Strategic Blueprint: Advancing a Super-Utilizer Program

A guide for designing a dedicated high-risk patient clinic
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Introducing the Population Health Advisor

Research Program Offers Customized Support for Transformation Leaders

<table>
<thead>
<tr>
<th>Advisory Board Company</th>
<th>Population Health Advisor</th>
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</thead>
<tbody>
<tr>
<td>Washington DC-based research, technology, and consulting firm partnering with 3,800 health care organizations; research services offer access to national meetings, best practice publications, Webconferences, analytic tools, and peer networking.</td>
<td>Serve executives, physicians, and caregivers dedicated to care transformation; we provide customized analysis and directive guidance on program design, investment prioritization, network management, and the operations of care management.</td>
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</tbody>
</table>

**Population Health Advisor Areas of Research**

- **Population Health Leadership**
  - We have so many siloes, can you help us take an inventory of our population health assets and programs across the system?

- **Primary Care Transformation**
  - How can promote better top-of-license and team-based care in our medical homes?

- **Care Management**
  - Can you assess our care management staffing to evaluate opportunities to improve role definition and deployment?

- **Post-Acute Care**
  - What can we do to help PAC sites care for more medically complex patients?
Super-Utilizer Program Road Map
# Super-Utilizer Program Road Map

## Key Lessons Span All Stages of Program Design and Implementation

### Program Design
- Decide on level of ownership over medical management (e.g., support to existing PCPs or full PCP role)
- Use program model to determine optimal program location

### Staffing, Deployment
- Select a multi-disciplinary care team whose composition reflects patient needs
- Rely on nurses to play central role in care team, regardless of model

### Patient Identification
- Determine inclusion/exclusion criteria to avoid outreach to patients with high episodic costs or unavoidable conditions
- Incorporate patient activation levels in assessment to narrow patient lists to best candidates

### Patient Management
- Tier ongoing management of patients using defined phases or categories
- Design passive monitoring protocols to enable “graduation” and intake of new patients

### Care Coordination
- Select PCP engagement tactics that mirror program’s model
- Form strategic community partnerships to provide complementary services and help meet complex social needs

### Sustainable Funding
- Utilize multiple funding sources that can support pilot programs that scale up over time

**Sources:** Population Health Advisor interviews and analysis.
First, Decide Degree of Medical Management

Greater Medical Management Yields Bigger Opportunity to Inflect Change, But Requires More Resources to Sustain

Three Main Program Models Vary in Ownership and Centralization

- **Supplemental**
  - Less resource intensive
  - Least disruptive to PCP relationships
  - Lower ability to inflect change

- **Hybrid Model**
  - Moderate resource intensity
  - Does not disrupt existing PCP relationships
  - Moderate capacity to inflect change

- **Full PCP Role**
  - Highly resource intensive
  - Greater potential to disrupt PCP relationships
  - Highest potential to inflect change

Source: Population Health Advisor interviews and analysis
Optimal Location Depends on Extent of Medical Management

Programs Serving as Patients’ PCP Benefit from Centralized Clinical Space, Access to Inpatient Data Assets

Common Location Options Have Tradeoffs, Best Fit Different Models

<table>
<thead>
<tr>
<th>Common Location Options</th>
<th>Benefits</th>
<th>Drawbacks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobile or multi-site</strong></td>
<td>Facilitates forming connections with community resources; meet patients where they are</td>
<td>Higher staff travel time; lower capacity for clinical examinations</td>
</tr>
<tr>
<td>Best for: supplemental programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Co-located with ambulatory clinic</strong></td>
<td>More options for locating clinic near most high-risk patients; easier to build PCP buy-in</td>
<td>Data access challenges across inpatient transitions, especially if multiple hospitals</td>
</tr>
<tr>
<td>Best for: hybrid or full PCP model</td>
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</tr>
<tr>
<td><strong>Co-located with inpatient facility</strong></td>
<td>Strong connections to inpatient providers, hospital data sources</td>
<td>More challenging to build rapport with PCPs; location can feel uncomfortable for patients</td>
</tr>
<tr>
<td>Best for: hybrid or full PCP model</td>
<td></td>
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</tbody>
</table>

