Right-Sizing ED Utilization for Patients with Complex Needs

Key Insights at-a-Glance:

- **Problem Scope:** Patients with three or more chronic conditions and a functional limitation use the ED over three times more than the average adult, often unnecessarily. Population health managers need to streamline post-discharge processes for patients with complex needs to reduce ED utilization.
- **Solutions:** Provide wrap-around support in the ED and invest in staff to ease post-discharge care transitions by surfacing and addressing clinical and non-clinical needs that drive avoidable utilization.
- **Benefits:** Reduces acute utilization (e.g., ED and readmissions) and improves patient well-being and access to behavioral health services.

Top Drivers of Inappropriate ED Use

Inconsistent Diagnoses

14%

Patients with complex needs receive different diagnoses from multiple physicians, complicating the health care journey

Behavioral Health Comorbidity

82%

Higher risk of a heart attack in patients with comorbid depression and diabetes than those without depression

Complex Medication Regiment

24

Average number of prescriptions taken by patients with 3-4 chronic conditions

Financial Hardship

8%

Patients with serious chronic conditions who file for bankruptcy to pay for medical bills

Business Case

Financial Impact

Health care spending for patients with 3-4 chronic conditions is six times higher in the ED than spending for a patient without any chronic condition, which equates to approximately $2,500 higher per year spending.

$3K

Annual ED spending[1] on patients with 3-4 chronic conditions

Operational Impact

Patients with multiple chronic conditions require extensive coordination across the care continuum. Many health systems are ill-equipped for this degree of coordination, which results in care gaps, duplicative efforts, and inefficiencies.

18%

Patients with MCC[2] who receive duplicate tests or procedures

Clinical Impact

Patients with multiple chronic conditions often require a longer recovery time than those with just one condition, which results in greater lengths of stay and increased costs.

11%

Greater inpatient LOS[3] for patients with 2-3 chronic conditions compared to those with 0-1 conditions

Source: "High-Need, High-Cost Patients: Who Are They and How do They Use Health Care?." Commonwealth Fund, http://www.commonwealthfund.org/; Scherrer, JF, et al., "Increased risk of myocardial infarction in depressed patients with type 2 diabetes," *Diabetes Care*, 34, no. 8, (2011): 1729-1734; Harris, et al., "Characteristics of Hospital and Emergency Care Super-Utilizers with Multiple Chronic Conditions," *The Journal of Emergency Medicine*, 50, no. 4 (2016): 203-214; "Chronic Care: Making the Case for Ongoing Care," Robert Wood Johnson Foundation, https://www.ncoa.org/; Buttorff C, et al., "Multiple Chronic Conditions in the United States," Rand Health, http://www.fightchronicdisease.org/; "Chronic Care: Making the Case for Ongoing Care," Robert Wood Johnson Foundation, https://www.ncoa.org/; Skinner HG, et al., "The Effects of Multiple Chronic Conditions on Hospitalization Costs and Utilization for Ambulatory Care Sensitive Conditions in the United States: a Nationally Representative Cross-Sectional Study," BMC Health Services Research, 16, no. 77, (2016): 1-8; Population Health Advisor interviews and analysis.

1) ED costs across all payers, including patient out-of-pocket payments.
2) Multiple chronic conditions.
3) Length of stay.

Solutions

POINT OF INFLECTION	HEALTH SYSTEM SOLUTION
Early Intervention and Prevention	Primary and acute care providers should proactively conduct in-depth psychosocial assessments to surface non-clinical needs and then connect patients to needed support services. Further, medication reconciliation and education at transitions of care can facilitate medication adherence and prevent misuse.
Point of Care Intervention	Within the ED, staff should conduct a biopsychosocial assessment and provide multidisciplinary care for all patients flagged as "complex." Clinical ED staff members should first stabilize complex patients, then refer them to non-traditional, often non-clinical, ED care team members for education, referrals, and wrap-around support.
Post-Utilization Education and Follow-Up	After the ED visit, providers need to ensure effective follow-up care for complex patients, including transition support, ongoing management, and in some cases, home visits. Patients should be connected to a primary care provider, care management services, and community providers to inflect future inappropriate utilization.

