Paramedicine: The Potential of Telehealth

Presented by
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Learning Outcome Standards: Based on Best Practices of the National School of Applied Telehealth, Consortium of Telehealth Resource Centers & American Telemedicine Association

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Paramedicine: Telehealth and Post-Discharge

Purpose of Today

Today’s presentation is intended to explore the role and positive impact that paramedicine combined with telehealth plays in the care of patients.

This discussion is intended for all stakeholders of telehealth from those in need of healthcare to those who participate at any level in the delivery of healthcare.
The Case for Community-Based Telehealth

Learning Outcomes

By the end of this presentation, you should be able to:

• Explain how paramedicine can utilize telemedicine for the care of patients in the following applications or settings: Mental Health, Emergency Departments, Home-Based Care
• Describe the cost savings related to a decrease in Emergency Department visits and hospital admissions.
• Identify top reasons it is important for hospital leaders to efficiently use these programs in the healthcare environment.
• Identify other audiences that need to know this information and need to collaborate in this area.
• Identify actions items to take in response to this training.

POLL QUESTION

Who is on today’s webinar? How would you generally classify your role:

a. Administrator/Executive Leadership
b. Physician/Provider
c. Paramedic/EMT
d. Social Worker/Mental Health Provider
e. Support Staff or Other

POLL QUESTION

Do you currently have an active paramedicine program in your community?

a. Yes
b. No
c. I'm not sure
The Perfect Storm
A rare combination of events or circumstances creating unusually bad situation.
The Perfect Storm
Mental Health Crisis in America

1 in 5 Adults have a mental health condition. That’s over 40 million Americans; more than the populations of New York and Florida combined. Youth mental health is worsening. Rates of youth with severe depression increased from 5.9% in 2012 to 8.2% in 2015. Even with severe depression, 76% of youth are left with no or insufficient treatment.

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Most Americans still lack access to care. 56% of American adults with a mental illness do not receive treatment.

There is a serious mental health workforce shortage. In states with the lowest workforce, there is up to 6 times the individuals to only 1 mental health professional. This includes psychiatrists, psychologists, social workers, counselors, and psychiatric nurses combined.

The Iowa Headlines

Mentally ill Iowans stranded for months in hospitals

In one of the worst cases, a Des Moines man who had been cleared for release spent an extra year and two months in Broadlawns Mental Health Center's psychiatric unit. Hospital staff members struggled to find an agency that would supervise him in the community. They finally found one this spring, after Polk County taxpayers spent nearly $900,000 housing the man in the public hospital for 33 months.

Mental health in Iowa is fragmented and costly

Iowa is home to more than 100,000 people who are dealt with through the state’s mental health services. The state spends nearly $1.3 billion on mental health, yet many Iowans struggle to access care. The Des Moines Register

Mental health system is in crisis

Part of the problem Carpenter confronted was the result of what a recent state study calls a severe workforce shortage in Iowa’s mental health services. That study, a report released in November 2016 by the Iowa Department of Human Services, said Iowa ranks 47th nationwide in the number of psychiatrists per capita, a shortage that has prompted the state to provide $4 million to fill gaps.
Broadlawns Medical Center in Des Moines reported holding a psychiatric patient for an extra year and two months because no residential programs would take him. That single case cost the public hospital nearly $500,000.
POLL QUESTION
Do you believe that your community has a mental health provider shortage?

a. Yes
b. No
c. I'm not sure

Integration
Paramedicine + Telehealth
**Paramedicine** is the unique domain of practice that represents the intersection of health care, public health, and public safety. (Wikipedia)

Healthcare/Medicine + Public Health + Public Safety = Paramedicine

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**Paramedicine + Telehealth = Better Mental Health Care??**

1. Identify the problem
2. Assess the situation
3. De-escalate the problem
4. Seek the right treatment, at the right place

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**Where are the BEDS??!!!**

Paramedicine combined with telehealth for the assistance with mental illness isn’t the magic bullet but it’s a good place to start.
Case Study
Paramedicine + Telehealth = Better Mental Health Care

California’s Community Paramedicine Pilot Project – Alternate Destination: Behavioral Health

The Idea...
In response to a 911 call, community paramedics transport patients with behavioral health needs, but no emergent medical needs, to a mental health crisis center instead of to an emergency department (ED).


http://emsa.ca.gov/Community_Paramedicine
The Results...

