Efforts Toward Effective Emergency Department Use and Care Continuity

MedLink Forum

March 14, 2017

Partners in Compassionate Care Coordination.
Emergency Department (ED) Statistics

- Approximately 136 million ED visits in the US annually (average 42/100 persons)
- 11% result in hospitalization (CDC); 70% of non-elective admissions come through the ED
- Estimates of avoidable use varies from 15% (Millbank) to 62% (Truven) termed as “department of available medicine”
- Adults aged 18-64 on Medicaid are most likely to attend the ED (twice as likely as private insurance or self-pay)
- ED use increased with ACA due to lack of PCP access
- Unnecessary imaging tests increased during same time
ED Utilization by Age and Payer

- **Private health insurance**
- **Medicaid¹**
- **Uninsured**
- **Medicare and Medicaid**
- **Medicare, no Medicaid**

*Includes Children’s Health Insurance Program coverage.*

**NOTES:** Error bars indicate 95% confidence intervals. Private, Medicaid, and uninsured categories are mutually exclusive. Persons with both private and Medicaid coverage are categorized as having private coverage. Access data table for Figure 2 at: [http://www.cdc.gov/nchs/data/databriefs/db36_tables.pdf#2](http://www.cdc.gov/nchs/data/databriefs/db36_tables.pdf#2).

**SOURCE:** CDC/NCHS, National Health Interview Survey.
What we knew in 2012:

- CCPGM had a higher ED rate than half of the 14 CCNC networks.
- 86% of our top 100 Frequent Users of the ED (FUED) had a behavioral health condition; Other FUED groups were pediatrics and OB.
- Significant opportunity to communicate better with care partners like EDs, PCPs and community agencies.
- We needed better workflows and better engagement.
- We were relying heavily on telephonic interventions rather than more evidence-based high touch for FUED.
- Needed to improve linkage and access to medical homes, pediatricians, OB homes and BH providers.
- FUED routinely crossed CHS & Novant Health EDs.
How ED Innovation Got Started:

- 2011: ED Navigator grant came to an end
- 2012: Gains made from grant were slipping away; ED rate was rising
- July 2012: A group of physicians and CCPGM staff led by Dr. John Baker came together to brainstorm
- ED Innovation Team was implemented (monthly) with a strong QI approach
- Part-time Fellow Dr. Paras Mehta joined team
2012 – ED Innovation Team A3

- **GOAL = BEHAVIOR CHANGE**
- **FOCUS:** ED patients, health outcomes, care utilization
- **AIMS:**
  1. Reduce ED visits
  2. Improve patient satisfaction
  3. Increase patient adherence to care plans

**DIAGRAM:**
- **Analysis:**
  - **Costs:**
    - ED
    - Indirect Costs
  - **Methods:**
    - Interviews
    - Surveys
    - Observations
- **Strategies:**
  - Education
  - Navigation
  - Technology
  - Process Improvement

**Implementation:**
- **Plan:**
  1. Identify high-risk patients
  2. Implement care coordination
  3. Monitor outcomes

**Evaluation:**
- **Metrics:**
  - ED visits
  - Hospital readmissions
  - Patient satisfaction

**Case Management:**
- **CMAS:** Case management documented in system
- **CMAS Components:**
  - **Participant:**
    - **Care Plan:**
      - **Focus:**
        - **Goals:**
          - Reduce ED visits
          - Improve patient outcomes
        - **Strategies:**
          - Education
          - Navigation
          - Technology
          - Process Improvement

**Engagement Scripts, Telehealth:**
- **Phases:**
  1. Identify & Patients
  2. Pre-work (Collaborate)
  3. Launch Pilot (6 months)
  4. Check-in (3 months, 6 months)
  5. Evaluate Success of Pilot
  6. Develop Recommendations for Roll-out

**PDSA:**
- **еть with team on sustainable implementation**
- **For top 10 we can find— NIMC + Pa. CIO— to fill**
**Targeted Aim**

**Purpose:**
- To improve the health and care coordination of a cohort of the 100 ED frequent users while decreasing health care expenditures.

**Goals:**
- By July 31, 2013, take a cohort of patients and:
  - Increase the number of patients who have an identified medical home and have had a visit with PCP
  - Reduce ED visits by 20%, and decrease ED average cost/month, and imaging costs by 10%
  - Improve PCP/ED communication flow (alerts, portals, discharges, etc.) by...
  - Improve patient confidence in getting care when needed and in self-managing their health conditions

**Primary Drivers**
- Partnership of ED providers, community-based partners and CCPGM
- Identification of and invitation to patients who would most benefit from care management and medical home linkage
- PCP-ED Staff co-management; care management; resource linkage
- Data-driven decision-making and collaboration
- Patient-centered care