Source: Population Health Advisor interviews and analyses
<table>
<thead>
<tr>
<th>Key Step</th>
<th>Diagnostic Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs must first decide degree of ownership over medical management</td>
<td>- What percentage of our target patient population is already attributed to PCPs?</td>
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<tr>
<td></td>
<td>- How strong is executive leadership support for a super-utilizer program?</td>
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<tr>
<td></td>
<td>- How do key clinical leaders envision the scope of this type of program?</td>
</tr>
<tr>
<td></td>
<td>- How challenging will securing PCP buy-in for a super-utilizer program be?</td>
</tr>
<tr>
<td></td>
<td>- What staffing mix is most readily available for a super-utilizer program?</td>
</tr>
<tr>
<td>Program location reflects model of medical management used in program</td>
<td>- How much ownership will our program have over medical management?</td>
</tr>
<tr>
<td></td>
<td>- What facilities are available in our system for possible co-location with a super-utilizer clinic?</td>
</tr>
<tr>
<td></td>
<td>- Where is our target patient population already receiving care?</td>
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<tr>
<td></td>
<td>- What staff and resources are available at potential co-location sites?</td>
</tr>
</tbody>
</table>
Assemble Care Team to Meet Patient Population’s Greatest Needs

Psychosocial and Community Providers Offer Wraparound Support for Complex Patient Panels

Program Staff, Resources Meet Array of Patient Medical and Social Needs

Clinical
- Extensivist physicians
- RN case managers
- Licensed clinical social workers

Psychosocial
- Behavioral health providers
- Community health workers
- EMTs or paramedics

Community
- Social service agencies
- Religious organizations
- Volunteer opportunities

Sources: Population Health Advisor interviews and analysis
Regardless of Program Model, Nurses Play Central Role on Care Team

Strategic Use of Non-clinical Team Members Can Improve Capacity for Top-of-License Work

**Supplemental Program Team**
*Crozer-Keystone*

- Specialty Providers: 13%
- Social Workers: 11%
- Physicians or APNs: 30%
- Nurses: 47%

**Full PCP Program Team**
*Lancaster General*

- Specialty Providers: 18%
- Medical Assistants: 6%
- Social Workers: 9%
- Physicians or APNs: 22%
- Nurses: 45%

Both models employ specialty providers like pharmacists or psychologists part-time

**Crozer-Keystone Program Overview**

- **Model:** Supplemental to existing PCP
- **Location:** Co-located with outpatient facility
- **Target Patients:** Residency clinic patients, Medicare Advantage patients

**Lancaster General Program Overview**

- **Model:** Program becomes PCP
- **Location:** Co-located with inpatient facility
- **Target Patients:** LGH-attributed patients; all-payer high-utilizing patients

Sources: Population Health Advisor interviews and analysis; South Central Pennsylvania High Utilizer Collaborative. "Working With The Super Utilizer Population: The Experience and Recommendations of Five Pennsylvania Programs."
## Staffing and Deployment: Summary of Key Steps and Diagnostic Questions

<table>
<thead>
<tr>
<th>Key Step</th>
<th>Diagnostic Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-disciplinary, nurse-centered care team composition reflects patient population’s needs</td>
<td>- What are the predominant physical and behavioral health conditions in the target population?</td>
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<tr>
<td></td>
<td>- What services are patients already utilizing within our system?</td>
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<tr>
<td></td>
<td>- Which community resources are the highest profile in our region for addressing patient psychosocial needs?</td>
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<td></td>
<td>- What staff are already available in the site(s) our program might co-locate with?</td>
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<tr>
<td></td>
<td>- What nursing resources are available for potential shifting of existing FTEs?</td>
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<tr>
<td></td>
<td>- How can our program use residents or faculty members to provide additional medical management to patients?</td>
</tr>
<tr>
<td></td>
<td>- Where might the program be able to reallocate time from staff already funded through separate cost centers?</td>
</tr>
</tbody>
</table>
### Common Inclusion and Exclusion Criteria Span Clinical and Psychosocial Factors

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
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<tbody>
<tr>
<td>Top 3-5% highest-risk or highest-cost patients, within risk-based contracts</td>
<td>High cost episodes not managed by care team, such as cancer diagnoses or trauma</td>
</tr>
<tr>
<td>Multiple, ongoing chronic conditions, poorly managed</td>
<td>Behavioral health diagnosis only, without chronic medical conditions</td>
</tr>
<tr>
<td>Psychosocial barriers to care that exacerbate medical conditions</td>
<td>Patient not ready or willing to change, as assessed objectively or subjectively</td>
</tr>
</tbody>
</table>

