Population Management: Caring for our Highest Risk Patients

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Boston Health Care for the Homeless Program
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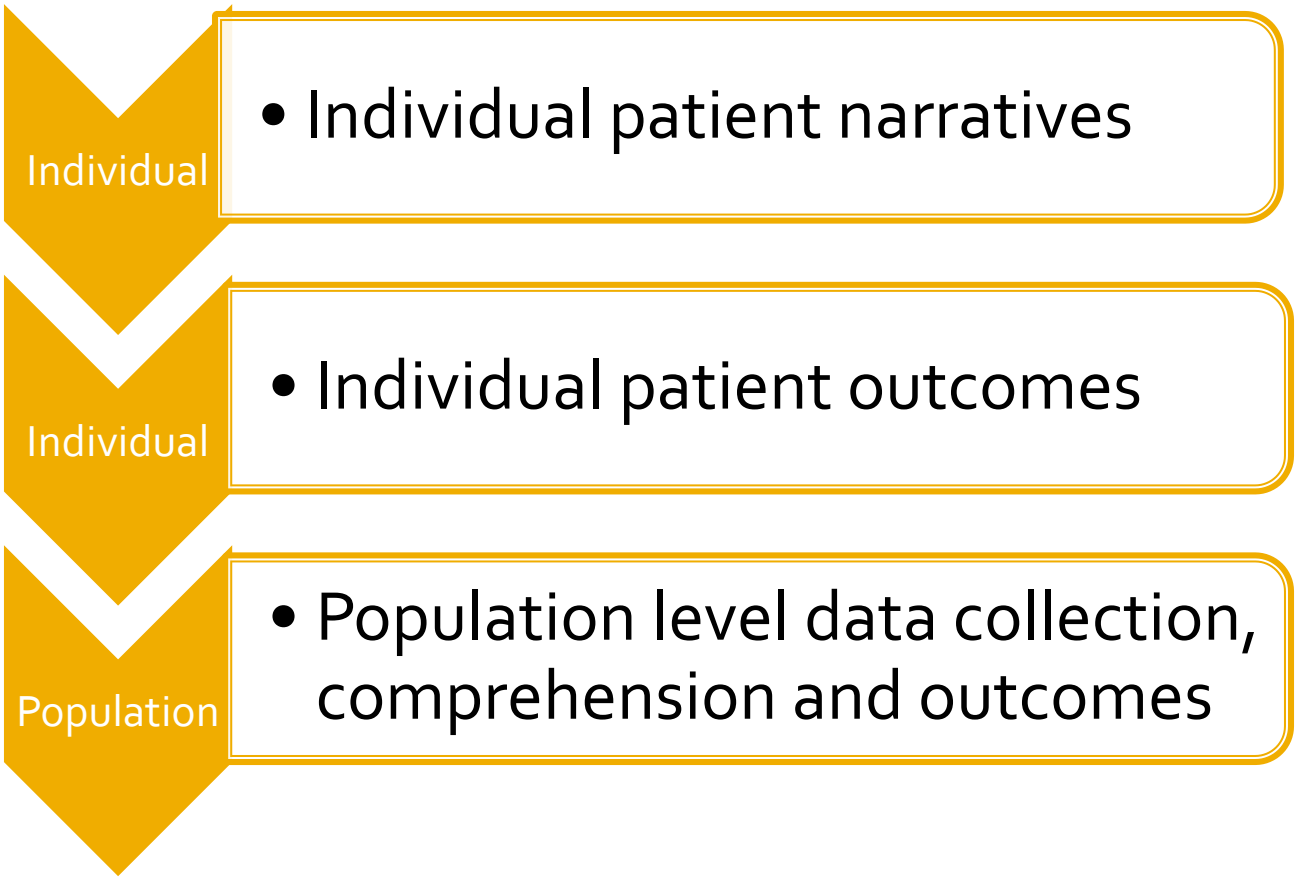
Outline

- Data analysis at a population level
- Implications for our care model
  - Facilitated discussion
- Population management
  - Examples and outcomes

Data Analysis at a Population Level

Starting Point



Analysis: 6,493 individuals seen by Boston Health Care for the Homeless Program (BHCHP) in 2010 who had Medicaid coverage

