Using Innovation and Technology in Rural Critical Care

Cuyuna Regional Medical Center

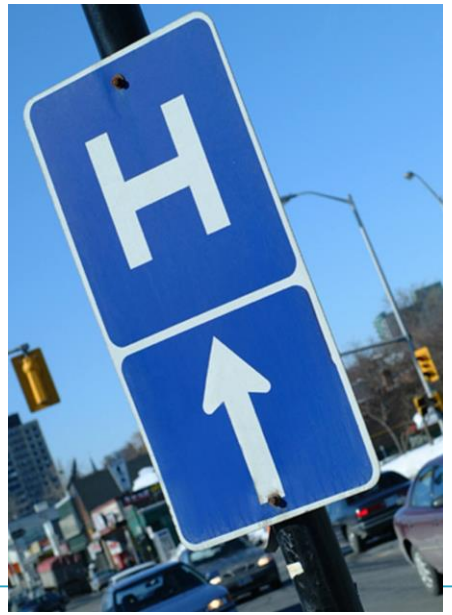
1964 50 2014
YEARS of CARE

Renee Steffen , DNP, RN - Chief Nursing Officer

Jana Keefe, R.R.T. –Community Paramedic

Who Are We?

- Public district hospital
- 25-bed critical access
- 117 Licensed skilled nursing home
- 3 Primary care clinic locations
- Thriving campus – providing comprehensive services
  - 13 Primary Care Physicians
  - 4 General Surgeons and 2 Orthopedic
  - 3 OB/GYN-
  - 15 with specialist in several areas
  - 7 NP, PA and Advance Clinicians
  - 5 Emergency physicians
  - 24/7 Hospitalist Program



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Our Heritage and Mission

1964 50 2014
YEARS of CARE

- Built on the historic values of the Cuyuna Range in Crosby MN.
- Cuyuna Range Hospital opened in 1964 following a grassroots community effort

Our Mission

"*Accommodating you with care and compassion by dedication ourselves to you every day*"

Above left to right: Father Joseph Cashen, Arvy Hansen and Ken Burns at the ground breaking for the Cuyuna Range District Hospital.

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Our Vision and CAN-DO Values

Vision

- Be the preferred health care and continuing care provider in all markets that we serve.
- Be the leader in developing innovative models for health care and continuing care services in our region.
- Maintain locally controlled health care with a spectrum of services
- Partner with premier providers

CAN-DO Values

- **C**ollaboration
- **A**mbassador
- i**N**novation
- **D**edication
- **O**pportunities for Excellence in the Moment

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Our Medical Staff

- Integrated with *The Central Lakes Medical Clinic* in November 2011
- Physician Service Agreement (PSA) With *Central Lake Physicians, LLC* and *Premier Surgical Associates, LLC*
- Leadership Council – shared planning between Administration & PSAs

- Chief Medical Officer (CMO) –Dr Rob Westin

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Success through Partnerships

- MHI – Minneapolis Heart Institute
- Allina/Abbott Northwestern Hospit
  - Virginia Piper Cancer Institute
  - Minnesota Oncology
  - Allina Stroke Telehealth
  - Allina Telegenetics
  - Baxter Medical Plaza
- Regional Diagnostic Radiologists (RDR)
- Adult & Pediatric Urology (APU)
- Crosby Eye Clinic
- Presbyterian Homes & Services
- CRMC-Riverwood Breast Health Alliance

Minneapolis Heart Institute

Allina Health Virginia Piper Cancer Institute

Regional Diagnostic Radiology

Allina Health Abbott Northwestern Hospital

Adult & Pediatric Urology

Crosby Eye Clinic

presbyterian homes & services

Cuyuna Riverwood Breast Health Alliance
Aitkin/Crosby

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Community Impact

- Second largest employer in Crow Wing County
- Physicians & staff are active in community (Ambassadors)
- Sponsorship/Volunteers for community initiatives
- EMS education
- County Services Planning
- C.W. County disaster response
- Health fairs/trade shows
- Community Paramedic Program
- Paramedic Mountain Bike Crew
- Sentimental Journey
- WIC Center
- Project Can Do

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ACUTE CARE
Innovation and Technology

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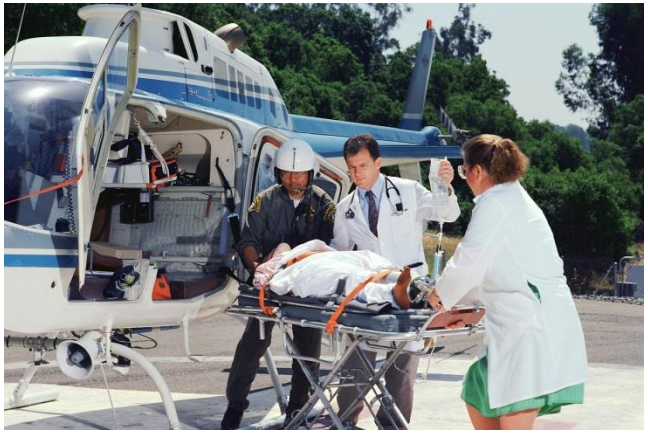
Disruption Innovation

- Average Daily Census creeping up- 22
- We met bed capacity twice in one week.- closed for short times.
- ICU has had up to 4 patients at one time twice in one week.
- Acuity is UP
- Flew an adult patient and baby out for higher level of care



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eICU

- eICU physicians assist by:
  - Available for questions or discussions regarding patient care (from physicians, nurses, RT)
  - Able to provide additional orders to address specific concerns
  - Second set of eyes for best practice interventions
  - eICU software specifically looks for negative trends in patient conditions (MAP, SaO2, pulse) and eICU physicians respond to negative trends

Critical Care Nurse to Nurse

- **Nurse to nurse consults can happen for:**

- Second opinions – "I've done this, what do you think?"
- Assistance with confused patients – "Mrs. Smith is kind of confused and I'm going to be busy with another patient – can you help me keep an eye on her?"

