City of Dallas Creative Improvement on EMS and Revenue Development

By Norman Seals and Richard Ngugi

City of Dallas Fire-Rescue developed a five-year strategic plan, in conjunction with internal and external stakeholders, that will increase the efficiency of the existing system and reshape the future direction of service delivery.

In the City of Dallas, Texas, the demand for pre-hospital care delivery has grown by a substantial 18 percent over the last five years. At the same time, Dallas, like most other U.S. cities, has faced fiscal challenges brought on by the recent economic downturn. As a result, the leadership of the City of Dallas Fire-Rescue Department (DFRD) found it necessary to evaluate the future of emergency medical service (EMS) delivery to the city. They developed a five-year strategic plan, in conjunction with a number of internal and external stakeholders, that will increase the efficiency of the existing system and reshape the future direction of service delivery.

BACKGROUND

In addition to the economic difficulties that have plagued municipal government over the past several years, another change has developed in the area of health-care reform. For many decades, the health-care industry has been structured around a fee-for-service model. But the recent health-care reform efforts such as the Affordable Care Act are predicated on converting to a value-based model that considers metrics such as customer satisfaction ratings, patient outcomes and the avoidance of readmission once a patient has been discharged from an in-hospital admission. Organizations are examining the costs of health-care delivery and ways to lower those costs, improve patient outcomes, and increase patient satisfaction.

The shift to value-based health care will have dramatic impacts on all EMS agencies, including municipal-based agencies. Historically, the primary source of revenue for these agencies has been transporting patients to an emergency department. Some agencies also bill patients directly for treatments delivered in the home when the patient subsequently refuses treatment. But many people utilize EMS services for situations that would not be considered an emergency by most people. This, combined with the need to avoid lawsuits, means that EMS agencies are forced, for lack of better options, to transport patients who do not need anything more than transportation to an emergency department to receive minor care. This system is less than efficient, requiring a great deal of subsidy from municipal government, and it will create increasing challenges for agencies that have not changed their service delivery models.

These issues do not just affect EMS agencies, of course. Hospitals have experienced more impact from the changing societal factors and health-care reform than EMS providers. Hospital overcrowding, readmission penalties, reimbursement reductions, customer satisfaction ratings, and many

other factors are creating a difficult situation for these organizations.

One particular patient category that is causing strain on both pre-hospital and hospital providers is that of frequent utilizers. The fractured healthcare system has created a group of patients who fall into gaps of healthcare delivery. These patients are generally uninsured or enrolled in government insurance programs, and they have difficulty in finding routine medical care with a primary care physician. There is a care gap for patients who have difficulty scheduling timely appointments because they cannot find doctors who accept Medicaid[1] and, perhaps to a lesser extent, Medicare,[2] and patients who are uninsured have even greater difficulty. Therefore, many of these patients get their care by utilizing 911 and the area's hospital emergency departments, which is not just a cost issue; studies indicate that these patients most often have multiple health issues that would benefit from routine healthcare and monitoring and cross system coordination of care.[3]

The municipal cost, even in just one area — EMS — is substantial. In fiscal 2013, Dallas Fire-Rescue Department EMS had 254 patients who received a billable service, transport, or treatment with no transport 12 or more times. According to internal data monitoring, the difference between the amounts billed and received for these services totaled more than $1.5 million. And the City of Dallas is growing at a steady pace, which will likely lead to increased demand for city services, including EMS resources. Unfortunately, adding additional EMS resources to cover increasing demand has proven to be difficult and costly. Alternative solutions need to be developed.

DEVELOPING A NEW PROGRAM

The first program implemented under the city's strategic plan to address this situation is called the Mobile Community Health-Care Program (MCHP). It is based on a service delivery model that has been around since the early 2000s. The program's overarching goals are to:

- Reduce frequent utilizers' dependence on 911.
- Reduce the subsidy Dallas pays for services that can't be billed or bills that can't be collected from these individuals.
- Reduce the EMS call volume from these individuals, freeing up those units to absorb some of the increasing systemic call volume.
- Partner with other area community health-care providers in providing these services.

DFRD began Phase I of the program in March 2014, after a year and a half of research and design. This process included data review, a community needs assessment, and program design, as well as recruiting and training of personnel. The department identified the callers who had made the most use of EMS services in the past fiscal year, and then Mobile Community Paramedics (MCPs) assigned to the program made contact with these patients and sought to enroll them in the program. Once the patient is enrolled, the MCP performs a number of basic assessments to identify areas of need in that patient's life from a holistic standpoint, evaluating areas such as medical history, psychosocial needs, access to primary or specialty care, and the need for fall/injury prevention. The MCP reviews the results of this assessment with the DFRD medical director, and they develop a plan of action that includes goals and items to work on. Action steps primarily center on helping the patient navigate the complex medical care process by providing advocacy for the patient with providers, linkages with community partners, and health-care education. As the patient's needs are identified, the MCP helps the patient access appropriate care from the most appropriate source: hospital-based programs and/or non-profit, for-profit, or faith-based agencies that provide medical, social services, mental health, or other services. At the end of the process, the goal is to improve the health care each patient receives to a degree that means they are no longer overly dependent on the 911 system.

