



Improving EMS Response Times in a Rural County



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APPLICATION FORM

Program Information:

Locality: Mathews County
Program Title: Improving EMS Response in a Rural County
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Improving EMS Response Times in a Rural County

SUMMARY

The number of volunteers at the Mathews Volunteer Rescue Squad (MVRS) was shrinking. Excellent medical care was at risk. Initially, two problems were identified: 1) average-time-with-patient was too high at 19 minutes and 2) an average of less than 15 Emergency Management Technicians (EMTs) was responding to 95% of all calls. Working in collaboration with County Officials, a process was developed to create a hybrid volunteer-paid staff, install a 911-GPS system, and institute compassionate billing. Concerned about public reaction to a billing program, steps were taken to educate residents about the challenges. Squads throughout the country had lost a majority of volunteers when going through similar transitions. MVRS did not. With more Emergency Management Technicians (EMTs) based at the Rescue Squad building, average “wheels rolling” response time began to improve almost overnight. In just four months, MVRS reduced average-response-time to less than five minutes and average-time-to-patient to less than 12 minutes!

Mathews County made a commitment to reduce response times and improve patient care. In addition to planning, success required coordination, communication and combined efforts from the Mathews County Board of Supervisors, County Administrator, MVRS leaders and dedicated MVRS members.

It is hoped that the experience of the MVRS can serve as a model for other rural Counties who face similar challenges: inadequate funding, unacceptable response times, and a decreasing pool of skilled volunteers.

CHALLENGES

The Mathews Volunteer Rescue Squad (MVRS), founded in 1968, had always been a 100% volunteer Squad. By the end of 2011, the number of skilled volunteers at MVRS was shrinking and excellent medical care was at risk. The MVRS leadership team - Ron Lambert, Chairman of the Board; Judy Buis, President; Debbie Lambert, Vice-President; and Dave Burns, Treasurer and Business Manager - recognized significant changes had to be made if the Squad was to continue to fulfill its mission of outstanding, 24/7, County-wide, emergency medical care. The leadership team decided to quantify its problem by analyzing on-scene-response times and average-time-with-patient data; identifying high-incident periods; and exploring reasons for its shrinking pool of skilled volunteers.

As a result, three major issues were identified:

- Average-time-with-patients was too high at 19 minutes.
- On average, the same 14 EMTs responded to 95% of calls for assistance.
- State-mandated skills were increasingly difficult for volunteer EMTs to acquire.

The team concluded that continuing to operate in the Squad's all-volunteer tradition would lead to a combination of unacceptable response times, volunteer burnout, and the potential for reduced quality of patient care.

The Board of Directors reviewed the findings and authorized the team to "fix the problem."

SOLUTION

Step 1 laid the foundation for change. Buis and D. Lambert identified EMTs within the volunteer pool with credentials and availability to work from the Rescue Squad building on a scheduled basis during high-incident periods. R. Lambert and Burns investigated revenue sources to pay that core group and agreed a compassionate billing program was the best option for securing funds. Rescue Squad services had always been provided at no charge to Mathews County residents and the leadership team wanted that tradition to continue. A billing company was identified that would charge Medicare and private insurers for services but would not bill uninsured County residents. Buis, Burns and D. Lambert spent considerable time developing billing procedures, including a process for oversight of the billing company. A public relations campaign included articles in newspapers and outreach through churches and civic organizations. Objectives: educate residents about challenges facing the Squad; communicate the commitment to outstanding service; and secure funding at no cost to residents or additional cost to the County.

Having done their homework, the leadership team secured permission from the County Board of Supervisors to proceed. The compassionate billing program was launched successfully without one citizen complaint!

Step 2 was to increase the number of paid staff at the Squad building for high-incident periods to 6:00am – 6:00pm, six days a week. As with *Step 1*, the President hired first from the ranks of committed volunteers, making this difficult step easier. Squads throughout the country had lost a majority of their volunteers when going through similar transitions. MVRS did not. All volunteers were engaged in conversations that explained the need to increase critical skills and

importance of compassionate billing. EMTs continuing as volunteers were encouraged to continue to supplement crews just as others had done in Mathews for over 40 years.

Step 3, to monitor and reduce response times, began immediately. With EMTs now based more hours at the Squad building, average “wheels rolling” response time improved almost overnight. This “push” – to get ambulances rolling sooner - caught on with the volunteers who started spending more duty times at the building. The result was that in just four months, MVRS reduced the average response time to less than five minutes and the average-time-to-patient to less than 12 minutes! These numbers continue to improve.

Step 4 waited while billing revenue was used to pay the small staff and to establish a fund for upgrading critical equipment. Once funds were available, MVRS purchased five Life-Pak-15s and installed telecommunications equipment (\$155,000) so EKG’s and other critical data could be transmitted to area hospitals from the patient’s side. This allowed emergency room physicians to make decisions on where and how the patient must be transported. *Step 4* is improving not only response times but actual patient care. Every EMT has been trained on how to use Life-Pak-15s. MVRS remains one of the few squads in the region with 100% of all levels of EMTs capable of using Life-Pak-15s to diagnose life-threatening heart attacks.

Step 5 was to install 911-compatible GPS systems in each of the five MVRS ambulances (cost: \$92,000 with funds from compassionate billing revenue supplementing a \$44,000 grant). Mathews is a Super-Rural County which consists solely of a peninsula and an island. Hundreds of small, unlit, meandering roads eventually lead to difficult-to-reach single homes. Hard to find in daytime, these structures are extremely challenging to find at night or in a storm. The 911-compatible GPS system is also helping Mathews improve response times.

RESULTS

Data gathering, planning and County-wide support were critical to success. MVRS improved its already-outstanding patient care, significantly reduced MVRS response times, upgraded Rescue Squad skills, and established a sound financial cushion. These changes have led to average “with patient” times of under 12 minutes (down from 19) and a more robust staff of EMTs to handle the 1100 calls per year in this 85-square mile rural community. Recently Mathews Volunteer Rescue Squad was honored as “The Outstanding EMS Agency” out of more than 50 Regional squads. One reason for this Award was the number of lives saved through the use of Life-Pak-15s, purchased through compassionate billing funds.

Mathews Volunteer Rescue Squad made a commitment to reducing response times and improving patient care. In addition to planning, success required coordination, communication and combined efforts from the Mathews County Board of Supervisors, the Mathews County Administrator, MVRS leaders and the dedicated members of MVRS.