IN-DEPTH CASE STUDY PROFILES

To effectively manage patients with complex care needs in the ED, successful population health managers assess patients' biopsychosocial needs to ensure appropriate triage, then provide active transition management to a specialized care team to drive longitudinal coordination post-discharge. The next four pages focus on two in-depth case studies of organizations that successfully reduced acute care utilization by ensuring wrap-around support for complex, high-utilizer patients.

Point of Inflection	Strategy	Case Study 1: Discharge Clinic	Case Study 2: Home Visits with Personalized Primary Care
Early Intervention and Prevention	Identification of at-risk patients	✓	✓
	Pharmacist-led medication reconciliation	✓	✗
Point of Care Intervention	In-ED identification	✗	✓
Post-utilization Education and Follow-Up	In-home follow-up	✗	✓
	Patient education	✓	✓
	Primary care team collaboration	✓	✓

1) Social Worker – Nurse Practitioner.

Source: Population Health Advisor interviews and analysis.

Discharge Clinic Closes Hospital-to-Primary Care Service Gap

Case in Brief: El Rio Community Center, Arizona Connected Care

- El Rio, a federally qualified health center with 16 locations in the greater Tucson area, is part of Arizona Connected Care, an ACO that includes Tucson Medical Center and four community health centers
- To prevent high-risk, complex patients from visiting the ED following an inpatient stay, El Rio dedicated space in their centrally-located community health center (CHC) to serve as a discharge clinic for transitional care management
- The discharge clinic's multidisciplinary care team provides telephonic and in-person transitional care management services (e.g., patient care plan education, medication reconciliation, advance care planning, and annual wellness visits)
- Since opening its doors in February 2016, the discharge clinic has treated over 300 patients and was able to bill for 83% of appointments with Transitional Care Management codes.[1] Since, 90% of patients receive depression follow-up care, and patients readmitted 35% less often during 30 and 16% less often during 90 days post-discharge.

Program Structure

El Rio Community Center dedicates clinic space to manage post-discharge transitions

The discharge clinic was originally designed to serve as a stopgap for follow-up primary care visits of patients without a PCP 7-14 days post-discharge. However, El Rio leaders found that patients with polypharmacy and chronic conditions were readmitted to the hospital and ED because they (1) were discharged too soon, (2) required additional education about their care plan and medications, and/or (3) did not receive their medications. As a result, leadership opened discharge clinic services to all high-risk, complex patients. Today, the discharge clinic operates two days a week and conducts approximately eleven post-discharge appointments per day, each lasting 60-90 minutes.

The clinic includes four patient rooms and an area for the providers to convene. To ensure financial sustainability of the model: The clinic is (1) centrally located and accessible to all patients, and (2) co-located with the community health center and a variety of other services. El Rio's discharge clinic taps into additional staffing (e.g., behavioral health specialists, Community Health Advisor) and services (e.g., imaging, labs) to fill gaps in care.

Operations

Within two days of hospital discharge, clinic reaches out and initiates primary care connection

Patient identification and outreach → **Clinic services (0-5 days post-discharge)** → **Warm hand-off to ongoing care coordinator and PCP**

1) El Rio clinic receives a high-risk patient discharge alert.[2] Eligible patients include those with **chronic conditions, polypharmacy,[3] frequent acute care use, and lack of social support**. When possible, hospitalists or care managers notify El Rio before an eligible patient discharges so that clinic staff can call the patient's bedside phone, which is an effective way to reach homeless patients.
2) Clinic staff reach out to identified patients **one-to-three times via phone** to try to enroll them into clinic services.
3) When a new patient enters the discharge clinic, staff perform comprehensive assessments to **learn about the patient's transition to and challenges at home**.
4) A significant portion of the visit is spent **educating patients** about their care plan and **performing medication reconciliation**. If needed, patients receive other services, such as advance care planning, preventive care (e.g., annual wellness visit), re-dressing wounds, and necessary specialist services (e.g., behavioral health, lab testing).
5) Before clinic discharge, the team **schedules a PCP appointment** and introduces patients to their primary care RN Care Coordinators (CC).
6) To build patient trust and prevent avoidable acute utilization, the discharge clinic RN shares the CC's business card with a phone number to call when the patient is in trouble.
7) **Discharge clinic RNs and primary care CCs are in contact** via an internal text messaging system and annotations on patient charts.