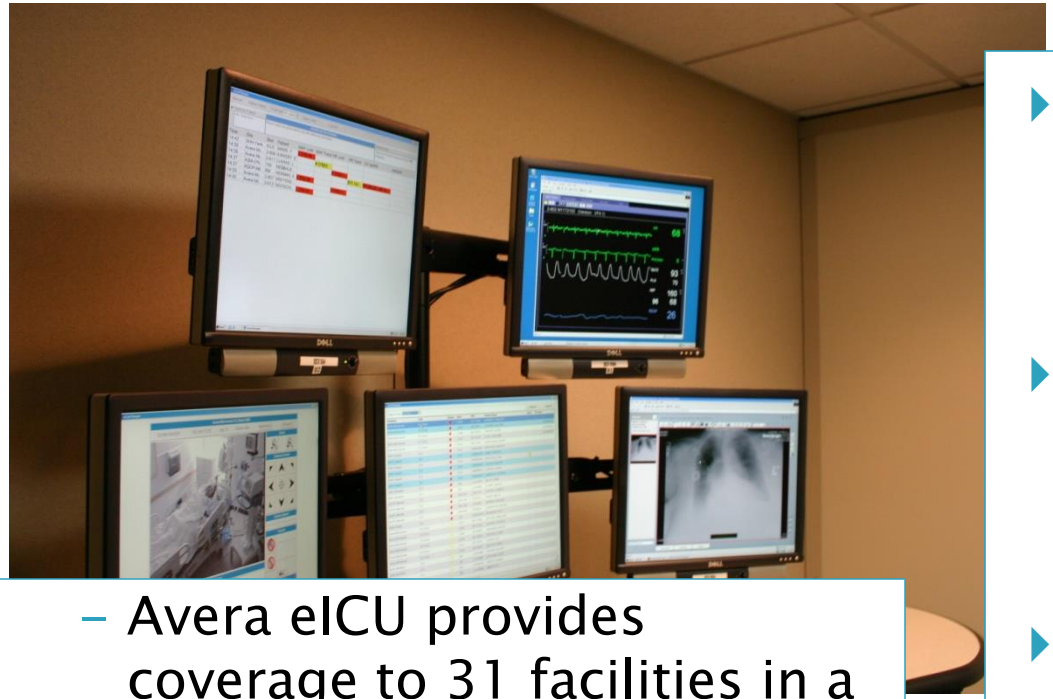
- Double-checking rates for drips or numbers for blood is optional – we would just have to work out the documentation to support that.

- We can call the house supervisor in a crisis if the nurse needs more help.

- If you have a new nurse on or someone floating into the ICU who isn't totally comfortable, you can let us know that and we'll reach out to the new nurse/float and try to assist them throughout the shift.

- The eICU nurse can also help facilitate having our physicians look at x-rays for tube placement, electrolyte corrections, or minor med adjustments.

eICU work station–in Sioux Falls, SD



- Avera eICU provides coverage to 31 facilities in a 6 state area
- Other MN facilities: Hutchinson, Marshall, Pipestone, Tyler
- Average 38 patients/day being monitored

- – Access to EMR, cardiac monitor, PACs images
- – High resolution cameras to view patients
- – Specialized software to provide trend monitoring

Our support is only a few seconds away…….

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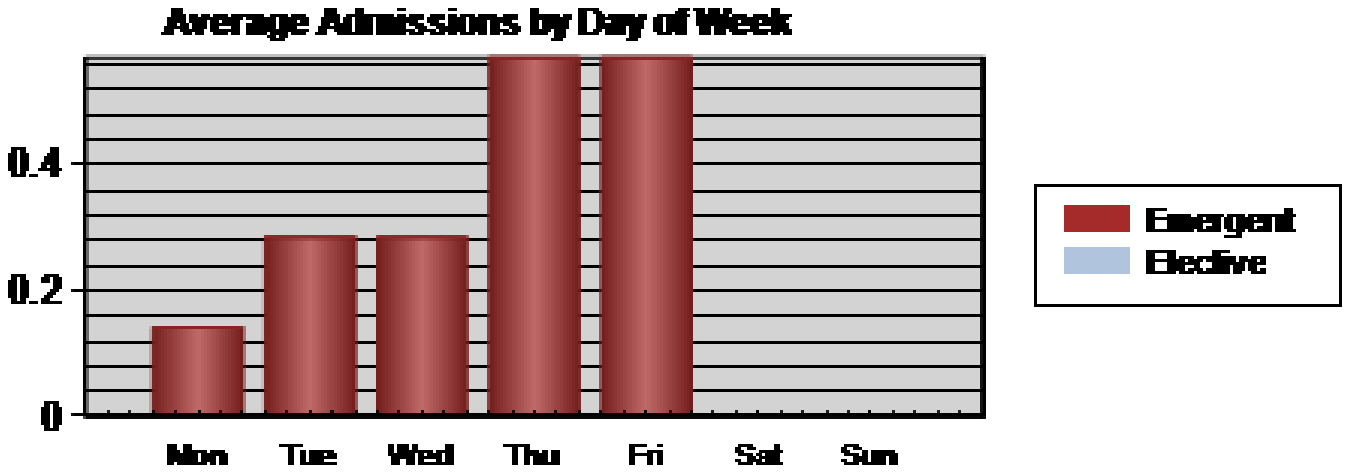
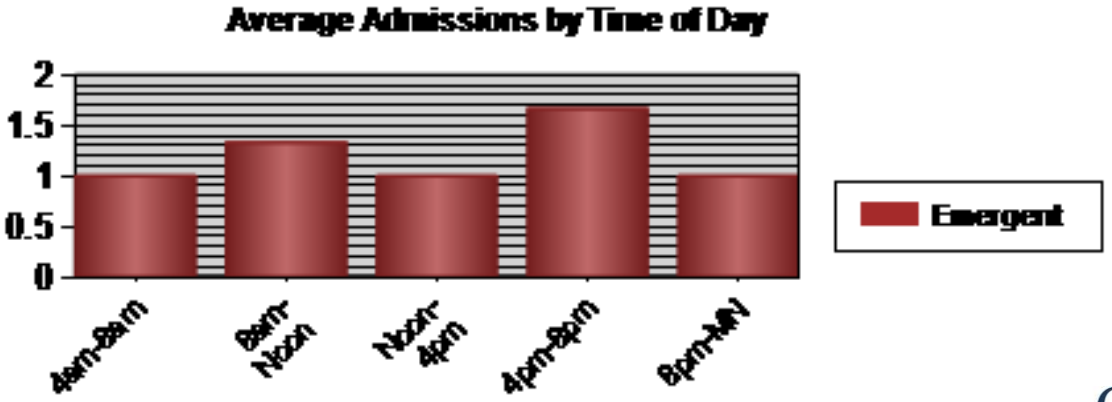
eicu in Full Force





