate therapy.[6] Investigators from Duke University Medical Center reported that involvement of a clinical pharmacist in the management of patients with heart failure resulted in significantly more patients receiving appropriate therapy and achieved a 78% reduction in all-cause mortality and nonfatal heart failure events.[7] Unfortunately, a cost-benefit analysis of this impressive reduction of adverse outcomes was not provided.

Avoidance of Adverse Drug Effects at Harvard Medical School, Boston, Massachusetts

The federal government's Institute of Medicine report[8] is one of several studies[9–12] documenting that the inappropriate use of drugs causes over 100,000 deaths and $29–76 billion of health care expenses annually. One group of investigators concluded that 1 million patients are hospitalized annually due to adverse drug effects (ADEs) and that 106,000 of these ADEs are fatal.[10] These data place ADEs as the fifth leading cause of death—ahead of motor vehicle accidents, breast cancer, and acquired immunodeficiency syndrome.[11] In addition, the rate of ADE-associated mortality has increased 2.5-fold from 1983 to 1993.[12]

Might clinical pharmacists' services reduce this waste and harm as well? A 1999 report stated that including a pharmacist on physician rounds in the intensive care unit at Harvard Medical School resulted in a 66% reduction in ADEs and was associated with a cost savings of $270,000/year on just one unit of the hospital.[13]

Improving the Treatment of the Untreated and Undertreated

Several hundred thousand strokes, heart attacks, and deaths could be avoided if available, highly effective therapies were used more widely in individuals with high blood pressure, diabetes mellitus, atrial fibrillation, and high cholesterol levels. Clinical pharmacy services can help correct this underuse of effective and cost-effective therapies. As early as the 1970s, investigators demonstrated the ability of clinical pharmacy services to improve the drug therapy of patients with diabetes and high blood pressure dramatically, improve compliance, and possibly reduce mortality.[14, 15] Approximately 30 years later, only about one third of the 50 million U.S. citizens with high blood pressure receive adequate treatment.[16] Similarly, for the more than 2 million patients in the United States who have atrial fibrillation, fewer than half receive

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appropriate therapy for stroke prevention.[17] This lack of appropriate treatment results in at least 40,000 preventable strokes/year at a cost of approximately $40 billion.[18] Of the 15 million patients who could benefit from cholesterol-lowering drug therapy, fewer than 2 million receive such therapy.[19] Finally, a large portion of the 3–4 million patients with heart failure do not receive adequate therapy.[6]

Costs versus Savings of Clinical Pharmacy Services

Although the data presented indicate that it is imperative for Medicare to cover clinical pharmacy services if we are to reduce the documented waste of "blood, sweat, and tears," it is reasonable to ask what such measures will actually cost. In Drs. Bond and Raehl's report, they calculated that every dollar spent on clinical pharmacy anticoagulation services in the hospital would generate $7–20 in reduced expenses.[1] In other words, providing such services would reduce bleeding complications, shorten hospital stays, and reduce mortality all while saving $7–10 for every dollar invested! That return on investment is very similar to those calculated in an earlier article that reviewed over 104 articles published between 1988 and 1995.[20] Of the 104 studies reviewed, 89% found a positive financial benefit for a variety of clinical pharmacy services. The average savings was $16.70 for every dollar invested in clinical pharmacy services. Even though the authors identified 104 studies published over a 7-year period, it is important to realize that other studies that documented a reduction in adverse events with clinical pharmacy services were published during this time but were not included in the analysis because they did not include a cost-benefit analysis in their reports.

Summary

The report by Drs. Bond and Raehl[1] is yet another of the more than 100 articles published over the past 30 years that demonstrates that clinical pharmacy services can improve health care, save billions of dollars in health care expenses, and significantly reduce morbidity and mortality. Our society invests heavily in the education and training of clinical pharmacists, but society is prevented from benefiting from this investment because Medicare (and other payers) will not reimburse for these services. There can be no justification for allowing such waste and harm to continue in the U.S. health care system. Congress, Medicare, the pharmacy profession, and other groups dedicated to improving health care should take action immediately to correct this immense problem by passing the simple legislation that is required in order to add clinically trained pharmacists to the list of Medicare providers.

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