State and Federal Coverage	N	%
Medicaid and Medicare	1,760	27%
Medicaid only	4,733	73%
Total	6,493	100%

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BHCHP Cohort 2010: Mental Health and Substance Use

	All (N=6,494)
Mental Illness	4,384 (68%)
Schizophrenia	1264 (19%)
Bipolar Disorders	1889 (30%)
Depression	3068 (47%)
Anxiety	2627 (40%)
Substance use disorders	3890 (60%)
Alcohol use disorder	2628 (40%)
Drug use disorder	3118 (48%)
Co-occurring mental illness and substance use	3135(48%)

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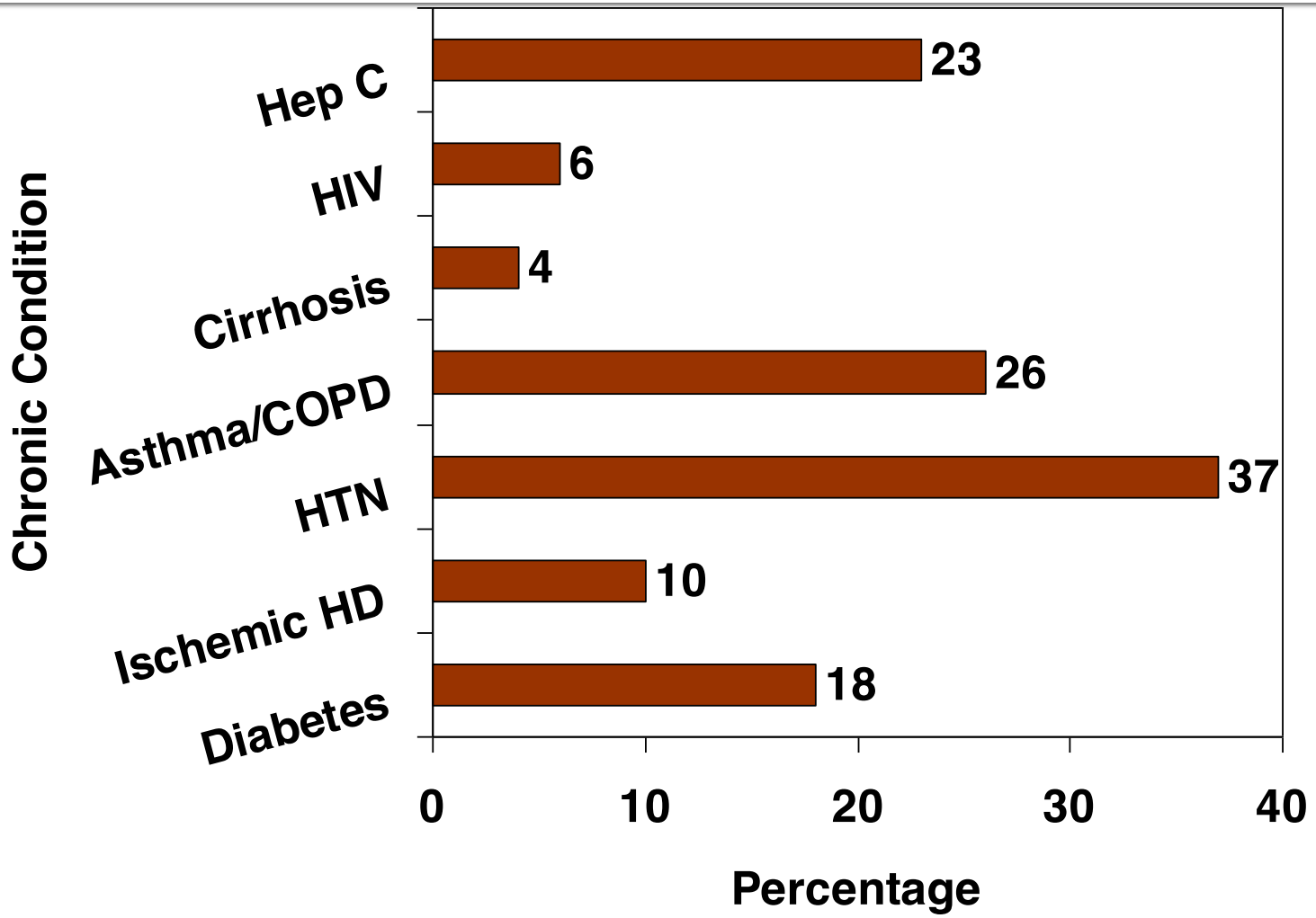
BHCHP Cohort 2010: Selected Chronic Physical Conditions