Please see the [appendix](#) for a pick list of sample inclusion and exclusion criteria for identifying new patients.
Assess Patient Readiness to Change before Enrolling in Clinic

Multiple Objective and Subjective Strategies Available for Determining Patient Engagement Levels

**Crozer-Keystone Subjectively Assesses Activation Levels to Identify Patients**

1. **Identify Patient**
   - Potential patients identified from payer data and hospital data on admissions and ED utilization

2. **Consult PCP**
   - Medicare Advantage program RN contacts existing PCPs to ask whether or not they recommend patients for the program

3. **Courting Period**
   - If PCP and patient both opt in for family medicine residency program, patient has a 30-day “courting period” before formally committing to program

**Case in Brief: Crozer-Keystone Health System**

- Five-hospital system based in Springfield, Pennsylvania
- Connections to Health team covers programs in a family medicine residency clinic and a private payer sponsored grant program for Medicare Advantage patients
- Program will not reach out to potential Medicare Advantage patients unless their existing PCP believes the high level of intervention is appropriate; program uses a “courting period” to further assess whether patients are a good fit for the family medicine residency program

**Program Overview**

- **Model:** Supplemental to existing PCP
- **Location:** Co-located with outpatient facility
- **Target Patients:** Residency clinic patients, Medicare Advantage patients

Source: Population Health Advisor interviews and analysis
### Patient Identification: Summary of Key Steps and Diagnostic Questions

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<tr>
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</thead>
</table>
| Excluding episodic high-cost or unengaged patients crucial to identifying the right population | - Which exclusion criteria should we set for our program to maximize ROI on staff time and resources (see Appendix for Exclusion Criteria Pick List)?  
- How strong are our behavioral health resources? Which conditions will be too challenging for staff to manage, given their licensure?  
- What specialty support services does our system have, such as cancer coaches or behavioral health navigators, to which we could refer patients? |
| Assess patient readiness to change to allocate resources to best fit patients | - What objective measurements of patient activation are already in our EMR, if any?  
- What protocols will our program use for subjectively assessing patient readiness to change (e.g., asking existing providers or using a “trial period”)? |
Create Step-Down Approach for Care Management

Redefine “Graduation” to Lower-Acuity Management and Passive Monitoring

Broad Support Network Critical to Successful Graduation

PCP Involvement
- Coordinate with PCPs via EMR, huddles, or warm handoffs
- Program staff can ensure that PCP care plan is implemented in the home

Relationship With Clinicians
- Care managers who attend specialty appointments with patients can help foster open communication and relationship-building
- Relationships with office staff also important to patient success

Stable Disease Management
- Program staff work with patients to set goals around utilization or disease-specific metrics that trigger graduation
- Patients may not be independently managing conditions, but can be stepped down to moderate-risk care management or health coaching for ongoing support

Support at Home
- Access to stable housing flagged as particularly important for patients to graduate successfully
- Supportive community networks help patients have the resources they need to address barriers to care

Keys to Success Post-Graduation

Source: Population Health Advisor interviews and analysis
Defined Patient Categories Allow Step-Down Management

Disengaged Patients Can Still Be Monitored for Exacerbations and Opportunities to Re-engage in Program

**Four Patient Categories Map to Management Needs**

<table>
<thead>
<tr>
<th>Patient Category</th>
<th>Sample Criteria</th>
<th>Patient Management &amp; Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Patients</td>
<td>High-risk patient still engaged, working toward care plan goals</td>
<td>Routine home visits from care navigators, office visits in Care Connections Clinic, etc.</td>
</tr>
<tr>
<td>Graduated Patients</td>
<td>Met at least 50% of care goals, reduced hospital utilization</td>
<td>Continuing chart reviews by team, occasional care navigator check-ins as needed</td>
</tr>
<tr>
<td>Long-Term Patients</td>
<td>Patient engaged, but not ready to graduate after 4-6 months</td>
<td>EMR triggers alerts to team for ED visits, observation status, admissions</td>
</tr>
<tr>
<td>Patient’s Choice to Leave</td>
<td>10-15% of patients left voluntarily or didn’t keep appointments</td>
<td>Patients are kept on a “watch list,” but not actively managed</td>
</tr>
</tbody>
</table>

**Case in Brief: Lancaster General Health**
- Two-hospital system with 630 beds and a network of regional outpatient care centers, headquartered in Lancaster, Pennsylvania
- Care Connections Clinic is located within Lancaster General Hospital, manages high-use patients across all payers
- Program groups patients into four categories, which determine level of management or monitoring they receive

