9-1-1 Calls Often Uncoordinated for Hospice Patients

Ultimately, No Stakeholders’ Needs Fully Met by Current Pathway

Typical 9-1-1 Call-Response Pathway for Hospice Patients

- Hospice patient’s condition suddenly changes or deteriorates
- Family or caregiver dials 9-1-1 instead of calling hospice nurse

ED

- EMS arrives and transports patient to ED
- ED staff treat patient without knowing hospice plan of care

Potential Pitfalls

- Unwanted treatment inconsistent with hospice principles
- Revocation of hospice status
- Significant incurred costs for hospice provider
- Increased confusion over patient wishes for EMS, ED staff

Source: Population Health Advisor research and analysis.
Coordinated 9-1-1 Response Averts ED Transport

EMS-Hospice Partnership Supports Patient, Family in Home Setting

Coordinated 9-1-1 Call-Response Pathway for Hospice Patients

Hospice patient’s condition suddenly changes or deteriorates

Family or caregiver dials 9-1-1 instead of calling hospice nurse

EMS notifies hospice nurse and sends specialized paramedic

Paramedic follows hospice plan of care and reassures family until hospice nurse arrives

Benefits

- Patient receives care in line with hospice plan of care
- Maintenance of hospice status
- Avoided ED transport and hospitalization costs
- Improved EMS-hospice relationship

Source: Population Health Advisor research and analysis.

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Improving Support for Patients at End-of-Life

Hospice-EMS Partnership Leads to Comprehensive Program

Hospice-EMS Program Design

- 9-1-1 Response Protocol
- In-Home Patient Management
- Patient Identification and Enrollment

Ensuring Program Sustainability

- Stakeholder Engagement
- Program Staffing and Training
- Funding Model

MedStar Mobile HealthCare

- EMS provider based in Fort Worth, Texas, that serves as the exclusive ambulance service provider to 15 Tarrant County cities

Vitas Healthcare

- Largest provider of end-of-life care in the US, headquartered in Miami, Florida, and operating programs in 15 states and the District of Columbia

Source: Population Health Advisor research and analysis.
Redesigned Pathway Deploys Upskilled Paramedic

On-Call Hospice Nurse Also Contacted and Sent to Patient’s Home

The Coordinated 9-1-1 Response Process

Patient or caregivers call 9-1-1

EMS dispatcher receives call and collects patient information (i.e., name and address)

Computer aided dispatch (CAD) system automatically notifies dispatcher if the patient is enrolled in hospice

Dispatcher sends first response team and on-duty community paramedic

Dispatcher contacts patient’s hospice nurse to inform them of 9-1-1 response

Source: Population Health Advisor research and analysis.
Paramedic Treats Patient and Counsels Family

Access to Patient Comfort Pack Medication is Critical

Upon arrival:

- Community paramedic assesses patient’s condition
- Reviews patient’s full medical record on tablet computer
- Consults with hospice nurse via telephone to determine if the issue is part of the hospice plan of care

If issue is unrelated:

- Paramedic proceeds with routine urgent response

If related to hospice plan of care:

Administer medication from patient’s comfort pack to ease pain and alleviate patient

Counsel family and caregivers on the benefits of keeping the patient at home

If the family agrees the patient does not need to be transported, dismiss first responders and monitor patient until hospice nurse arrives

If the patient’s condition cannot be safely managed at home, contact on-call hospice nurse to make arrangements for admission to the inpatient hospice unit

Source: Population Health Advisor research and analysis.
Target Families at High Risk of Calling 9-1-1

Hospice Uploads DNR Documents and Paramedic Visits Enrollees

Patient Enrollment into Revocation Prevention Program

1. Assess Family's Risk of Calling 9-1-1
   Hospice nurses use a checklist to identify patients and caregivers who are at high-risk of calling 9-1-1 instead of hospice nurse

2. Enroll High Risk Families
   The nurse informs high-risk families about the hospice revocation prevention program and enrolls the patient

3. Share Patient Information
   Hospice staff upload the DNR document into the shared EMR and MedStar logs the patient’s address into their dispatch system

4. Send Community Paramedic to Home
   A community paramedic visits families to emphasize the collaborative relationship between hospice and EMS

Source: Population Health Advisor research and analysis.
Benefits Support Alignment Across Stakeholders

Providers Incentivized to Act in Patients’ Best Interests

**Hospice**
Decreased hospitalization and revocation rate avoids cost of an ambulance transport and cost of hospital treatment

**EMS**
Coordination with hospice avoids confusion at patient’s home over DNR order, hospice plan of care

**Emergency Departments**
Admission of patients directly to inpatient hospice unit saves time and increases ED staff capacity

**Patient and Caregivers**
Patient preferences for end-of-life treatment are respected by remaining in hospice and avoiding unwanted ambulance transports

**54%**
Decrease in revocation rate (from 13% to 6%)

**$195K**
Total cost savings for hospice ($1,075 per enrolled patient)

Source: Population Health Advisor research and analysis.
Support from Varied Stakeholders Ensures Success

Traditionally Siloed Groups Unite Over Patient-Centered Care Model

Major Stakeholders Involved in Program Development

1. Emergency Physicians Advisory Board
   - Role: Provides medical oversight of MedStar EMS

2. Medical Directors of MedStar and Vitas
   - Role: Develop new clinical protocols for paramedics

3. Vitas Hospice RNs
   - Role: Support training of paramedics

1) Consists of ED directors of all hospitals in service area and five representatives from the county medical society

Source: Population Health Advisor research and analysis.
Hospice Nurses Support Paramedic Training

Shadowing Gives Paramedics Hands-On Experience

**Community Paramedic Staffing and Training**

- 5 daytime, 2 nighttime on-duty community paramedics
- Core community paramedic training includes 120 hours of classroom training and 100 clinical hours

**Hospice-Specific Training Module**

**Classroom Training**
- Paramedics attend 8 hours of classroom training on hospice-designed curriculum which covers care protocols, the dying process, and family counseling tactics

**Shadowing with Hospice Nurses**
- Paramedics exposed to routine hospice nurse home visit structure and treatment protocols

**Nurses Riding with Paramedics**
- Nurses advise paramedics during real-life 9-1-1 hospice-related calls

Source: Population Health Advisor research and analysis.
### Funding Model

**Population-Based Funding Ensures Sustainability**

**Shift from Targeted to Global Enrollment Reflects Program Success**

<table>
<thead>
<tr>
<th>Current Funding Structure</th>
<th>Future Funding Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospice patients at high-risk of revocation only</td>
<td>All hospice patients living in service area</td>
</tr>
<tr>
<td>25 Average number of patients per agency</td>
<td>125 Total number of expected patients from Vitas</td>
</tr>
<tr>
<td>$400 PMPM for patients enrolled in program</td>
<td>Reduced administrative burden from patient identification and FFS billing</td>
</tr>
<tr>
<td>92 Average LOS in hospice, in days</td>
<td>Increased EMS capacity from transporting fewer patients to hospital ED</td>
</tr>
</tbody>
</table>

Source: Population Health Advisor research and analysis.