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Total of 13 patients that we've monitored together – 3 of those were sepsis, other dx: ETOH withdrawl, angina, meningitis, GI bleed, post-op mgmt, CHF, emphysema.

- Written orders 84 times of those 31 times the orders were considered major interventions, 38 were intermediate and 15 were minor.

- When doing interventions, the physician notes orders for: best practice, medication adjustments, vent settings, electrolyte management, sedation management, fluid boluses, cultures, line placement verification ("PICC line in good placement – ok to use").

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Pharmacy

Medication Reconciliation
- Average patient takes 25 minutes
- 40% discrepancy in home list
- Goal is education on new medications while in hospital

Warfaring Dosing
- Almost all patients are dosed by the pharmacy. Warfarin clinic continues to follow patients after discharge (Cuyuna Lakes Pharmacy/nursing)

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ED/Ambulance

- Cross training has begun CC/ED
- Tuck in/holding orders admit to floor and then seen by Hospitalist to decrease wait times in ED and for patient satisfaction
- Community Paramedic meets patients in ED

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Innovation……

New Simulation Lab

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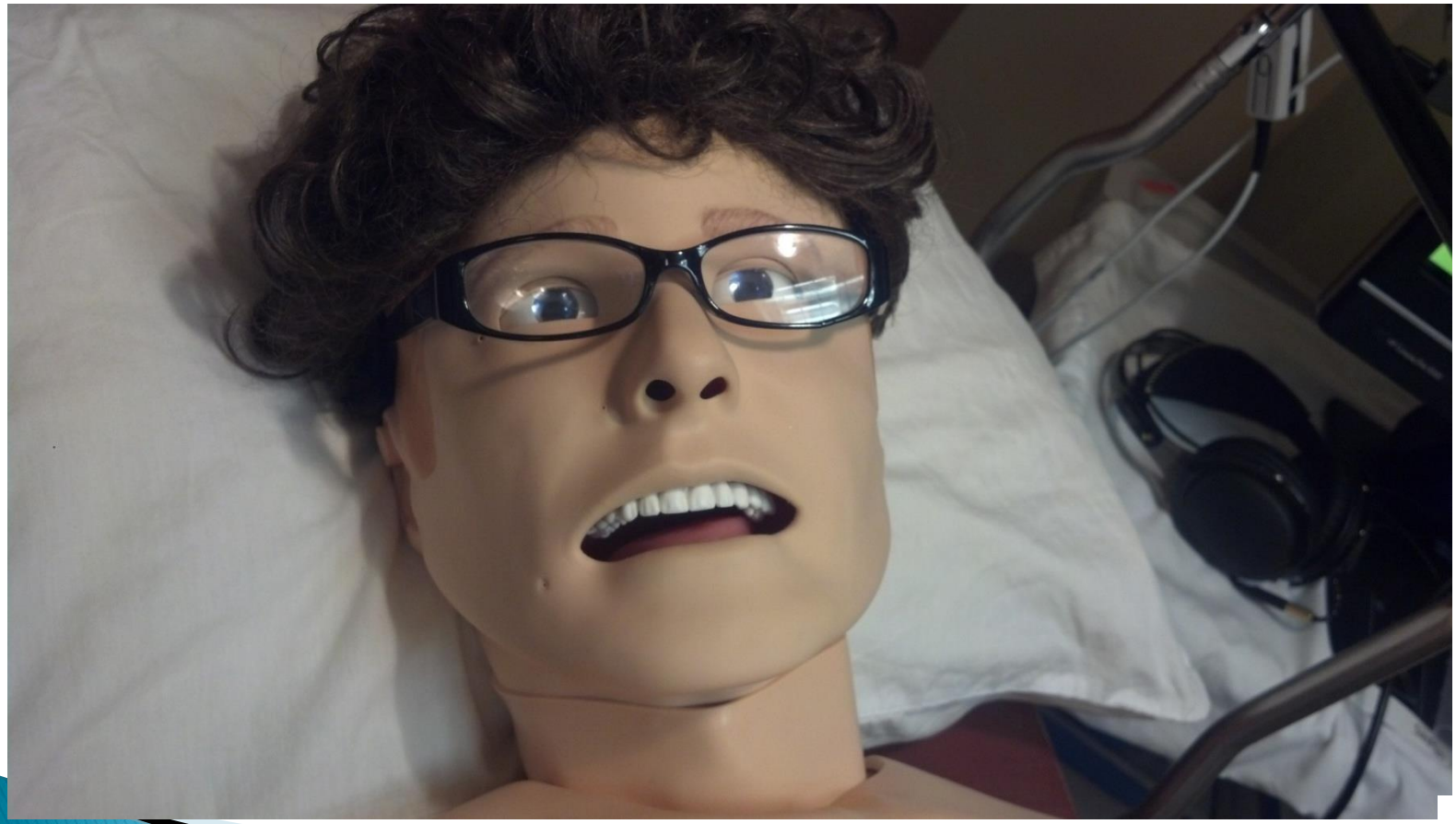
Mr. Jones has called for am ambulance and CRMC responds and brings him to our ED……