**Program Overview**
- **Model:** Program becomes PCP
- **Location:** Co-located with inpatient facility
- **Target Patients:** LGH-attributed patients; all-payer high-utilizing patients

Source: Population Health Advisor interviews and analysis
## Patient Management: Summary of Key Steps and Diagnostic Questions

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<tr>
<th>Key Step</th>
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</thead>
</table>
| Redefine “graduation” to lower-acuity management, passive monitoring | - What moderate- or rising-risk care management services are available in our health system for stepping-down patients?  
- What is our system’s IT capacity for passively monitoring patients through alerts on ED visits, observation status, etc.? |
| Use defined patient categories to allow lower-intensity management | - What criteria will determine whether a patient is ready for stepping down to lower-acuity care management programs?  
- What criteria will define a patient as needing ongoing follow-up or monitoring?  
- What clinical or other events will trigger a patient’s re-entry into higher-intensity management? |
Robust Coordination Requires Engagement from Program Start

Physician Engagement Starts During Program Design and Continues Even After Patients Graduate

Create Multiple Points for PCP Feedback

Program Design Phase

- Create or join a cross-continuum work group to ensure services aren't duplicated for super-utilizer patients and gain PCP input into program design

- Track process metrics for highest-utilizing patients before program implementation to demonstrate value to PCPs, such as faster appointments or fewer phone calls

Patient Identification, Management

- Consider having the super-utilizer team secure PCPs' “blessings” before enrolling patients, or serve in an advisory capacity only

- Provide materials to market the program to PCPs as an add-on to their services and a way to help manage their most time-consuming patients

Post-Patient Graduation

- Attend a “warm hand-back,” the first appointment a patient has back at their prior PCP, if your program takes over as PCP

- Elicit formal feedback from PCPs on how the program is going, such as through surveys or focus groups

Key Steps Precede Warm Hand-Back

Source: Population Health Advisor interviews and analyses
Anticipate Wide Range of Stakeholders to Coordinate
Community Resources Support Patients From Management Through Graduation

NHCLV Employs Community Resource Staff to Connect Patients to Resources

Case in Brief: Neighborhood Health Centers of the Lehigh Valley
- Network of community health centers located in Pennsylvania
- Lehigh Valley Superutilizer Partnership works with three local health systems
- NHCLV uses non-clinical staff members to build a strong network of community resources to help manage and graduate patients

Program Overview
Model: Hybrid model
Location: Co-located with outpatient facility
Target Patients: Complex, high-utilizing NHCLV patients, regardless of payer

## Care Coordination: Summary of Key Steps and Diagnostic Questions

<table>
<thead>
<tr>
<th>Key Step</th>
<th>Diagnostic Questions</th>
</tr>
</thead>
</table>
| Match PCP engagement tactics to degree of ownership of patient management | - How much ownership over medical management will the program have?  
- How strong is PCP support for a super-utilizer program?  
- Are there existing cross-continuum committees or workgroups that can provide input into how to engage and educate providers around the program’s development and launch? |
| Strategic community partnerships meet complex social needs of super-utilizer population, enable step-down management | - What are the top patient psychosocial and clinical needs in the target patient population?  
- Which needs are most likely to go unmet based on the staffing availability and other resources in our super-utilizer program?  
- Which resources in the community have the highest capacity to address these unmet needs?  
- Do staff in our program/system already have relationships with leaders in these organizations to facilitate partnership formation? |
Multiple Funding Sources Available to Support Pilot Program

During Program Design, Determine Which Metrics Can Demonstrate Value to Funders

Multiple Funding Sources Pool Together to Support Pilot Programs

Grant Funding
Programs may receive planning and implementation grants from parent health systems, CMS, universities, and independent organizations to start a pilot super-utilizer program.

Partnerships with Payers
Medicaid managed care organizations can provide data access, as well as financial support to super-utilizer programs through PMPM payments or block grants.

Billable Services
Providers may use transitions of care and chronic care management billing codes to receive reimbursement for some services, such as home visits to system patients.

Partnerships with Other Organizations
Providers may partner with social service agencies, senior living facilities, or other public or community-based organizations to obtain funding and other resources in exchange for providing services to shared patients.