- 99% of patients were evaluated at the behavioral health crisis center without the long delay of a preliminary ED visit.
- Less than 3% of patients required subsequent transfer to the ED, and there were no adverse outcomes. After refining the field/medical evaluation protocols, the rate of transfer to an ED fell to zero.
- The project yielded savings for payers, primarily Medi-Cal, because screening behavioral health patients in the field for medical needs and transporting them directly to the mental health crisis center obviated the need for an ED visit with subsequent transfer from an ED to a behavioral health facility.
- For uninsured patients, the amount of uncompensated care provided by ambulance providers and hospitals also decreased.


Canadian Study:
May 12, 2006

Centre for Rural and Northern Health Research

Using Telehealth to Augment Delivery of Mental Health Services by Family Health Teams: Potential Barriers and Possible Solutions

Conceptual Framework...

![Conceptual Framework Image]
The Results...

- Tele-Mental Health is effective in connecting providers and patients.
- Tele-Mental Health increases access.
- Telehealth services should be as broad as possible and should not be limited to mental health care. The more types of clinical, educational and administrative uses of the telehealth equipment and the greater number of potential users, the better the chance of success.
- Many other results can be viewed at: http://documents.cranhr.ca/pdf/Telemental_Health_Final_Report_May_17_2006.pdf

What if Paramedicine is not available?

Community Health Systems
HealthCare IT News
November 2017

Health system sees shorter wait times, improved compliance through behavioral health telemedicine
The Idea...

• Create an Access Center that allows for better patient traffic control
• Staff Access Center with Behavioral Health specialists (LPCs, LCSWs)
• Assess and get patients to the correct care quicker and within Joint Commission Standards

The Results...

Shortened Wait Times; Decreased Boarding Length

Increased revenue due to shorter ER times (bed throughput)

Increased compliance with Joint Commission (shorter boarding times)

Overview

The Perfect Storm
Inappropriate ED Use
The Perfect Storm
Inappropriate ED Use

There are over 130.4 million visits to the ER every year in the U.S., but only 9.3% of all those ER visits actually end with a hospital admission. That means that people are often visiting the ER for non-life threatening injuries and illnesses.

Around 71% of ER visits made by patients using their employer-sponsored insurance are for issues that don't require immediate attention in an emergency room setting or are preventable with appropriate outpatient treatment.

In a recent study of insurance claims in more than 6.5 million ER visits, researchers discovered that only 29% of patients actually required immediate attention when they came to an emergency room. The same study also revealed that 41% of ER patients could have received the same care in a primary care or urgent care facility. And what's more, 6% of patients received care for conditions that could have been prevented with proper primary or urgent care treatment.

An analysis of the study revealed that if a mere 10% of these unnecessary visits were handled in an office setting, a net savings of $18.68 in total cost per health plan member per year could have been achieved.

Five Causes of Emergency Department Overuse:

- Patients have limited access to timely primary care services.
- The emergency department provides convenient after-hours and weekend care.
- The emergency department offers patients immediate reassurance about their medical conditions.
- Primary care providers refer patients to the emergency department.
- Hospitals have financial and legal obligations to treat emergency department patients.
The Perfect Storm
Inappropriate ED Use

Consequences of ED Overuse:

- Crowding, long waits, and added stress on hospital.
- Inappropriate use of the ED negatively impacts the quality of care for those with true medical emergencies.
- Excess Cost: Experts estimate that the cost of an emergency department visit for a non-urgent condition is two to five times greater than the cost of receiving care in a primary care setting for the same condition.
- Fragmented Care: Emergency department care is rarely coordinated with care that occurs elsewhere in the system, including in the primary care provider’s office.
- Hospitals have financial and legal obligations to treat emergency department patients.
- Emergency Department Diversion: Nearly one-third of all hospitals have experienced periods of having to divert ambulances to other hospitals.