PERFORMANCE EVALUATION AND ROI

At the six-month performance evaluation of Phase I, 41 patients were enrolled in the program. Thirty of them had responded favorably to the program, as measured by their decreased use of 911 services, and 11 had maintained or increased pre-enrollment call volumes.

The 30 enrolled patients who had responded favorably to the program reduced their overall 911 utilization by 57.51 percent, or 64 calls. A number of these patients had met the established goals set by the program at intake and were deemed ready for graduation from the program shortly after the six-month performance evaluation process.

Those patients who had maintained or increased their 911 utilization levels were found to have significant mental health or substance abuse issues that exceeded the scope of service delivery for the program, so they were re-classified into a new category. It was determined that service delivery would be continued for these patients, but that additional community resources would be identified to assist with their complex health issues. Overall, this group of patients increased their utilization of 911 services by 66 percent over the year they were tracked, with an average monthly increase of 11.3 calls.

Overall, the program corresponded with 52.7 fewer calls per month. According to a recent fee study the City of Dallas undertook, each EMS run without transport has an average direct cost of $835. Reducing 911 utilization by 632 calls per year therefore creates a cost avoidance of $528,054. The city's collection rate for most of these patients is very low, so any cost savings generated by the program cover a portion of the subsidy Dallas pays to provide EMS service to its citizens who are uninsured and underinsured. The annual increase in EMS call volume in the DFRD system exceeds the 632 calls that were avoided through this program, but as the program matures, additional quality improvement measures are undertaken, and additional community resources are identified, call volumes are expected to decrease.

These measures are not intended to replace staffing or equipment. Rather, the program is intended to offset rising EMS call volumes without adding additional resources. In its initial year of operation, this program is creating costa for the city, but as it becomes more advanced and streamlined, the cost avoidance is expected to offset any program impact on the budget. Additionally, as the program expands in Phase II (discussed below), it will generate revenue that is predicted to offset the cost of the program completely.

FUTURE OUTLOOK

DFRD is beginning to implement Phase II of this program, which involves developing collaborative relationships between DFRD and other community health-care partners to provide programs that help patients avoid readmission. In October 2012, the Centers for Medicare and Medicaid Services implemented readmission penalties for certain patients who were admitted to a hospital, treated, discharged, and subsequently readmitted within 30 days.[4] As a result, many hospitals have developed in-house programs designed to reduce the number of readmissions, but this is difficult with patients who are challenged in terms of mobility or transportation. MCHP is uniquely suited to provide in-home services, on behalf of the hospital, that are designed to greatly reduce, or prevent, the chances of readmission. DFRD, the City of Dallas, and several area hospitals are in a contract design and development phase, and DFRD is expected to start providing these services soon.

When the program gets underway, the city's hospital partners will engage with the MCHP to provide 30 days of post-discharge follow-up services to these patients in their homes. The hospital will pay for these services per hour of patient contact. The MCP assigned to these patients will ensure that they understand and comply with all discharge instructions, schedule follow-up appointments, get transportation to the appointment, and fill prescription orders. Clients will have 24-hour access to an MCP, and they can access the program directly (instead of using 911) if they have any concerns. If an MCP finds that a patient isn't doing well, he or she will have direct access to a member of the hospital program medical staff for consultation 24 hours a day. This kind of focused attention is expected to bring the readmission rate for these patients to the lowest level possible.

According to internal analysis, every dollar spent on this collaborative effort is expected to generate $6.62 for the hospitals. This number represents cost avoidance for the unreimbursed services to these patients. The amount that the program could save hospitals by avoiding readmission penalties is not included in this estimate.

CONCLUSIONS

The most important aspect of MCHP is the direct positive impact it is having on individuals in the City of Dallas community who have fallen into the gaps of the modern health-care system — gaps in insurance coverage and the availability of care.[5] The patients enrolled in MCHP, through the program's patient navigation and advocacy, have received coordinated health care that has made a substantial difference in the quality of their life. While this program is still in its infancy, it has already demonstrated early success in terms of cost avoidance, reduced 911 utilization, and the potential for substantial revenue generation.

The program also moves Dallas Fire-Rescue Department's Emergency Medical Service closer to alignment with anticipated health-care reform changes for pre-hospital care providers. The Centers for Medicare and Medicaid Services and private payers are expected to recognize the benefit of these programs and allow for direct reimbursement for these service deliverables by EMS agencies. As this program continues to mature and expand, it will continue to be evaluated against DFR EMS's five-year strategic plan. The program is expected to make a significant impact on the way health-care is delivered in the City of Dallas community.

Notes

1. Peter J. Cunningham and Ann S. O'Malley, "Do Reimbursement Delays Discourage Medicaid Participation by Physicians," HealthAffairs, content.healthaffairs.org..
2. David Hogbert, "The Next Exodus: Primary-Care Physicians and Medicare," *National Policy Analysis*, August 2012.
3. John Billings and Maria C. Raven, "Dispelling an Urban Legend: Frequent Emergency Department Users Have Substantial Burden of Disease," *Health Affairs* 32, No. 12 (2013).
4. Readmissions Reduction Program, Centers for Medicare and Medicaid Services, http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html.
5. Access, Affordability, and Insurance Complexity Are Often Worse in the United States Compared to 10 Other Countries, the Commonwealth Fund, November 2013, http://www.commonwealthfund.org/Publications/In-the-Literature/2013/Nov/Access-Affordability-and-Insurance.aspx.

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