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## High Utilizers of ED Services: Lessons for System Reform

*John V. Jacobi\**

In every busy hospital emergency department (“ED”) in the United States, the doctors, nurses, and social workers have stories about the frequent utilizers – sometimes called “frequent fliers.” These are not patients who use the ED for routine primary care such as upper respiratory infections, and whom we wish would have a more appropriate medical home; those patients present their own health finance and care coordination puzzles, but they are not the stuff that stories are made of. The frequent utilizers are the patients who come to the ED very frequently – most EDs have patients who present dozens of times or even more frequently each year. They are often on a first-name basis with ED personnel, and they often present with conditions other than true emergencies.

Frequent utilizers are problems for two reasons. First, no matter how compassionate and caring the ED personnel are, using a hospital ED dozens of times each year is unlikely to be therapeutically appropriate. Frequent use is usually a signal of a serious problem, although not one requiring the sort of care EDs are intended to provide. Instead, it usually is a signal of poorly managed mental health or substance use disorders, poorly managed chronic physical illness, and/or social services problems such as homelessness. Because the ED structure is not geared to resolving these issues, the patient can suffer and the true presenting condition can fester. Second, most frequent use is inefficient. As the ED visit is unlikely to resolve the underlying problem, visits simply continue. ED personnel devoting time to frequent utilizers are unavailable for true emergent care, causing higher personnel costs, longer waiting times, or both. Space and equipment capacity can also be stressed. Reimbursement from public and private sources is unlikely to make a dent in these costs. Inadequate though it may be from the hospitals’ perspective, the reimbursement for those frequent utilizers with public and private insurance is not money well spent, as it pays for multiple visits that poorly match the actual needs of their

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This article will describe a nonprofit health coalition's ongoing project to address the problems of frequent utilizers in Newark, New Jersey. It will provide some background on previous research on improving the responsiveness and efficiency of care for frequent utilizers. It will then discuss the composition of the Newark coalition, and its program to connect frequent utilizers with appropriate community based services, through which it hopes to improve care for patients while reducing ED costs. It will also discuss the coalition's additional goal: making an economic case for increased intensive case management of frequent utilizers in times of contraction in public funding for care for the poor. Finally, this article will suggest two lessons that might be drawn from these efforts. First, the most vulnerable in society tend to be left behind in health reform efforts; projects such as this one provide one way to avoid that result this time around. Second, healthcare demand and costs are not smoothly spread in the patient population; rather, a small percentage of persons consume a high percentage of health resources. Many health systems scholars have urged that providers and insurers respond to the concentration of costs by adopting innovations such as Patient-Centered Medical Homes ("PCMHs") and Accountable Care Organizations ("ACOs"). This paper will relate the problem of frequent ED utilizers to the broader problem of health cost concentration. Most obviously, the tools of chronic care management are essential to addressing the underlying needs of frequent utilizers. Less obviously, success in this venture could point the way to better and more efficient care for broader categories of medically vulnerable hard to reach patients.

## I. FREQUENT UTILIZERS

Many visits to the emergency room are for traumatic injuries such as lacerations, dislocations, burns, or fractures. In addition to trauma, ED intake diagnosis might include stroke, obstetric complications, or appendicitis. In contrast, the admitting diagnosis of frequent utilizers might be intoxication, asthma, sickle cell disease, and infections secondary to IV drug use. As a group, frequent users of ED services differ from the occasional ED patient. The frequent user is more likely to be poor, have one or more chronic illnesses, have an alcohol or drug related disorder, and to be homeless or tenuously housed. Almost all of the frequent utilizers are either uninsured or are covered by a public program.<sup>1</sup>

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1. See Margot B. Kushel et al., *Emergency Department Use Among the Homeless and Marginally Housed: Results From a Community-Based Study*, 92 AM. J. PUB. HEALTH 778 (2002); Joshua H. Mandelberg et al., *Epidemiological Analysis of an Urban, Public Emergency Department's Frequent Users*, 7 ACAD. EMERGENCY MED. 637 (2000); Benjamin