Integration & Case Studies

Telehealth + Paramedicine = Decreased ED Overuse

Journal of Urgent Care Medicine Mar 03, 2017

- A telemedicine ambulance triage system is helping to keep non-emergent cases out of the emergency room.
- A briefing on Advisory Board notes that the city’s ED wait times were among the worst in the country 10 years ago, thanks to up to 50% of patients, in effect, beating primary care to their local ED.
- However, a telemedicine system for ambulance-bound triage has helped keep people who don’t need to be there out of the ED.

http://wellness.totalaccessmedical.com/blog/the-consequences-of-emergency-department-overuse
Telemedicine Helps Reduce Overuse of ED

Journal of Urgent Care Medicine Mar 03, 2017

In this particular program, firefighters specially trained in emergency medical services (EMS) are dispatched by 911 services.

- In this particular program, firefighters specially trained in emergency medical services (EMS) are dispatched by 911 services.
- Once on site with the patient, they use tablet devices to consult with a nurse at a call center to determine whether or not transfer to the ED is necessary.
- Preliminary results of the program show that the share of people for whom EMS was dispatched who end up going to the ED fell from 74% to 67%.
- Patient satisfaction with the Houston EMS system is on the rise, too.

https://www.jucm.com/telemedicine-helps-reduce-overuse-emergency-rooms-urgent-care/

Telemedicine Helps Reduce Overuse of ED

Journal of Urgent Care Medicine

The program is known as ETHAN, Emergency TeleHealth And Navigation.

- Its creator, David Persse, MD, FACEP, says it allows paramedics the ability to connect these non-911 patients in a new way.
- ETHAN shortens EMS providers’ ability to deliver much more responsive, specialized care to patients, requiring something other than an ambulance ride to the ED.


Albuquerque, NM Paramedicine Program Cuts ED Overuse

The Albuquerque Journal, May 19, 2017

- The Community Paramedicine initiative, launched in January 2016 by Blue Cross Blue Shield of New Mexico, has moved from pilot program status to an ongoing service helping more than 1,100 Medicaid members.
- There was an almost 62 percent drop in emergency room visits and a 63 percent decrease in ambulance use by frequent flyers.
- Community paramedics from Albuquerque Ambulance and American Medical Response go into the patient’s homes to address health issues as well as factors like safety precautions and nutrition.
- BCBS estimates that the program in its first year saved $1.7 million that would have been spent in the ER.

Telehealth Strengthens Community Paramedics and Care Team Communication

- Incorporating telehealth technology helps ensure that patients receive comprehensive treatment immediately.
- Northwell Health System in Long Island, NY, uses telehealth to ensure the delivery of appropriate treatment to the patient’s home.
- Patients can call a 24/7 help line and a triage nurse assesses the patient’s condition and needs. The nurse has the option to send a community paramedic to the patient’s home for further evaluation.
- Upon arrival, the community paramedic connects with a physician and nurse via a telemedicine device for a three-way conference call. This collaboration allows for immediate care-plan modifications. The community paramedic can administer medication, perform diagnostics, or manage the patient’s symptoms right then and there.
- Within one year of implementation, Northwell observed $2.1 million in cost savings from reduced ED visits and hospital admissions.

Overview

The Perfect Storm
Telehealth + Paramedicine Fragile Elderly - Home Alone

Residents age 65 and over grew from 31.3 million in 2000 to 40.2 million in 2016, accounting for 12.4 percent and 15.2 percent of the total population, respectively.
- According to the U.S. Census Bureau, 11 million, or 24%, of people aged 65 and older, live alone at the time of the census.
- According to AARP, about one-third of Americans older than 65 now live alone, and half of those over 85 do. More and more older adults do not have children, reports the AARP, and that means fewer family members to provide company and care as those adults become seniors.

The Perfect Storm
Fragile Elderly - Home Alone
Approximately 80% of older adults have at least one chronic disease, and 77% have at least two. Chronic diseases—heart disease, cancer, stroke, and diabetes—cause almost two-thirds of all deaths each year.

Chronic diseases account for 75% of the money our nation spends on health care, yet only 1% of health dollars are spent on public efforts to improve overall health.

Diabetes affects 12.2 million Americans aged 60+, or 23% of the older population. An additional 57 million Americans aged 20+ have pre-diabetes, which increases a person's risk of developing diabetes. In a 2007 Centers for Disease Control and Prevention program for people at high risk for developing diabetes, lifestyle intervention reduced risk by 71% among those aged 60+.

90% of Americans aged 55+ are at risk for hypertension, or high blood pressure. Women are more likely than men to develop hypertension, with half of women aged 60+ and 77% of women aged 75+ having this condition. Hypertension affects 68% of men aged 75+.


