

LDI *Issue Brief*

Volume 10, Number 8
Summer 2005

Leonard Davis Institute of Health Economics

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How Primary Care Practice Affects Medicaid Patients' Use of Emergency Services

Editor's note: The use of emergency departments (EDs) in the U.S. continues to rise. Some of these ED visits may reflect limited access to primary care, even among patients with a primary care provider. Payers and policymakers have tried to restrain ED use, because of concern over high charges and discontinuity of care. But most of these attempts have involved erecting financial and administrative barriers to going to the ED, rather than expanding access to primary care. Is it possible to reduce excessive use of EDs by making primary care practices more "user-friendly"? This Issue Brief summarizes research that identifies primary care characteristics associated with ED use in a Medicaid managed care population. It suggests a strategy to simultaneously improve access to primary care and reduce costs of ED care.

High rate of ED use prompts quality and cost concerns

Recent data from the National Hospital Ambulatory Medical Care Survey show a steady annual increase in ED visits. According to the survey, at least 13% of these visits are for non-urgent problems. Most ED users with non-urgent problems have established relationships with a primary care provider.

- From 1993 to 2003, the number of ED visits increased by 26%, from 90 million to 114 million visits annually. At the same time, the number of hospital EDs decreased by 12%, leading to a higher volume of patients in the remaining EDs. The increase in ED visits was entirely driven by adult use, and far outpaced the 12% growth in the U.S. population.
- Policymakers have voiced particular concern about ED use by Medicaid enrollees, because the cost of their care is a public expense. Medicaid patients have the highest annual rate of ED use (81 visits per 100 Medicaid enrollees), nearly four times the rate for people with private insurance, and twice the rate for people with no insurance.
- Payers have tried to reduce excessive ED use by creating barriers to ED access, such as primary care gatekeeping (requiring preauthorization for an ED visit) and increasing patient co-payments. These strategies have had limited effectiveness and have prompted concerns about patient safety, especially for patients with limited access to care elsewhere. Gatekeeping and co-payment strategies have led to adverse outcomes for patients, medical-legal risks for providers, undesirable administrative complexities, and even racial disparities in denial of ED care.
- Strategies that try to reduce ED use by identifying "non-emergency" complaints and denying ED care assume that it is easy to distinguish "true emergencies" from "unnecessary" ED visits. However, studies indicate that both patients and health

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professionals have trouble distinguishing “appropriate” from “inappropriate” ED use. Lowe and colleagues sought to lay the foundation for an alternative strategy — to reduce the need for ED use by making primary care practices more accessible and attractive.

Study examines relationship between primary care characteristics and ED use

Lowe and colleagues studied primary care practices serving a Medicaid population to determine whether certain practice characteristics are associated with ED use. To identify the practice characteristics to study, they reviewed the literature, conducted focus groups of Medicaid enrollees, and interviewed primary care practitioners.

- The study included 353 primary care practices affiliated with one of the Medicaid HMOs in the Philadelphia area. State regulations require HMOs to assign each Medicaid enrollee to a primary care practice as a “medical home.” Eligible patients were children or adults under age 65 enrolled in the HMO and assigned to one of the practices between August 1998 and July 1999.
- The practice characteristics included accessibility for urgent care, as measured by expanded office hours; administrative features, such as the proportion of Medicaid patients in the practice, provider workload, and presence of non-physician providers; and availability of specialized equipment, such as asthma inhalers and equipment, EKG machines, and defibrillators.
- To ascertain office hours, researchers interviewed office staff and reviewed the appointment scheduling system at each office. To verify this information, researchers called each practice 30 minutes before the reported closing time to confirm that the office was open. To understand patients’ access to urgent care, “simulated” patients called each office and posed as Medicaid enrollees in need of urgent appointments.

Study reveals high ED use by Medicaid enrollees and barriers to primary care access for urgent problems

The researchers analyzed claims data to understand the extent of, and reasons for, ED visits among Medicaid enrollees assigned to the practices. Using a previously validated method, the researchers also classified visits as either “potentially avoidable,” meaning that a prompt primary care appointment could have averted an ED visit, or “probably unavoidable,” meaning that the condition was unlikely to be treatable in a primary care setting.

- Nearly 58,000 enrollees were included in the study. In the study year, these patients had 32,156 ED visits, which amounted to 0.80 visits per member-year.
- The researchers classified 15.7% of these visits as potentially avoidable, and 10% as probably unavoidable.
- Patients may face barriers in seeing their primary care provider for potentially urgent problems. About 26% of primary care practices had no weekday hours after 5 pm and 56% lacked weekend hours. Simulated patients were unable to make appointments for urgent problems at 21% of practices.