Several projects have focused on frequent utilizers from both a cost and quality of care perspective. Perhaps the most familiar project is that of Dr. Jeffrey Brenner and his Camden Coalition of Healthcare Providers.<sup>2</sup> Dr. Brenner has gained some popular recognition for his work in part because he was profiled by Atul Gawande in the *New Yorker* magazine. In that profile, Gawande noted the multiple health problems of the frequent utilizers with whom Brenner's group works. He then captured the essence of the connection between care and cost in this context:

Brenner wasn't all that interested in costs; he was more interested in helping people who received bad health care. But in his experience the people with the highest medical costs – the people cycling in and out of the hospital – were often the people receiving the worst care. “Emergency-room visits and hospital admissions should be considered failures of the health-care system until proven otherwise,” he told me – failures of prevention and of timely, effective care.<sup>3</sup>

As part of his effort to address this shortfall in care, Dr. Brenner's group has focused on intense management of the care of frequent ED users, and there are some suggestive early results:

The Camden Coalition has been able to measure its long-term effect on its first thirty-six super-utilizers. They averaged sixty-two hospital and E.R. visits per month before joining the program and thirty-seven visits after – a forty percent reduction. Their hospital bills averaged \$1.2 per month before and just over half a million after – a fifty-six percent reduction.<sup>4</sup>

Gawande notes that not all of these reductions can necessarily be attributed to Brenner's group's intervention, and that the reductions are not themselves cost-free. But the sense of the enterprise is apparent and appealing. Dr. Brenner attempts to connect to appropriate community care those clinically lost souls who now cycle into and out of hospitals (often the EDs), thereby improving their care and along the way reducing inefficient hospital expenditures. His work builds on efforts that indicate that close case management of frequent ED users can both improve the lives of the patients and reduce the use of hospital emergency departments.<sup>5</sup>

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C. Sun et al., *Predictors and Outcomes of Frequent Emergency Department Users*, 10 ACAD. EMERGENCY MEDICINE 320 (2003).

2. See Camden Coalition of Healthcare Providers (2011), <http://www.camdenhealth.org/>.

3. See Atul Gawande, *The Hot Spotters*, NEW YORKER, Jan. 24, 2011, available at [http://www.newyorker.com/reporting/2011/01/24/110124fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2011/01/24/110124fa_fact_gawande).

4. *Id.*

5. See Martha Shumway et al., *Cost-Effectiveness of Clinical Case Management for ED Frequent Users: Results of a Randomized Trial*, 26 AM. J. EMERGENCY MED. 155 (2007).

A large-scale research project was conducted in the middle of the last decade to test case management and community connections as tools to improve care and reduce costs for high utilizers. The Frequent Users of Health Services Initiative (“FUHSI”) was funded by the California Endowment and the California HealthCare Foundation, and was conducted in six California counties from 2004 to 2007. The project was

designed to develop and test new models to serve [frequent users of ED services] more effectively, replacing a costly and avoidable health care utilization pattern with ongoing, coordinated, and multidisciplinary care provided in more appropriate settings.<sup>6</sup>

The project produced several types of interesting data. First, the case managers for the county programs evaluated each frequent user screened into the project for several key “presenting conditions,” and discovered the following:

- 65% of participants had chronic medical conditions, most commonly diabetes, cardiovascular disease, chronic pain, liver disease, respiratory conditions, seizures, Hepatitis C, and HIV;
- 53% had substance abuse disorders;
- 45% were homeless on entry into the program; and
- Between 32% and 50% had Axis I or Axis II mental illnesses.<sup>7</sup>

The county programs applied case management techniques to the participants, including crisis management, coordination of care, assistance with housing and public benefits eligibility, and linkage to primary physical and behavioral health providers. The aggregate results were impressive on many fronts.

- *Primary care.* 61% were referred to clinics, 44% attended a clinical appointment, and 31% were assigned to a primary care provider.
- *Behavioral health care.* Of those participants presenting with mental health issues, 42% were connected to community mental health services. Of those presenting with substance abuse issues, 20% were connected to community substance abuse services.
- *Entitlements.* Of those presenting uninsured, 16% were approved for Medicaid, and 64% were approved for county health insurance

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6. KAREN W. LINKINS ET AL., FREQUENT USERS OF HEALTH SERVICES INITIATIVE: FINAL EVALUATION REPORT 1, 5 (Lewin Group 2008), available at <http://documents.csh.org/documents/fui/FUHSIEvaluationReportFINAL.pdf>.