**Secondary Drivers**
- 1. Ensure partners’ buy in for patients’ outcomes and cost reductions
- 2. Establish communication between ED providers, CCPGM and community-based partners for care coordination
- 3. Create reports for work teams for change management
- 4. Identify high-cost complex chronic population using ED rather than medical home
- 5. Develop methodology for identifying these patients in real-time as they present at area EDs;
- 6. Develop effective hand-offs; referrals; linkage
- 7. Test “impactability” model with the initial target population with alternative medical home and Digma
- 8. In an iterative process, further refine interventions
- 9. Involve care managers, embedded at medical homes; assure connections to patients and other providers
- 10. Develop co-management guidelines for high prevalence complex/chronic diseases; remove barriers to enhance subspecialist-PCP communication
- 11. Promote evidence-based practice for chronic disease management
- 12. Provide mental health-medical co-management
- 13. Provide pharmacy utilization management
- 14. Develop, implement strategies for appropriate use of health care resources
- 15. Jointly establish case targets and change parameters (%), program processes, and interventions using data and rapid cycle change to determine predictive factors
- 16. Apply evidence-based, high-impact interventions
- 17. Provide performance feedback to providers
- 18. Complete PCP and ED provider satisfaction survey
- 19. Develop patient coordinator role for social support
- 20. Link patients with care manager and medical home
- 21. Provide case appropriate patient education concerning chronic illnesses
- 22. Develop self-management support process specific to
- 23. Refer appropriate patients to palliative care
### Early ED Innovation Efforts with Partners:

1. Evidence Review; Brainstorming; Theming and Prioritizing
2. A3; Developed Aim and Charter; Key Drivers; Compared partner processes with workflows
3. Formed Interdisciplinary Workgroups which morphed; Started with Policy; System; Provider Factors
4. Field visits - Steve Crane; PCPs; EDs; DIGMAs with acupuncture for chronic pain; care plans; Dr. Mehta and RN led self-management groups
5. DIGMA Pilots with Dr. Rhett Brown at Novant Health Midtown Family Medicine and Dr. Animita Saha at CMC Myers Park Internal Medicine
Myers Park Internal Medicine and Novant Practice – Results from Drop-In Group Medical Appointment Pilot (DIGMA)

Financial Impact

- Estimated charges for all 16 patients: $1,946,885
- Average annual ED visits cut from 13.7 to 8.4
- Imaging studies were reduced significantly
- $720,348 estimated savings annually by both pilots
- Very high touch and resource intensive; successful, but not sustainable as designed
Effects on the Person

**ED Utilization**

- **Number of ED Visits**
- **Week**

- **First DIGMA**
- **Attends DIGMA**
ED Preventable Readmissions Options and Care Transitions (PROACT)

- 3-4 Patient Contacts Within 14-Day Period Post Release
- Ensure Linkage to BH and PCP
- Develop and share ED Customized Care Plans
Behavioral Health Transitional Care (Inpatient) – addressed due to 86% of FUED had BH conditions

March-December 2014

- 1054 local BH admissions (CHS and Novant)
- TC Initiated: 591 (56%)
- 171 patients refused services (16%)
- 94 readmissions (9%)
- 57 transferred to facility (~6%)

- TC Initiated
- Pts refused services
- Readmission
- Pts transferred
- Encounters missed
Key Process Measures

- Patient contact attempted within 3 days from discharge (inpatient)
- Patient contact attempted within 3 days from discharge (ED)
- TC process completed within 30 days of discharge (inpatient)
- TC process completed within 14 days of discharge (ED)
- Medication Reconciliation and PCP visit within 7 days
- Fidelity to workflows and scripts
Key Performance Indicators

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<th>IP Rate/1,000 Member Months</th>
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*PPR = Potentially Preventable Readmissions
CCPGM ED Visit Rates 2012-2015 (lowest in state in 2014)
CCPGM Inpatient Rates 2012-2015 (lowest in state in 2014)
Per Member Per Month Costs

CCPGM Total PMPM Cost - Actual vs. Expected

- Actual PMPM
- Expected PMPM
CCPGM Readmission Rates 2012-2015

CCPGM Potentially Preventable Readmissions
Actual vs. Expected

- PPR Rate
- Expected Rate

YE-DEC12 YE-DEC13 YE-MAR14 YE-JUN14 YE-SEP14 YE-DEC14 YE-MAR15 YE-JUN15
Additional Interventions:

Team-Based Care: nurse care managers; social workers, pharmacists, BH specialists – get daily ED list to work based on priority list and rising risk

Pediatric Initiatives: Health Check Coordinators. Call after ED visits; Asthma Collaborative targeting ED and IP visits; Newborn linkage before D/C from nursery

Integrated Outreach – Social workers with BH background and peer supporters follow-up on patients based on criteria i.e. #visits over time

Chronic Pain Initiative: Work with CCNC Call Center and Dr. Ify to ensure sickle cell patients are in care and work with high opioid users
And More Interventions

Pilot with Dr. Coluciello to provide follow-up to ED patients with low/medium risk BH rather than referring to telepsych; payer agnostic