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Patient is seen and assessed in our ED……

AKA…New Simulation Room and Sheila Hoehn- Clinical Development Specialist

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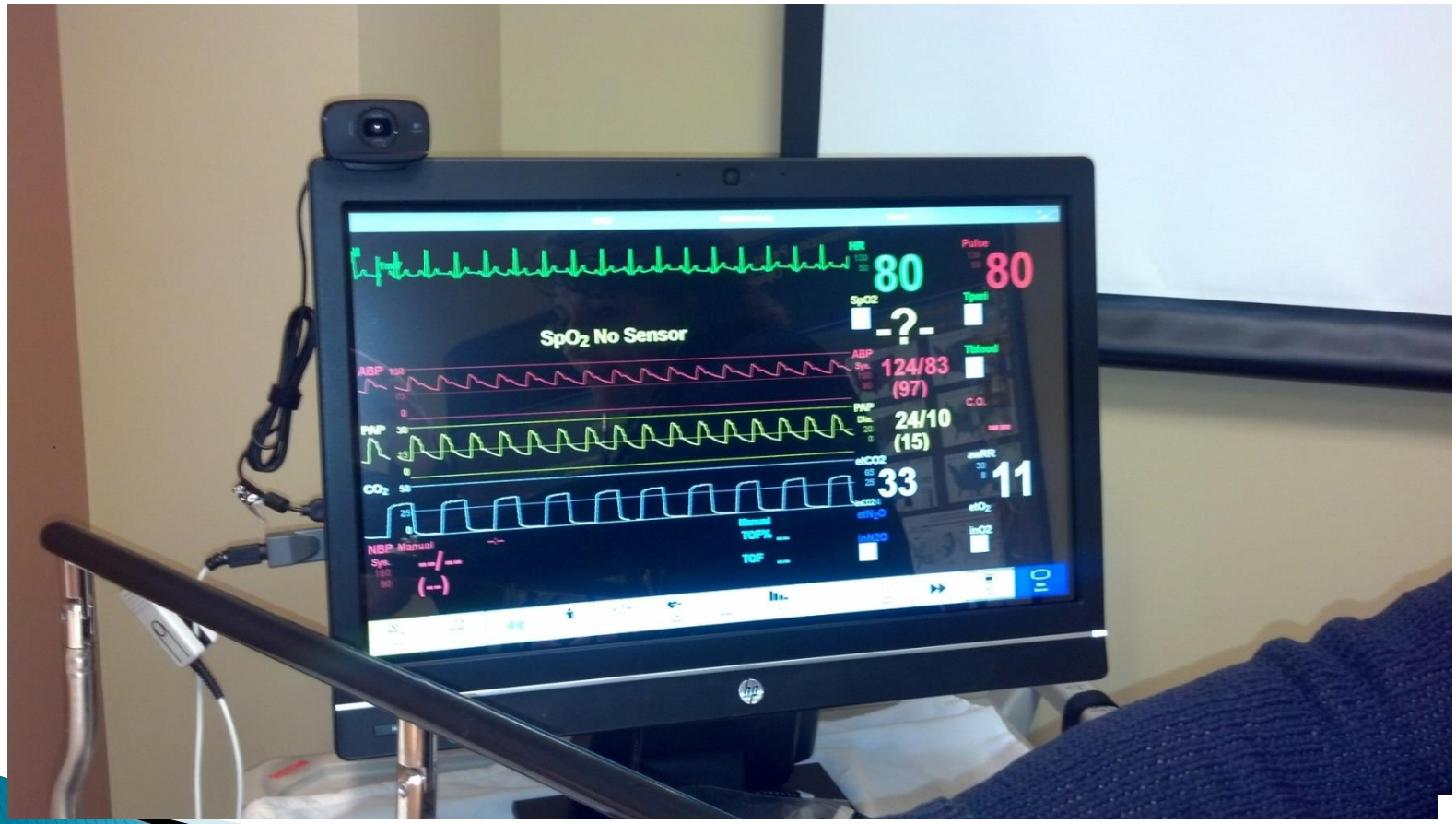
He is having trouble breathing. He is not looking very good.