7. *Id.* at 24-25.

programs.

- *Homelessness.* Of those who were homeless at intake, over 80% were connected to permanent housing, long-term temporary housing, or homeless shelters.<sup>8</sup>

The project also reported significant effects in hospital usage by the participants. For the cohort of participants engaged in the program and not lost to follow-up, the ED visits were reduced by 37 percent after one year in the program and by 59 percent after two. ED charges similarly fell by 29 percent after one year and by 55 percent after two. Inpatient admissions were also affected, showing a 25 percent reduction in admissions after one year and a 69 percent reduction after two, and 28 percent reduction in inpatient charges after one year and a 72 percent decrease after two.<sup>9</sup>

The California study, then, confirmed prior researchers' findings that frequent utilizers tend to be poor and either uninsured or on public assistance, disproportionately affected by substance abuse and chronic illness, and disproportionately homeless. The case management services provided to the participants were associated with connections with community services, housing, and public insurance, and with reductions in the participants' use of both ED and inpatient hospital services. People in New Jersey took notice.

## II. NEWARK, NEW JERSEY COALITION AND THE FREQUENT UTILIZER PROJECT

Newark is New Jersey's largest city. It has a population of approximately 280,000, about a quarter of whom live below the poverty level. Its healthcare delivery system has been in flux in recent years. In 2008, two of the city's five hospitals closed, leading to substantial concern among residents, elected officials, and remaining healthcare providers. In 2009, a "President and CEO Workgroup" was formed with the goal of stabilizing healthcare delivery in the city. It included the CEOs of the three remaining hospitals, as well as city and state health department representatives, the city's federally qualified health center, other healthcare providers, academic institutions, and community representatives. The collaboration broadened over the next two years, and in 2010 it incorporated as a not for profit corporation called the Greater Newark Healthcare Coalition ("GNHC" or "the Coalition"). Its mission statement included the goal to "develop and implement a long-term strategy to improve the health and health services for the people of the Greater Newark area, particularly the poor and medically underserved people of the area."

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8. *Id.* at 27-30.

9. *Id.* at 48-49.

The Coalition's existence and continued vitality has been a source of some hope for long-time public health advocates. New Jersey's healthcare system is fragmented, with a predominance of very small physician practices, and hospitals (particularly those in urban areas) existing on razor-thin operating margins. The coalescence of the leaders of important healthcare institutions in Newark, and their willingness to personally attend working meetings, promised a new level of engagement and cooperation on health delivery issues in a city that has tended to lurch from crisis to crisis. The focus on primary care related to the Coalition's determination that the people of greater Newark could benefit from a more comprehensive array of services – more community than hospital based – that would connect them with care at the right level of intensity at the clinically appropriate time. This commitment was overwhelmingly embraced by all Coalition members, regardless of their institutional affiliation.

The GNHC's members meet monthly to discuss health issues relevant to the greater Newark area, and to develop and monitor projects it has undertaken. It has created and spun off (as a separate non-profit corporation) a health information exchange, and it has conducted several training sessions for area physicians on the process of incorporating into their practices the fundamentals of the PCMH model. In 2010, the GNHC initiated plans to create a Frequent Utilizers project. Following up on the work of the work of projects in Camden, New Jersey and in California that are described above, and based on its own preliminary research, the Coalition hypothesized that Newark hospitals, like those in other urban centers, had a cohort of patients who present frequently at hospital emergency departments; that many of those patients' presenting conditions were not emergent health needs, but rather involved poorly engaged mental or substance abuse disorders, poorly managed chronic illnesses, or housing stresses.

As part of the planning for the project, the Coalition met with many community service organizations delivering behavioral health, housing, health, and legal services. The meetings reinforced the Coalition's hypotheses, and resulted in agreements among the organizations to collaborate on referrals of patients. It was decided that the project would be relatively small in scale. It would permit an advanced practice nurse ("APN") employed by the Coalition member Visiting Nurse Association of Central Jersey to be the focal point. She would work with key contacts (including social work and ED nursing representatives) in the four participating hospitals (University Hospital, Newark Beth Israel Medical Center, St. Michael's Medical Center, and East Orange General Hospital, all Coalition members) to screen in high-utilizing patients. Hospital ED personnel would offer the project's services to such patients, and, with their consent, would refer them to the APN. The APN would then visit the

patient, assess her needs, and develop a plan of care. The plan of care could include home care services, referrals to community providers for behavioral health and housing services, and/or connection with a primary care physician.