Please see the appendix for a pick list of metrics to track super-utilizer program success and demonstrate ROI to funders.

Sources: Population Health Advisor interviews and analysis; South Central Pennsylvania High Utilizer Collaborative, "Working With The Super-Utilizer Population: The Experience and Recommendations of Five Pennsylvania Programs."
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<thead>
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<th>Diagnostic Questions</th>
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<tbody>
<tr>
<td>Seek multiple funding options to pilot program in fee-for-service world</td>
<td>- How interested are private or public payers in our region in collaborating on super-utilizer programs?</td>
</tr>
<tr>
<td></td>
<td>- What community, regional, or national grant funding opportunities are available for supporting program design and launch?</td>
</tr>
<tr>
<td></td>
<td>- Are there third parties in our area, such as senior living facilities, that align with the demographics of the target patient population and may be interested in partnerships?</td>
</tr>
</tbody>
</table>
Appendix

- Program Summary
- Staffing Composition Picklist
- Inclusion and Exclusion Criteria Picklists
- Patient Assessment Picklist
- Community Partner Picklist
- Program Metric Picklist
### Program Summary

#### Program Snapshot (Page 1 of 2)

<table>
<thead>
<tr>
<th>Ownership over Medical Management</th>
<th>Crozer-Keystone Health System</th>
<th>Denver Health</th>
<th>Neighborhood Health Centers of the Lehigh Valley</th>
<th>Lancaster General Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplemental to existing PCP</td>
<td>Program becomes full PCP, medical home</td>
<td>Hybrid model</td>
<td>Program becomes full PCP</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree of Centralization</th>
<th>Co-located with outpatient facility</th>
<th>Co-located with outpatient facility</th>
<th>Co-located with outpatient facility</th>
<th>Co-located with inpatient facility, but case management activities are both inpatient and outpatient</th>
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</table>

<table>
<thead>
<tr>
<th>Staffing Composition</th>
<th>Crozer-Keystone Health System</th>
<th>Denver Health</th>
<th>Neighborhood Health Centers of the Lehigh Valley</th>
<th>Lancaster General Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 part-time physician fellows</td>
<td>1.0 nurse practitioner</td>
<td>1 parish nurse</td>
<td>1.5 physician</td>
<td>1.8 nurse practitioner</td>
</tr>
<tr>
<td>0.12 psychologist</td>
<td>0.8 physician</td>
<td>1 MSW</td>
<td>4.0 care navigators (EMTs/paramedics)</td>
<td></td>
</tr>
<tr>
<td>0.12 nurse case manager</td>
<td>1.0 navigator</td>
<td>1 LPN</td>
<td>3.0 patient support representatives (MAs)</td>
<td></td>
</tr>
<tr>
<td>0.25 MSW student</td>
<td>1.0 clerk</td>
<td>2 community health workers</td>
<td>2.0 RN case manager</td>
<td></td>
</tr>
<tr>
<td>0.08 PsyD student</td>
<td>1.0 RN</td>
<td>2 physicians</td>
<td>1.0 clinical counselor</td>
<td></td>
</tr>
<tr>
<td>0.10 clinical pharmacist</td>
<td>1.0 medical assistant</td>
<td>Part-time project manager</td>
<td>0.5 pharmacist</td>
<td></td>
</tr>
<tr>
<td>0.05 supervising physician</td>
<td>1.0 LGSW</td>
<td>Contracted community organizer</td>
<td>0.2 psychologist</td>
<td></td>
</tr>
<tr>
<td>1.0 RN case manager for private payer grant</td>
<td>1.0 certified addiction counselor</td>
<td>Contracted time bank liaison</td>
<td>County social service liaison</td>
<td></td>
</tr>
<tr>
<td>0.3 psychologist</td>
<td>0.10 clinical pharmacist</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patients Targeted</th>
<th>Crozer-Keystone Health System</th>
<th>Denver Health</th>
<th>Neighborhood Health Centers of the Lehigh Valley</th>
<th>Lancaster General Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>For residency-based program, highest attributed users of ED and inpatient services</td>
<td>Patients with 3+ potentially avoidable hospitalizations in a rolling twelve-month period</td>
<td>Program operates by referrals</td>
<td>All-payer, high-use patients</td>
<td></td>
</tr>
<tr>
<td>For Medicare Advantage program, patients with highest spend for payer</td>
<td>Patients with both a serious behavioral health diagnosis and 2+ hospitalizations</td>
<td>Targets patients with 2+ admissions in last 6 months</td>
<td>Patients with 2+ chronic conditions, 2+ inpatient stays in 6 months, or greater than $10,000 in costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patients with complex chronic conditions with a behavioral health component</td>
<td></td>
<td>LGH PCP attributed patients</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Ages 18+</td>
<td></td>
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<table>
<thead>
<tr>
<th>Patient Panels</th>
<th>Crozer-Keystone Health System</th>
<th>Denver Health</th>
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<th>Lancaster General Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>For residency-based program, worked with 3 patients with 1 more in process</td>
<td>Reached 208 patients in 2013 and 330 in 2014</td>
<td>Served 70 patients to date</td>
<td>Worked with 40 patients during pilot program and additional 53 in first 6 months of full program</td>
<td></td>
</tr>
<tr>
<td>For private payer program, worked with 5 patients with 2 more in process</td>
<td></td>
<td>40 have graduated</td>
<td>After 18 months, have engaged 225 patients</td>
<td></td>
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## Program Snapshot (Page 2 of 2)