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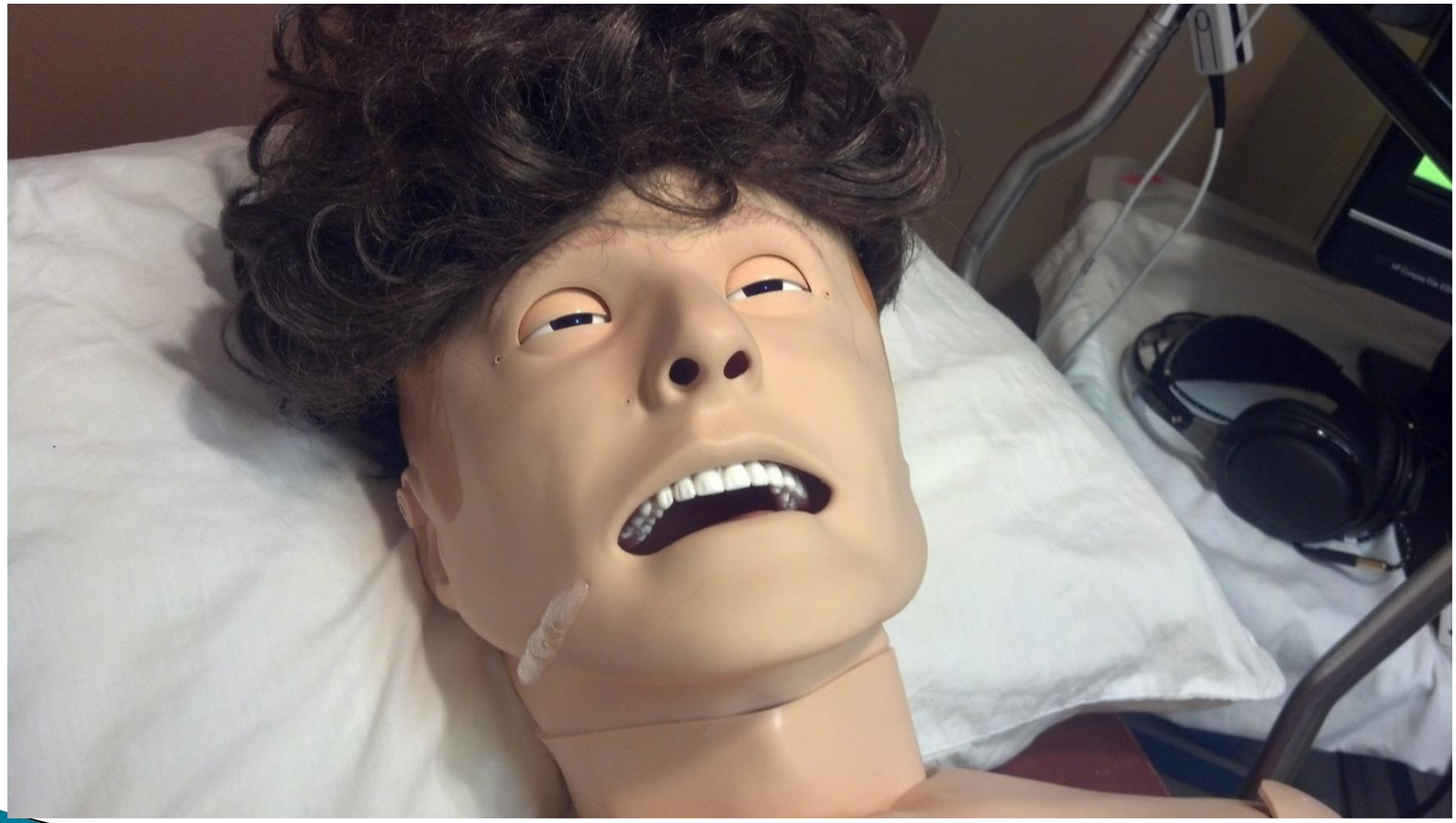
ED physician and new hospitalist determines he needs ICU….pharmacy helps with the med reconciliation……



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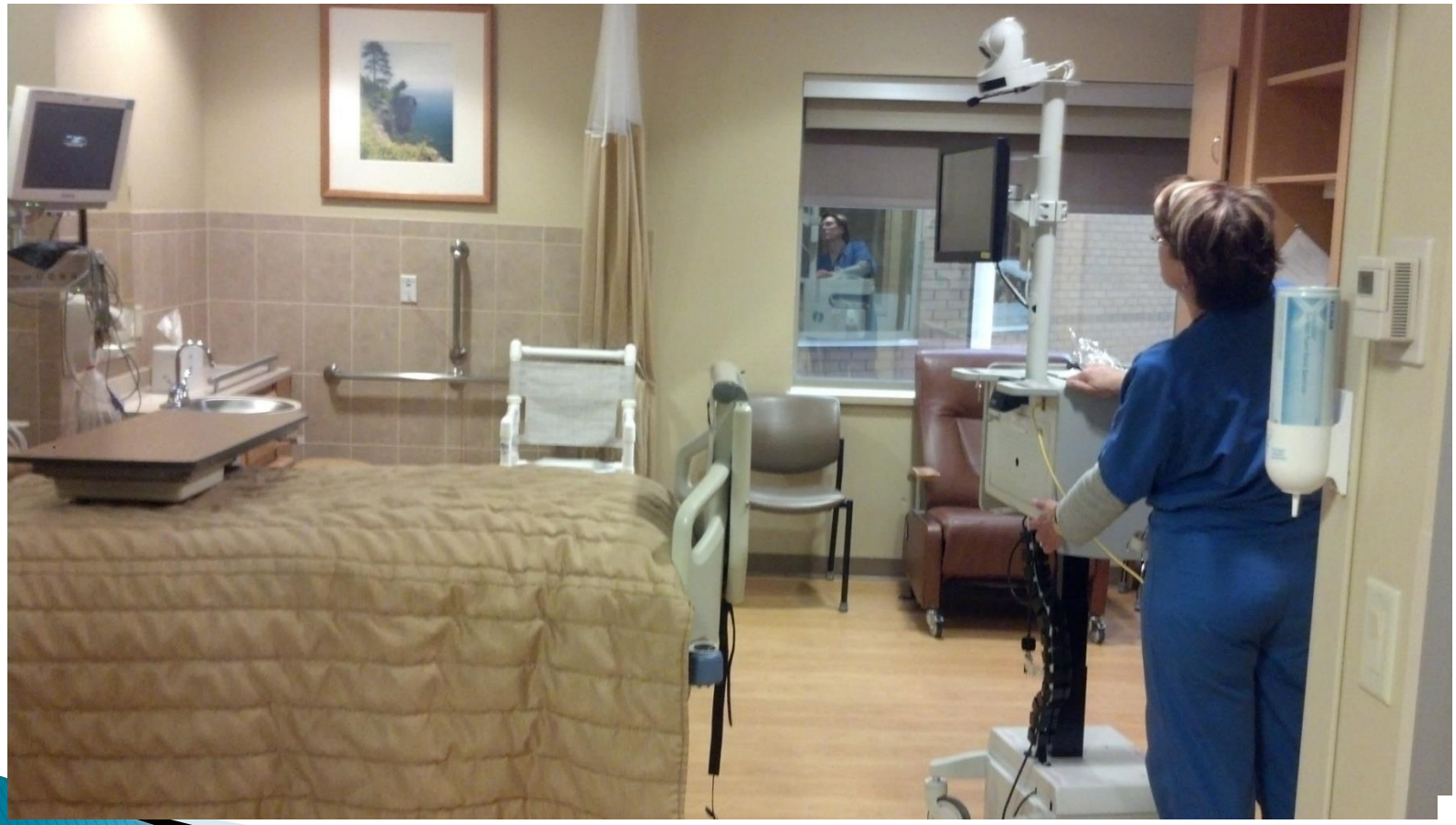
ICU is setting up a room for Mr. Jones and an eICU unit to connect with staff at Avera……..