The project's goals are threefold. First, it is intended that the project improve the care delivered to those frequent utilizers whose presenting condition was more reflective of needs for community services than for ED services. Second, it is intended that the project improve the efficiency of the participating hospitals' EDs by permitting (with patient consent) the referral of screened frequent utilizers for appropriate community-based services, thereby lessening the need for future hospital visits. Third, it was intended that an assessment of the results of the project (in terms of patient outcomes and cost reduction) would provide information to public and private funders of care, allowing them to redirect resources to strengthen case management and community services for the subjects of the study. This third goal is an important one. The first goal is directed at improving the health system's response to particularly vulnerable population and the second is directed at shoring up the stability of essential community facilities. The third looks toward a generalization of the theory driving frequent utilize projects – that is, the recognition that patient-centered approaches to care, particularly for those with chronic illness and other vulnerabilities, can both improve care and stabilize healthcare costs. If focused attention on frequent utilizers is not just good for the patients, but provides a return on the case management investment, then perhaps the model can improve care and stabilize costs for other patients. The Coalition hopes to examine the return on investment for case management of frequent utilizers in order to encourage funders to expand the model throughout the state. In addition, however, the Coalition hopes to link its work to that of others advancing models of patient-centered care as a way to both improve care and restrain health inflation pressures. This link is taken up in part III below.

The Frequent Utilizer Project began accepting patients early in 2011, and the Coalition has received funding support for the project from the Nicholson Foundation. The APN, working with hospital personnel, has created treatment plans for about two dozen patients as of this writing, all of whom were frequent users of ED care, and all of whom required but were not receiving community services. Early anecdotal evidence is that many of the patients are benefiting from the intervention, and their use of hospital services has diminished as they have obtained a variety of appropriate services in the community. It is, of course, too early to draw conclusions about the value of the program. Early signs are hopeful, and the project will continue.

### III. BROADER LESSONS OF ED PROJECTS

The GNHC has initiated its Frequent Utilizer Project to improve patient care, reduce health costs, and provide evidence to convince public and private sponsors of care that case management of the care of vulnerable patients is both clinically appropriate and cost-effective. It is the Coalition's hope that the project will convincingly demonstrate clinical and fiscal benefits for frequent utilizers. Beyond that, however, the Coalition intends to argue that the lessons of the project are applicable beyond the small population of frequent ED utilizers, and that it extends to the large number of persons with chronic illness.

The number of Americans living with chronic conditions is large and growing. A recent study estimated that 43.8 percent of civilian, non-institutionalized persons had one or more chronic illnesses.<sup>10</sup> The healthcare delivery system, however, is generally poor at caring for these Americans.

Patients with chronic conditions suffer from fragmented services . . . when they are treated not as persons but instead are segmented or compartmentalized into discrete organs or body systems. If health care professionals treat a malfunctioning system of the body rather than the person as a whole (i.e., treat the disease in the patient rather than treat the patient with the disease), treatment can become a series of medical interventions that target only the disease and ignore the ill person.<sup>11</sup>

This fragmentation can harm patients through lost opportunities and conflicting treatment:

Rarely in a fragmented, poorly coordinated health care system is a single health care professional or entity responsible for a patient's overall care. . . . Imprecise clinician responsibility increases the chance that some services may conflict with others . . . and that still other needed services may not be provided at all. Among people with chronic conditions 71% report having no help coordinating their care . . . and 17% say they have received contradictory medical information from health care professionals.<sup>12</sup>

This fragmentation also has cost consequences. Care for people with chronic illnesses accounts for about 75 percent of healthcare costs.<sup>13</sup> The

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10. Katherine Anne Paez et al., *Rising Out-Of-Pocket spending for Chronic Conditions: A Ten-Year Trend*, 28 HEALTH AFF. 15, 17 (2009).