<table>
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<tbody>
<tr>
<td><strong>Graduation Criteria</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- For residency-based program, reduced use of ED and inpatient services that must be sustainable when patients graduate to PCMH-level of care management</td>
<td>- Patients identified as super-utilizers followed for two-year study period</td>
<td>- Program uses a care plan to determine whether patients can accomplish their care goals and reach out for support from community/family resources</td>
<td>- Psychosocial risk score improvement</td>
</tr>
<tr>
<td>- For payer-specific program, no graduation criteria yet</td>
<td>- Graduation criteria unknown, but plans in place for &quot;step-down&quot; clinics</td>
<td>- Met at least 50% of care plan goals</td>
<td>- Met at least 50% of care plan goals</td>
</tr>
<tr>
<td><strong>Funding Sources</strong></td>
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</tr>
<tr>
<td>- Crozer-Keystone Health System funding</td>
<td>- CMMI grant</td>
<td>- CMMI grant through Rutgers University</td>
<td>- Commonwealth of Pennsylvania grant for program start-up</td>
</tr>
<tr>
<td>- Private payer grant</td>
<td>- Denver Health provides care to large uninsured population and also serves as an HMO</td>
<td></td>
<td>- Lancaster General designated operating budget for ongoing operations</td>
</tr>
<tr>
<td>- Public payer grant for Medicare Advantage patients</td>
<td>- CMMI grant</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Measurement of Success</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Rate of reduction in hospital utilization</td>
<td>- Average annual spending per patient</td>
<td>- Decreased hospital utilization</td>
<td>- Fulfillment of care plan goals</td>
</tr>
<tr>
<td>- Mean annual inpatient admissions</td>
<td>- Mean annual inpatient admissions</td>
<td>- Goals met by patient</td>
<td>- Quality measures</td>
</tr>
<tr>
<td>- Risk scores (concurrent and predictive)</td>
<td>- Risk scores (concurrent and predictive)</td>
<td>- Provider and patient satisfaction</td>
<td>- Psychosocial risk improvement</td>
</tr>
<tr>
<td>- Provider and patient satisfaction</td>
<td>- Provider and patient satisfaction</td>
<td>- Decreased hospital utilization</td>
<td>- At least 15% reduction in costs to hospital</td>
</tr>
</tbody>
</table>

# Staffing Composition Picklist

<table>
<thead>
<tr>
<th>Clinical Staff</th>
<th>Psychosocial Staff</th>
<th>Community Resource Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Physicians</td>
<td>- Behavioral health clinicians</td>
<td>- Office specialist/front desk staff/schedulers</td>
</tr>
<tr>
<td>- Advanced practice nurses</td>
<td>- Alcohol/drug counselors</td>
<td>- Social service agency liaisons</td>
</tr>
<tr>
<td>- RN case managers</td>
<td>- Community health workers</td>
<td>- Resource counselors</td>
</tr>
<tr>
<td>- Licensed clinical social workers</td>
<td>- Health coaches</td>
<td>- Financial case workers</td>
</tr>
<tr>
<td>- Clinical pharmacists</td>
<td>- Patient navigators/care coordinators</td>
<td>- Residents/fellows/students</td>
</tr>
<tr>
<td>- Physical therapists/occupational therapists</td>
<td>- LPNs</td>
<td>- Community organizing liaisons</td>
</tr>
<tr>
<td>- Dieticians</td>
<td>- Community paramedics</td>
<td>- Other community resource liaisons</td>
</tr>
</tbody>
</table>