Primary care evening hours are associated with lower ED use

Lowe and colleagues adjusted for many patient and practice characteristics as they analyzed the relationship between primary care office hours and ED use.

- The more evening hours a practice had, the lower was ED use by its patients. Most dramatically, patients in practices with 12 or more evening hours a week used the ED 20% less than patients in practices without evening hours. The effect was more marked for adults than for children. Weekend hours were also associated with lower ED use, but did not reach statistical significance.
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- Evening office hours had a stronger association with reduced ED use for “potentially avoidable” ED visits than for “probably unavoidable” visits.
 - Practices that were open more hours during the day on weekdays did not have lower ED use.

ED use is higher when practices have higher percentage of Medicaid patients and when clinicians have greater workload

After adjusting for patient and practice characteristics, a number of administrative features of primary care practices were associated with ED use.

- Patients covered by Medicaid used the ED at higher rates in practices with higher percentages of Medicaid patients.
- ED use was higher in practices with a greater clinician workload, as measured by the ratio of active patients per clinician-hour.
- Patients used the ED at higher rates when the primary care practice included nurse practitioners or physician assistants and in practices where at least one clinician made hospital rounds.

ED use is lower in primary care offices that have specialized respiratory equipment

Nearly one-quarter of all ED visits were for respiratory conditions. The researchers analyzed whether the presence of certain equipment for asthma management, such as nebulizers for children and peak flow meters for adults, was associated with lower overall ED use in a practice, after accounting for other patient and practice characteristics.

- Children used the ED 13% more when their primary care practice did not have nebulizers for bronchodilators, with particularly high use of the ED for respiratory conditions.
- Adults used the ED 15% more when their primary care practice did not have peak flow meters, with particularly high ED use for respiratory conditions.
- Unexpectedly, practices lacking inhalers had lower overall ED use, and lower ED use for respiratory conditions, than practices with inhalers. Patients may view nebulizers and peak flow meters as more useful for acute management of asthma than inhalers, so patient behavior may be affected differently by these devices. Alternatively, availability of these different devices may be markers of different practice characteristics.

Potentially, changing primary care practice characteristics could reduce ED use substantially

Lowe and colleagues estimated the potential impact of changing practice characteristics for this group of Medicaid patients. While this estimate is only illustrative, it provides policymakers with a sense of the maximal impact that these changes could have on the study population.

- Overall ED use would decrease by 13% if patients in all practices used the ED at the rate observed for practices with 12 or more evening hours a week, and by 5% if all practices had weekend office hours.
- Overall ED use would decrease by 6% if all practices had ED use of those practices in the lowest quartile of active patients per clinician-hour.
- Overall ED use would decrease by 3% if all practices had ED use of those practices with nebulizers for children and peak flow meters for adults.

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POLICY IMPLICATIONS

This study demonstrates an association between primary care practice characteristics and ED use and suggests a promising alternative to gatekeeping and patient co-payments. Encouraging patients to choose traditional sources of primary care may be more effective, and less risky, than discouraging them from seeking ED care. Focusing on systems issues, rather than on individual patients, may be a more productive strategy to reduce excessive ED use.

- Because the study was observational, further research is needed. The authors recommend intervention trials to determine whether modifying practice characteristics results in an actual change in ED use.
- A critical question is whether reduction in ED use in these intervention trials affects patient outcomes. If improving accessibility and quality of primary care reduces ED use, does it also improve clinical outcomes or enhance continuity of care?
- The relative costs and benefits of changing practice characteristics should be assessed. Economic analyses are needed to estimate the potential savings to payers from reduced ED use, to determine what incentives payers could offer practices to encourage changes that are found to be effective.

This Issue Brief is based on the following article: R.A. Lowe, A.R. Localio, D.F. Schwarz, S. Williams, L.W. Tuton, S. Maroney, D. Nicklin, N. Goldfarb, D.D. Vojta, H.I. Feldman. Association between primary care practice characteristics and emergency department use in a Medicaid managed care organization. Medical Care, August 2005, vol. 43, pp. 792-800.

This Issue Brief was supported by a grant from the GlaxoSmithKline Community Partnership Program.

Published by the Leonard Davis Institute of Health Economics, University of Pennsylvania, 3641 Locust Walk, Philadelphia, PA 19104-6218.

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Published by the
Leonard Davis Institute
of Health Economics
University of Pennsylvania

Issue Brief



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