11. ROBERT L. KANE ET AL., MEETING THE CHALLENGE OF CHRONIC ILLNESS 50-51 (2005).

12. *Id.* at 50 (citation omitted).

13. Catherine Hoffman et al., *Persons With Chronic Conditions: Their Prevalence and Costs*, 276 JAMA 1473, 1476 (1996). See also Alain C. Enthoven, *Employment-Based*

average cost of care for a person with one chronic condition is more than twice that of a person without chronic conditions, and for a person with two or more chronic conditions, costs average almost six times that of care for persons without chronic illnesses.<sup>14</sup> One proposed solution to this fragmentation is the reconfiguration of care delivery through such innovations as PCMHs. PCMHs focus on team-based practice involving a range of health professionals, whole-person practice orientation, care coordination and integration, and reimbursement of practices reflective of its broad responsibility.<sup>15</sup> The care management program employed by the GNHC in its Frequent Utilizer Project is obviously a poor cousin of the PCCM model; ideally, the frequent ED users seen by the Project's APN would ultimately be placed in a well-functioning PCCM. One problem with obtaining that result is that the last component of the PCCM principles – reimbursement commensurate with the PCCM's responsibilities to chronically ill patients – is not contemplated by the Project. There is an emerging mechanism, however, that could provide that funding: the Medicaid ACO.

ACOs have emerged as a proposed solution to many problems. Medicare ACOs, as created by the Affordable Care Act,<sup>16</sup> have been controversial, in part because the draft regulations proposed for their implementation are quite complex and burdensome. Medicaid ACOs, however, can be birds of quite a different feather. The fragmentation apparent in the general health finance system is, in many states, even more pronounced for the Medicaid population, as low reimbursement rates and scant provider networks make access to care, let alone coordination of services, extremely difficult.

As described in recent New Jersey legislation, Medicaid ACOs would create incentives for the coordination of care by providers of care to Medicaid-eligible patients through

initiatives such as creation of patient-centered medical homes, sharing of patient health information among providers, and implementation of care management programs designed to facilitate best practices and improve communication among providers and social services agencies throughout

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*Health Insurance is Failing: Now What?*, HEALTH AFF., May 28, 2003, at W3-237, 238, <http://content.healthaffairs.org/content/early/2003/05/28/hlthaff.w3.237.full.pdf+html> (citing Hoffman et al.).

14. Hoffman et al., *supra* note 14, at 1477.

15. See Patient Centered Primary Care Collaborative, Joint Principles for the Patient Centered Medical Home (Feb. 2007), <http://www.pcpc.net/content/joint-principles-patient-centered-medical-home>.

16. Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 3022 (2011).

the community.<sup>17</sup>

The resonance with the Frequent Utilizer Project's community coordination ethos is obvious. What is added by the Medicaid ACO bill is a funding mechanism – a gainsharing program, by which community-based ACOs would share program savings with New Jersey's Medicaid agency and Medicaid-participating HMOs.<sup>18</sup> Those savings would accrue from efficiencies derived, *inter alia*, from care management programs for Medicaid recipients, including the vulnerable patients targeted by the Frequent Utilizer program.

Other states are considering Medicaid ACO programs similar to that under consideration in New Jersey.<sup>19</sup> All of these emerging state projects seek to turn Medicaid towards a model in which health care providers have an incentive to provide coordinated, case managed care to Medicaid enrollees. If implemented thoughtfully, and if the funding for the case management services is adequate, this model could knit together the fragmented care system for Medicaid participants. If the GNHC's Frequent Utilizer Project is successful, it could serve as a precursor to a program that would apply its care coordination lessons to the vulnerable, chronically ill residents of greater Newark.

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17. 2011 N.J. Sess. Law. Serv. Ch. 114 § 1(b) (West).

18. *Id.* § 1(c).

19. *See, e.g.*, UTAH CODE ANN. 1953 § 26-18-405 (2011) (empowering state to amend State Medicaid Plan to create gainsharing programs); WASH. REV. CODE § 70.54.380 (2011) (empowering state to create two pilot Medicaid ACO projects); S. 486, 187th Leg. (Mass. 2011) (An Act Concerning Medicaid and Accountable Care).