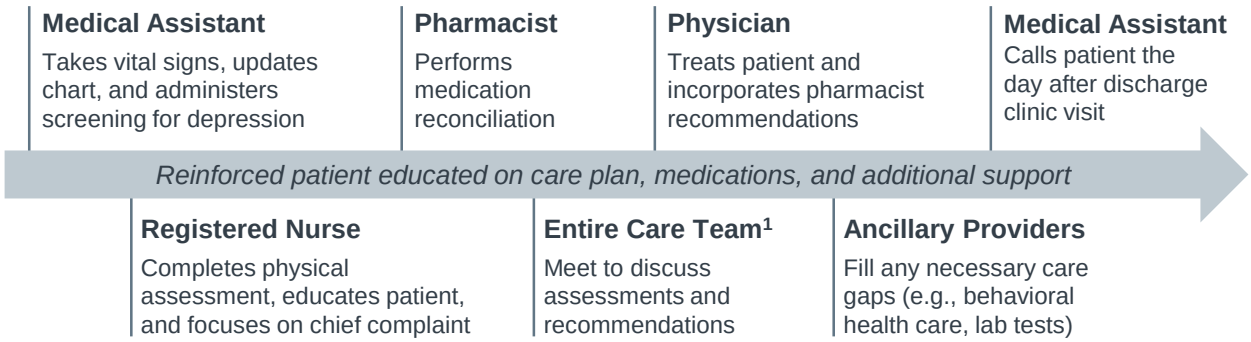
1) Of the first 250 appointments.
2) From hospital staff or via health information exchange.
3) 6+ medications.

Source: Population Health Advisor interviews and analysis.

Co-location of Staff, Services Enables Intensive Management

Program Staffing

Education at every touchpoint across a visit central to modify patients' behaviors long-term



Staff Deployment

Pharmacist-led medication reconciliation a pivotal step to prevent downstream utilization

Polypharmacy patients often readmit to the hospital when they do not understand their medications or are unable to access them. As the most equipped and trained team member to perform medication reconciliation for complex patients, the pharmacist follows a two-step process: (1) Gathers all of patients' medications and (2) reconciles those medications against any orders. Additionally, the pharmacist evaluates the patient's understanding of their medications and ability to access them. Then, the pharmacist educates the patient, fills care gaps, and, when needed, recommends regimen changes to the discharge clinic physician.

Shared staff and co-location fuels financial sustainability of clinic

By sharing space with the El Rio's CHC, start-up and operational costs of the clinic are low. El Rio's CHC dedicates MAs, RNs, physicians, and pharmacists to staff the discharge clinic on a rotation. The CHC also lends specialty staff to the clinic as needed. Licensed clinical social workers (LCSW) are the most commonly requested specialty staff members due to the high prevalence of behavioral health needs in complex patients. To proactively improve behavioral health access for these patients, a LCSW reviews incoming patient charts of the discharge clinic daily to flag patients at risk of needing their support.

The clinic is also close to key heath care providers and services (e.g., radiology, pharmacy). Clinic staff coordinate these services, ensuring a seamless referral to close gaps in care.

Shared oversight of clinic and primary care staff fosters warm hand-offs and builds patient trust

Following a discharge clinic visit, clinic nurses handoff patients to dedicated primary care coordinators. The transitions are seamless because of shared governance across sites, open communication channels between teams, and monthly team meetings. El Rio's Care Coordination Department oversees the clinic nurses and primary care, who meet monthly to optimize collaboration and discuss complex patients and operations.

$ Funding

With executive leadership buy-in and due to the model's affordability, El Rio dedicates operational funds to the project.

Program Impact

83%
Appointments billable using TCM[3] codes

90%
Patients receiving depression follow-up care

35%
Decrease in 30-day readmission rate (52% to 18%)

16%
Decrease in 90-day readmission rate (22% to 6%)

1) Meeting includes medical assistant, registered nurse, pharmacist, and physician.
2) Community health center.
3) Transitional Care Management Codes; n=250.