Source: Population Health Advisor interviews and analysis
### Inclusion Criteria

- High utilizers of inpatient services
- High utilizers of emergency department services
- High prospective risk scores
- Patients with highest spend in at-risk payer groups
- Multiple chronic conditions
- Behavioral health comorbidity
- Covered by risk-based contracts
- Uninsured patients
- Poor adherence/compliance to care plan
- High-risk utilization patterns (e.g., high ED use with no assigned PCP)
- Polypharmacy (5+ medications)
- Low health literacy
- Language barriers
- Lack of social support
- Active drug use
- Homelessness
- Childhood trauma
- Domestic violence
- Financial barriers to care
- Food insecurity
- Functional illiteracy
- Transportation barriers
- Willing to participate in program

### Exclusion Criteria

- Patients under 18
- Patients over 80 with neurological impairment
- Oncology diagnosis
- Mental health diagnosis only
- Pregnancy
- Elective surgery
- Surgical complications
- Trauma
- Other acute conditions
- HIV
- Severe cognitive impairment
- Unwilling to participate in program

Patient Assessment Picklist
(Choose 5-10)

Patient Assessment

- Homegrown risk screening tools
- Risk screening software
- Brief Pain Inventory (Short Form)
- Homegrown medication knowledge assessment
- Morisky Medication Adherence Scale
- Homegrown home environment safety assessment
- Homegrown self-sufficiency matrix
- Montreal Cognitive Assessment
- Rapid Estimate of Adult Literacy in Medicine
- Patient Activation Measure
- Homegrown satisfaction survey
- PHQ-9
- Newet Vital Sign
- GAD-7
- Client Perception of Coordination Questionnaire
- University of Rhode Island Change Assessment Scale
- CCHP Risk Stratification Score
- Geriatric Depression Scale
- Falls Risk Scale
- Activities of Daily Living/Instrumental ADL
- Healthy Days
- Care Transition Measure (CTM-3)
- Chronic Condition Checklist (CMS Chronic Condition Warehouse)
- Social Co-morbidity Checklist
- Beck Depression Inventory

Source: South Central Pennsylvania High Utilizer Collaborative, "Working With The Super-Ultilizer Population: The Experience and Recommendations of Five Pennsylvania Programs."
## Community Partner Picklist

<table>
<thead>
<tr>
<th>Providers/Specialists</th>
<th>Social Support</th>
<th>Other organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral health providers/agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacies/pharmacists</td>
<td>Local social service agencies</td>
<td></td>
</tr>
<tr>
<td>Drug/alcohol abuse services</td>
<td>Time banks</td>
<td></td>
</tr>
<tr>
<td>Clinical organizational bodies (e.g., nursing coalitions)</td>
<td>Religious congregations/organizations</td>
<td></td>
</tr>
<tr>
<td>Medical charity care networks</td>
<td>Community organizing groups</td>
<td></td>
</tr>
<tr>
<td>Super-utilizer program work groups</td>
<td>Legal service organizations</td>
<td></td>
</tr>
<tr>
<td>Palliative care organizations</td>
<td>Area agencies on aging</td>
<td></td>
</tr>
<tr>
<td>Dialysis centers</td>
<td>Ethnic/racial empowerment organizations</td>
<td></td>
</tr>
<tr>
<td>Federally-qualified health centers</td>
<td>YMCA/YWCA</td>
<td></td>
</tr>
<tr>
<td>Home health agencies</td>
<td>Homeless shelters</td>
<td></td>
</tr>
<tr>
<td>Residency/fellowship programs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Program Metric Picklist

## Clinical and Cost Metrics
- Rate of hospital utilization
- Length of stay for inpatient admissions
- Rate of emergency department utilization
- Number of goals in care plan achieved by patient
- Change in costs per patient to system or payer
- Disease-specific outcome measurements (e.g., A1c scores for diabetic patients)
- Rate of observation visits
- Fill rate and compliance rate with prescribed medications
- Number of medication errors discovered by program
- Psychosocial risk scores

## Process Metrics
- Consent rates to opt in to program
- Rates of making/keeping appointments with PCPs or specialists
- Frequency and duration of phone calls to PCPs or specialists
- Duration of appointments with PCPs or specialists

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