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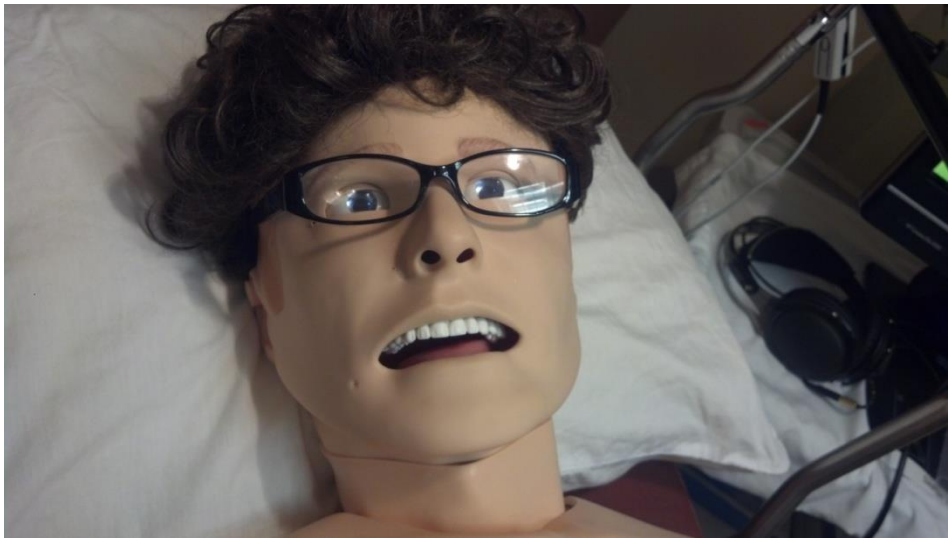
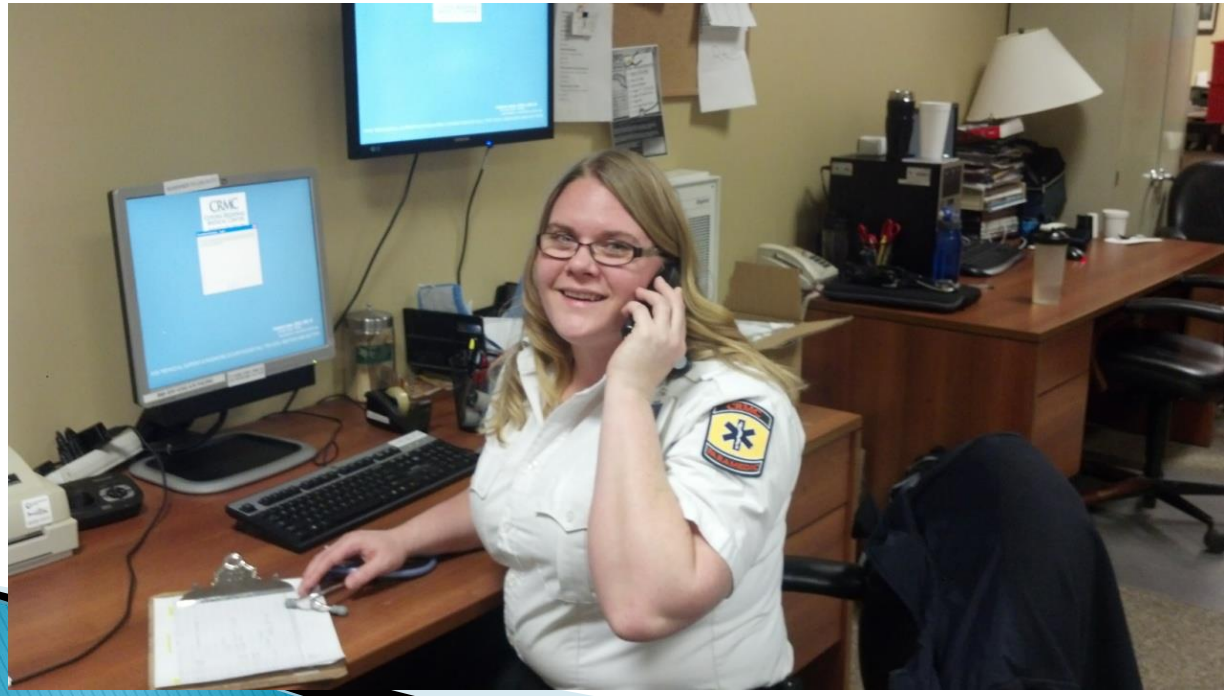
Mr. Jones recovers and wants to go home so the Care Managers arrange for Home Care……



Home Health Partners arrive the next day at his home and follow patient until he fully recovers.!!!!.....

Still connecting the dots……

Several weeks later Dr Westin calls EMS office and asks that a community paramedic go see Mr. Jones as he seems to be mixed up on his O2 use at home.