Source: Population Health Advisor interviews and analysis.

NP-SW Dyad Engages Complex Patients in Primary Care

Case in Brief: University of California San Francisco Health

- University of California San Francisco Health (UCSF) is an integrated health system of eight entities (hospitals, physician groups, and foundations) serving Northern California
- To reduce ED visits and hospitalizations of patients requiring complex care, UCSF adapted the evidence-based Geriatric Resources for the Assessment and Care of Elders (GRACE) health care delivery model
- Called Care Support, UCSF's program deploys a social worker and nurse practitioner dyad to identify and meet patients' spectrum of physical and mental health needs through post-discharge home visits, informing holistic care plans
- A pre-/post-intervention evaluation demonstrated program effectiveness with a decline in the median number of emergency visits of 5.5 and a 33% increase in self-rated positive health among those enrolled

Program Structure

Adapted from GRACE model, Care Support supports high-risk adult patients

To adapt the evidence-based Geriatric Resources for the Assessment and Care of Elders (GRACE) model, UCSF staff received training from the Indiana University Geriatrics GRACE Training and Resource Center. After this training, UCSF launched Care Support across four clinics to improve transitional care for high-risk patients.

UCSF made three specific changes to the traditional GRACE model: 1) Eliminated the 65+ age requirement, 2) eliminated the requirement to perform all assessments at the patient's home,[1] and 3) simplified care protocols as needed. The Care Support team conducts an extensive in-home assessment and follows a standardized approach to care based on findings. The main elements of the GRACE model remain intact, including dyad home visits and the development of individualized care plans by an interdisciplinary team.

Operations

With PCP approval, Care Support dyad kicks-off a new approach to ongoing patient management

1 **Eligibility & enrollment**

Care Support targets patients with high utilization, after PCP approval

Eligibility is based on patients' utilization history (i.e., ≥3 ED visits or ≥2 hospitalizations in previous 6 months). Prior to outreach, the Care Support team requests PCP approval. If the PCP agrees that the patient is appropriate for the program, the dyad contacts the patient via phone and sends a letter and "facecard" featuring a photo of the Care Support team.[2] The nurse practitioner and social worker (NP-SW) dyad calls new patients up to three times.

2 **Home visit & evaluation**

In-home assessment informs evidence-based care protocols

The NP-SW dyad perform a comprehensive evaluation of patients' medical and psychosocial needs. Observing patients in their own environment provides the team with insight into their day-to-day needs and social context. The assessment includes fall risk, housing status, depressive symptoms, and dependency in activities of daily living. The dyad also collaborates with patients to determine their personal goals to inform care planning.

3 **Care plan development & ongoing management**

Standardized Protocols

Self-management
Care coordination
Advance care planning

Dyad holds weekly case conferences with interdisciplinary team to develop personalized care plan and discuss ongoing management and graduation

Embedded in the primary care setting, the dyad leads weekly two-hour case conferences to develop a care plan based on specialist[3] input and standardized protocols. The most commonly used protocols include self-management, social service coordination, and advance care planning. Whenever a patient is discussed during a case conference, a summary note is routed to the PCP on the EHR.

1) Some patients prefer assessments to be done in the clinic rather than their home.
2) To appear more friendly, envelope is hand-stamped (rather than using bulk mailing stamps) and the enclosed letter is signed by a member of the Care Support team.
3) Specialists include those in geriatrics, psychiatry, pharmacy, and palliative care.

Source: Ritchie C, et al., "Implementation of an Interdisciplinary, Team-Based Complex Care Support Health Care Model at an Academic Medical Center: Impact on Health Care Utilization and Quality of Life," PLoS One,11, no. 2 (2016): http://dx.doi.org/10.1371/journal.pone.0148096; Population Health Advisor interviews and analysis.