Falls

- Every 15 seconds, an older adult is treated in the emergency room for a fall; every 29 minutes, an older adult dies following a fall.
- Among older adults, falls are the leading cause of hospital emergency department visits for trauma, and injury.
- Falls are also the most common cause of older adult emergency room visits, accounting for over 40% of all falls.
- The oldest 10 years of life account for 10% of all falls.


Integration & Case Studies

The Perfect Storm
Telehealth + Paramedicine
Better Access to Care for Vulnerable Seniors Living at Home
The Perfect Storm
Fragile Elderly - Home Alone

The Case for Home-Based Care

- Home-based acute care programs improve outcomes and satisfaction.
- As seniors continue to make up a growing proportion of the population, adopting a home-based care approach to home-based care.
- Home-based care models often rely on community paramedics to support the post-discharge transition.
- Telehealth strengthens community paramedics and care team communication.

- By enabling elderly patients to remain in a familiar environment and avoid the hectic hospital setting, home-based care contributes to fewer incidences of delirium.
- EMS crews with advanced medical training are treating elderly patients in their homes, helping to manage chronic conditions & provide telehealth connections with the care team when needed.
- They also follow up on recently discharged hospital patients to ensure they are following care plans.
- Home safety checks are performed to look for potential hazards that could contribute to falls, fractures or other injuries.

Mount Sinai Medical Center Paramedicine/Telemedicine Project

Mount Sinai Medical Center in NYC and a local ambulance company have established a community paramedic program to provide home care to elderly patients. Community paramedics respond to calls from patients enrolled in the program or from Mount Sinai’s existing emergency program.
- The paramedics visit and examine the patients in their homes, check vital signs, or perform wound care as needed.
- Out of 30 patients who used the service over a six-month period, only five were transported to the hospital, for an estimated savings of about $1,400 per encounter.


Glacier County Community Health Center,
Cut Bank, MT
Home Telehealth Program

- In Montana, Glacier County Community Health Center launched its first-in-the-state Integrated Mobile Health Service Program for home based care.
- Telehealth Applications include chronic illness care and training, basic wound care, new mom visits, lab draws, IV catheter change, extended hospice services or end of life care, immunizations & vaccinations.
- Program goals: decrease hospital readmissions, decrease emergency care transports, hospice revocation avoidance and cost savings for patients and their families.

Conclusion
The Perfect Storm
Telehealth + Paramedicine = Better Care

“Stop responding to penny problems with $100 solutions”

According to the Journal of Emergency Medicine in relation to telehealth:

There’s a reality we must come to realize in America: We can’t have healthcare for all and maintain our current spending habits on healthcare; it’s simply not sustainable. This includes EMS. We must look for opportunities to decrease expenses for the large number of low-acuity calls while still maintaining our ability to respond quickly to life-threatening emergencies.

Telehealth
To Embrace or Not to Embrace

Telehealth technology will play a critical role in meeting the healthcare needs of the US long into the future.

Healthcare Executives and Leaders should embrace this idea because paramedicine combined with telehealth:
• Increases access
• Reduces costs
• Provides a more convenient delivery mode for patients and providers

ACTION ITEMS

01
Best Practice: Perform A Needs Analysis / Self-Assessment

02
Best Practice: Define Services, Program Model and Technology Models

03
Best Practice: Collaborate with all stakeholders & partners to design strategic plan, implement, and market to employers, stakeholders, law enforcement, public, etc.

04
Best Practice: Data Collection. Build momentum by collecting data and reporting results to the community-at-large and all officials (local, state, federal)

Technology Transformation Series
The Case for Community-Based Telehealth Learning Outcomes

By the end of this presentation, you should be able to:
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• Identify actions items to take in response to this training.
REFERENCES & RESOURCES

The National Consortium of Telehealth Resource Centers
http://www.telehealthresourcecenter.org/

Journal of Emergency Medicine
http://wellness.totalaccessmedical.com/blog/the-consequences-of-emergency-department-overuse

Legacy ER and Urgent Care
https://www.legacyer.com/the-truth-about-unnecessary-emergency-room-visits

Mental Health America

QUESTIONS?

If you have questions about this education, please contact:

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