Mr. Jones is happy because he gets to see these sunsets at the end of a great day fishing!!!
And we avoided a Re -Admission.

Community Paramedic Program

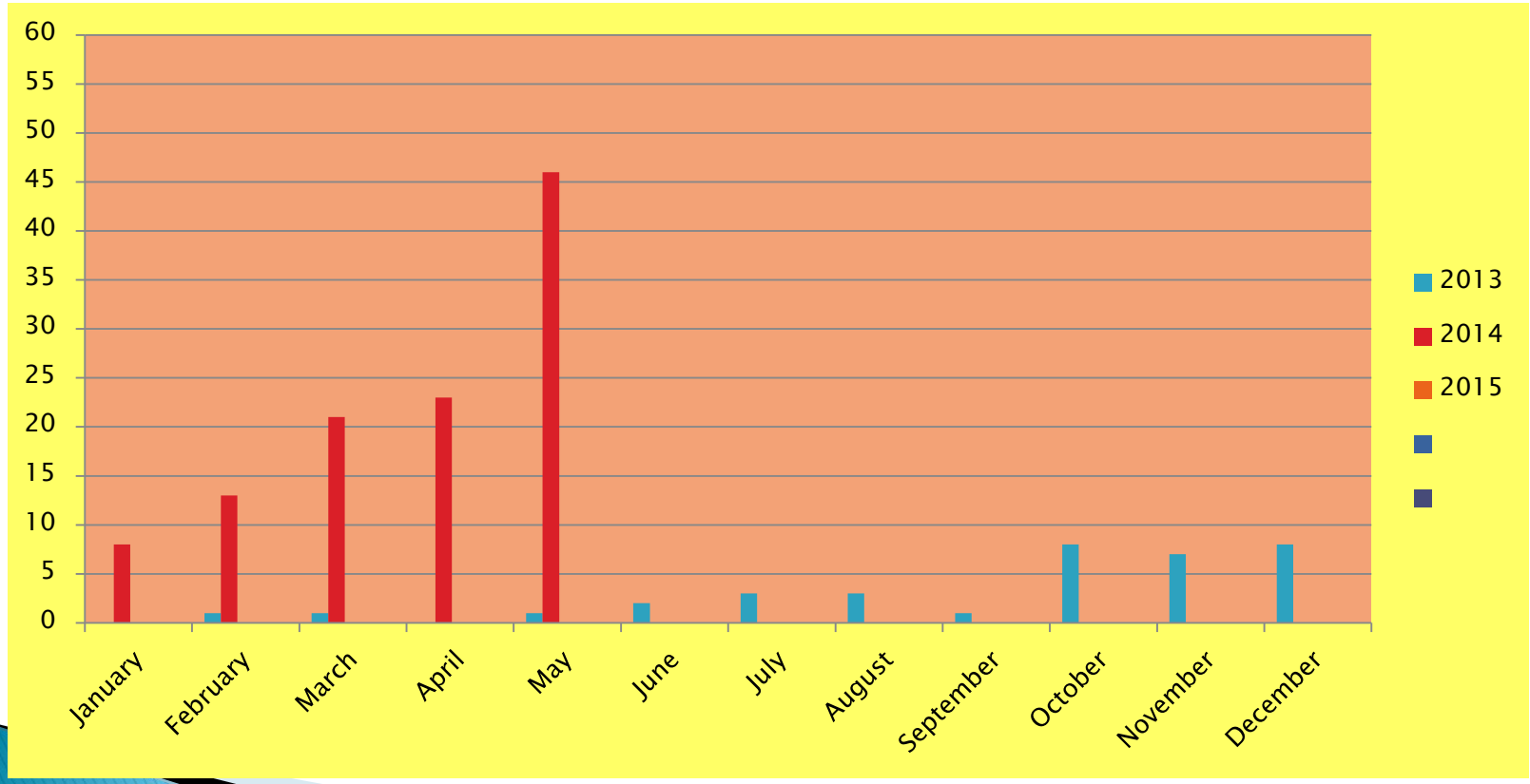
- Transforming Health Care by reaching beyond the walls of the facility.

Roles and Responsibilities of our Community Paramedics

- Minor Medical Procedures
- Laboratory Services
- Assess and Refer
- Chronic Disease Care and Management
- Clinical Care
- Care Plan Development and Follow-Up
- Hospital Discharge
- Wellness
- Medication Reconciliation
- Medication Administration

Community Paramedic Number of Patients

	January	February	March	April	May	June	July	August	September	October	November	December
2013		1	1		1	2	3	3	1	8	7	8
2014	8	13	21	23	46							
2015												