Care Team Flexibility Enables Personalized Care Planning

Program Staffing

Care Support dyad owns care plan with support from PCP, health care navigator, and specialists

Nurse Practitioner–Social Worker Dyad

Caseload 45-60 patients

- Performs in-home biopsychosocial assessment and identifies patient goals for recovery
- Develops care plan and graduation criteria with specialist consultants through case conferences
- Interacts with each patient weekly or bi-weekly (minimum of one touchpoint per month)
- Attends PCP visits and reviews goals with patient at every touchpoint

Support Staff to Dyad	Credentials	Role
Specialist Consultants	MD or PhD with relevant board certification	Participate in weekly case conferences and advise dyad on care plan development using specialized expertise (e.g., geriatrician/palliative care doctor,[1] psychiatrist, pharmacist)
Primary Care Physician	MD/DO	Reviews eligible patients for Care Support, has access to case conference notes, and collaborates with dyad when needed
Health Care Navigator	Bachelor's degree[2]	Meets with patients weekly or bi-weekly to navigate them through the health system and coach them using motivational interviewing

Increasing interaction with patients enrolled in Care Support

Staff Deployment

Team uses weekly case conferences to establish care plans and assess patient progress

During weekly, two-hour case conferences, the dyad presents new patients for discussion with specialists to determine: a projected intervention timeline, set graduation criteria (e.g., 10% reduction in weight), and care plan updates. From there, the dyad owns execution of the care plan, only asking the team for input when a new issue arises following an ED visit or inpatient stay, or when the patient is ready to graduate. At a minimum, staff discuss patients enrolled in Care Support at least once every quarter.

Medically complex patients, who lack support and have mild anxiety benefit most from support

According to Care Support team members, there are three critical aspects of the program that contribute to its effectiveness. First, care plans are customized to the complex needs of patients. Second, patients receive caregiver and self-management support to overcome coordination barriers and improve navigation. Lastly, staff build relationship with these patients—some of whom are mistrusting, anxious, and/or with low health literacy—thereby improving patients' engagement in self-management and with the health care system.

Based on experiences of involved providers, the Care Support program appears to be less beneficial for patients with severe and complex mental health needs (e.g., active substance abuse, schizophrenia, personality disorders).

Funding

In 2012, the Scan Foundation[3] provided $180K over 18 months to the Indiana University Geriatrics GRACE Training and Resource Center to provide training and technical assistance to UCSF and two other health care organizations.

Program Impact

5.5

Decline in median number of ED visits among enrollees

33%

Increase in self-rated positive health reporting

1) Consulting physician is double-board certified in geriatrics and palliative care.
2) Or commensurate experience.
3) Independent public charity devoted to transforming care for older adults.

Source: Ritchie C, et al., "Implementation of an Interdisciplinary, Team-Based Complex Care Support Health Care Model at an Academic Medical Center: Impact on Health Care Utilization and Quality of Life," *PLoS One*,11, no. 2 (2016): http://dx.doi.org/10.1371/journal.pone.0148096; "2012 Annual Report," The Scan Foundation, http://www.thescanfoundation.org/sites/default/files/2012_tsf_annual_report.pdf; Population Health Advisor interviews and analysis.

Advisors to Our Work

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Related Resources

Research Compendium: Reducing Avoidable Emergency Department Utilization (Link)

Summarizes strategies for decreasing avoidable utilization of the emergency department by increasing patient access to primary care, educating patients of alternate care points and self-management strategies, and implementing targeted measures for high risk patients

Primer: Right-Sizing ED Utilization for Acute Behavioral Health Patients (Link)

Outlines the opportunity and methods for preventing avoidable ED use, providing right-site-of-care, and follow-up support for patients with severe behavioral health needs

Research Brief: How to Develop a Community Paramedicine Program (Link)

Provides key considerations for developing a community paramedicine program and includes 11 case profiles that represent a broad range of models

White Paper: Expanding the Role of Patient Navigation in the Emergency Department (Link)

Features emergency department-based roles targeting frequent utilizers and patients requiring enhanced care coordination and case management

Data and Analytics Tool: Avoidable ED Utilization Assessment (Link)

Applies an algorithm developed by NYU clinical experts to your facility's Medicare inpatient and outpatient data to identify avoidable ED visits

Research Brief: Beyond Readmissions: Targeting Avoidable Costs in the Post-Discharge Process (Link)

Reviews a framework for targeted expansion of the care transitions process through six key steps

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