Integrated Care Training Program (ICTP): Fund supervisors for those seeking counseling hours; allow behavioral health resource in primary care alongside providers for high needs practices

OB Initiatives: Working with Health Dept and CMC EDs to follow-up on every positive pregnancy test where no medical home or insurance

Identify patients going to ED for prescription refills and reach out proactively; identify patients on narcotic lock-in and reach out; ensure naloxone availability in pharmacies
CCPGM’s Key Performance Indicators:

**PMPM Cost**
- Jan 2015: $359.61
- Expected Dec 2016: $182.96
- Actual Dec 2016: $172.27

**Inpatient Admissions**
- Jan 2015: 9.4
- Expected Dec 2016: 5.37
- Actual Dec 2016: 3.96

**ED Utilization**
- Jan 2015: 61.1
- Expected Dec 2016: 64.62
- Actual Dec 2016: 60.70

**Readmissions**
- Jan 2015: 0.8
- Expected Dec 2016: 0.48
- Actual Dec 2016: 0.19
Community CareBridge

- Funded by CHS to pilot intensive care management with high cost/high utilization patients who were uninsured
- CCPGM RN/MSW team with QI support and in-kind supervision worked with a cohort of 72 patients over a 7 month period
- 30% incidence of chronic conditions as PRIMARY diagnosis
- 18% incidence of behavioral health and addiction diagnoses as PRIMARY diagnosis
- 21% of those with chronic conditions have a dual PRIMARY DIAGNOSIS of behavioral health and addiction
- Social factors and poverty also greatly impact the health status of this population.
Care Management interventions included:

- Assistance (Emotional support, appointment scheduling)
- Assessment (condition specific, med rec)
- Community Resources (transportation, food resources)
- Education Interventions (self-management group)
- Crisis planning
- Motivational interviewing
The high utilizer uninsured population struggle financially to meet basic needs and lack knowledge of options. Targeted outreach by the nurse and social worker team is necessary to help gain coverage. 

- Transportation (Monthly Bus Passes & Cab Vouchers)
- Financial Eligibility
- Food & Diet (Friendship Trays)
- Prescriptions And Devices
- Behavioral Health
- Housing (Urban Ministries)
- Access to Care Management Programs in CHS
- Emotional Support
- Navigating the System
Patients with an active start of care date show a 32% drop in overall charges, resulting in a $863,372 charge reduction over 13 months (normalized pre/post).
Qualitative Outcomes

- Patients were asked to complete a survey of their health perception on entry into the program and again between 90-180 days or at Graduation.

- Self Reported Quality Outcomes:
  - 21% improvement in health perception (SF-1)
  - 20% increase in confidence in managing own health

- Program participants rated a positive impact on their health status and ability to self manage their health

- Program is out of pilot and adding financial counselor and behavioral health team members (peer support specialist, patient coordinator)
Shared Community Efforts

- Submitted **Accountable Health Communities** funding opportunity (CMMI) with Mecklenburg County Health Department at bridge organization with Novant Health and Carolinas HealthCare System and many community partners – will address unmet health-related social needs

- Submitted **BUILDing Health Challenge** grant (RWJF and other private funders) with MCHD, CHS, MCHD and Renaissance West community initiative to address social mobility including workforce development, education, access to care, family planning, etc.
Population Health

- Working with CHS to look at patients with 30 or more ED visits within the last year
- 158 patients identified with 7054 visits total
- All payer types represented with majority Medicaid and uninsured; some on other “high” lists like MEDIC
- All patients will be “touched” (by phone, in the ED, in provider office, home visit, shelter and/or jail diversion)
- Working in compliance with all partners to ensure most appropriate interventions, access and care
- Working with Dr. Chris Griggs to promote customized care plans and implementation of cross-system platform to allow for push notifications and shared information
A Few Current Patient Scenarios:

- 42 year old woman: 120 ED visits and 180 imaging studies over 15 month period; diabetes and cancer; lives in rural area; Medicaid
- 49 year old man: 47 ED visits and 184 imaging; COPD, depression, alcohol use; Medicaid
- 38 year old man: persistent mental illness; 131 ED visits; 112 imaging; ACT Team; Medicaid
- 58 year old man: 54 ED visits; on MEDIC high transport list; homeless; uninsured
- 41 year old woman: 35 ED visits; homeless; on MEDIC list; suicidal; uninsured
- 33 year old man: 284 ED visits; suicidal; IVC; uninsured
What interventions demonstrate the most improvement?

A combination of efforts:

- Inpatient engagement; home visits with med rec & review
- Team-based care (RN, SW, BH, Pharmacist, MDs, QIC) and intensive collaboration with partners (housing, EDs)
- Provider engagement – share reports and data; patients being care managed; practice profiles; audit results
- Get out and meet patients where they are – where is their “Starbucks?”
- Prioritize and titrate: One touch may be enough for some; multiple touches are required for most
- For FUED and high cost patients – high touch is essential!
Discussion and Q & A