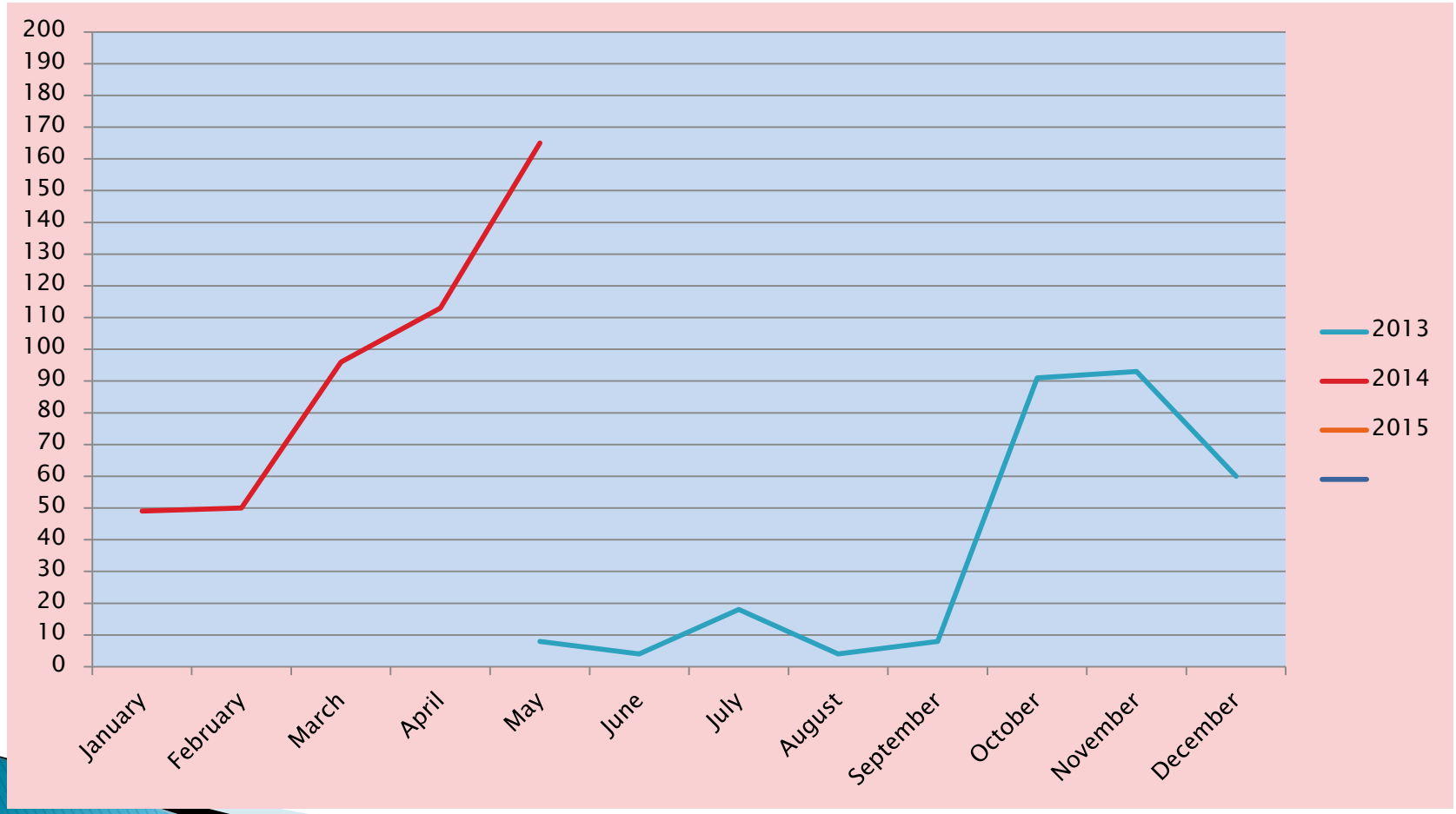


Collaboration

- Patient Referrals from a collaborative group
  - CRMC Clinics
  - Home Health Partnership
  - Minnesota Center for Orthopedics
  - CRMC Emergency Department
  - CRMC Hospitalists
  - Care Management
  - CRMC Hospital Nursing Services
  - EMS Services

Community Paramedic Interventions

	January	February	March	April	May	June	July	August	September	October	November	December
2013					8	4	18	4	8	91	93	60
2014	49	50	96	113	165							
2015												



Interventions

- Interventions include
  - Initial and follow up visits
  - Care plan and care plan follow up
  - Medication Reconciliation, Compliance, Administration
  - Minor Medical Procedures
  - Respiratory Services
  - Vital Signs
  - Assessments
    - Oral & ENT Health, Mental health, Social Evaluation, Neurological, Wellness

Prevention of Readmission

- Medication Reconciliation and Administration
- Injury Risk Assessment
- Home Safety Assessment
- Fall Prevention
- Hospital Discharge Follow up
- Respiratory Care Management

Respiratory Care Management

- Case Management of all in hospital respiratory patients
- Medication education
- Disease process education
- Home oxygen and neubulizer set ups
- Community Paramedic referral
- Home visit
- Discharge and medication compliance
- Proper cleaning and maintenance of medical equipment

Case Study #1

- 84 Year old female
- Admitted 3 times with in one month in 2013 for shortness of breath and anemia.
- Intubated 3 times and transferred to higher level of care
- After third admission a Community Paramedic referral was done.
- Since CP referral, she has had 29 CP visits.
- Labs are drawn every other week along with complete assessment of condition.
- Patient has contacted CP 4 times with complaints of Shortness of Breath and agitation.
  - Patient was visited and assessment done
  - Family practice physician was contacted by CP
  - Twice she came to hospital and received blood transfusions as outpatient for anemia
  - Twice she did not require any further treatment after CP visit.
- Since being referred to the Community Paramedic Program she has only been readmitted to the hospital once for pneumonia. This required a 48 hour stay and discharge to home. She is continuing in this program.

Case Study #2

- Female patient diagnosis of Cyclic Vomiting Disease
- Before being referred to the Community Paramedic Program she had no family practice physician and used the Emergency Department as her physician.
- In the past, she had as many as 4 ED visits per week, and at least 2 hospital admissions per month.
- Since being referred to the CP program she now as a family practice physician that she sees regularly once a month.
- The CP follows up with her 2-3 times by phone and 1 time in person per week.
- She is given transportation to and from her physician appointments at the clinic.
- She receives medication therapy at home per her family physician standing orders monitored by the CP.
- She is now receiving behavioral therapy and working on avoidance of the triggers for her disease.
- Patient now will contact CP if having symptoms, instead of going to ED. Her visits to the ED have been greatly decreased.
- She has not been readmitted to the hospital since her referral to the Community Paramedic Program.

A New Health Care Homecoming – Lakeland News at ... - YouTube

- *www.youtube.com/watch?v=h6B8rcE7JcY*

- Questions and Discussion