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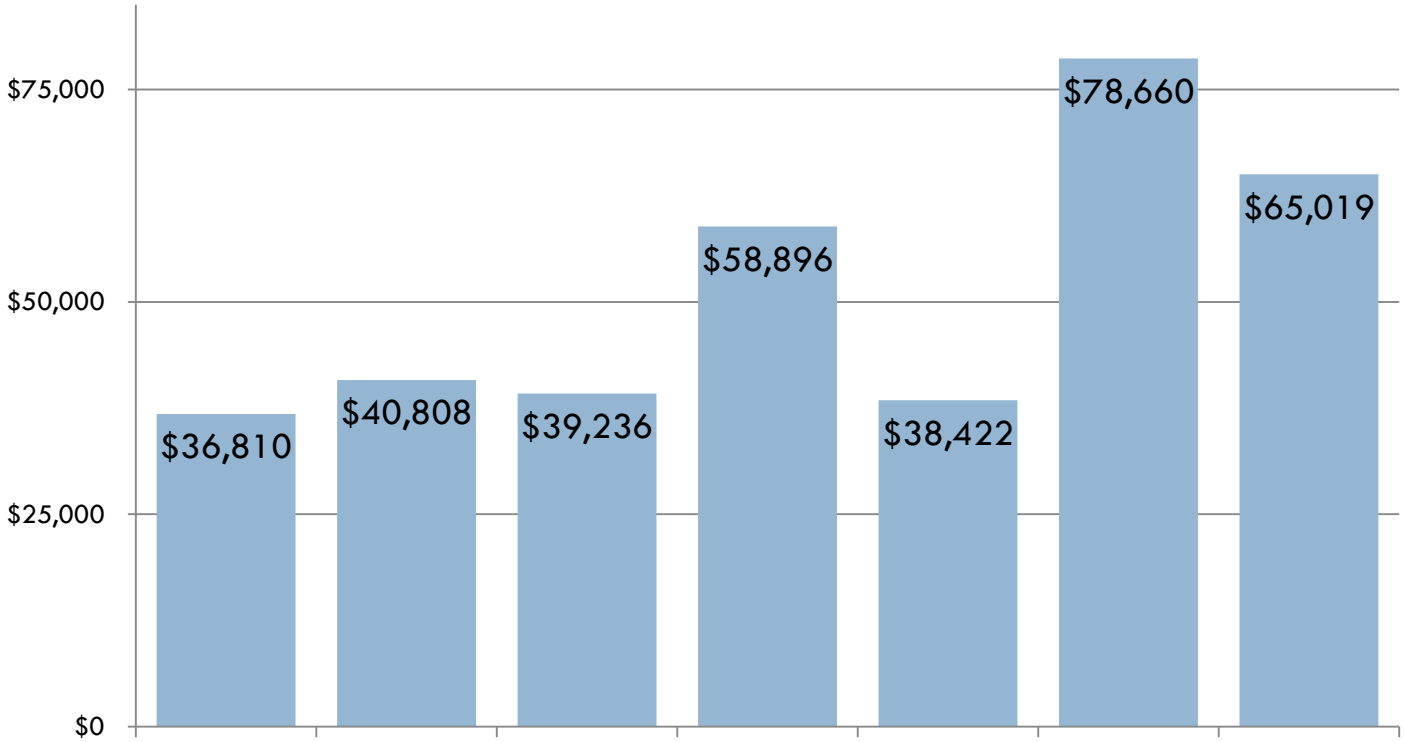
Average Expenditures for Patients with Selected Medical Diagnoses



N	1,711	1,473	1,191	560	409	265	254

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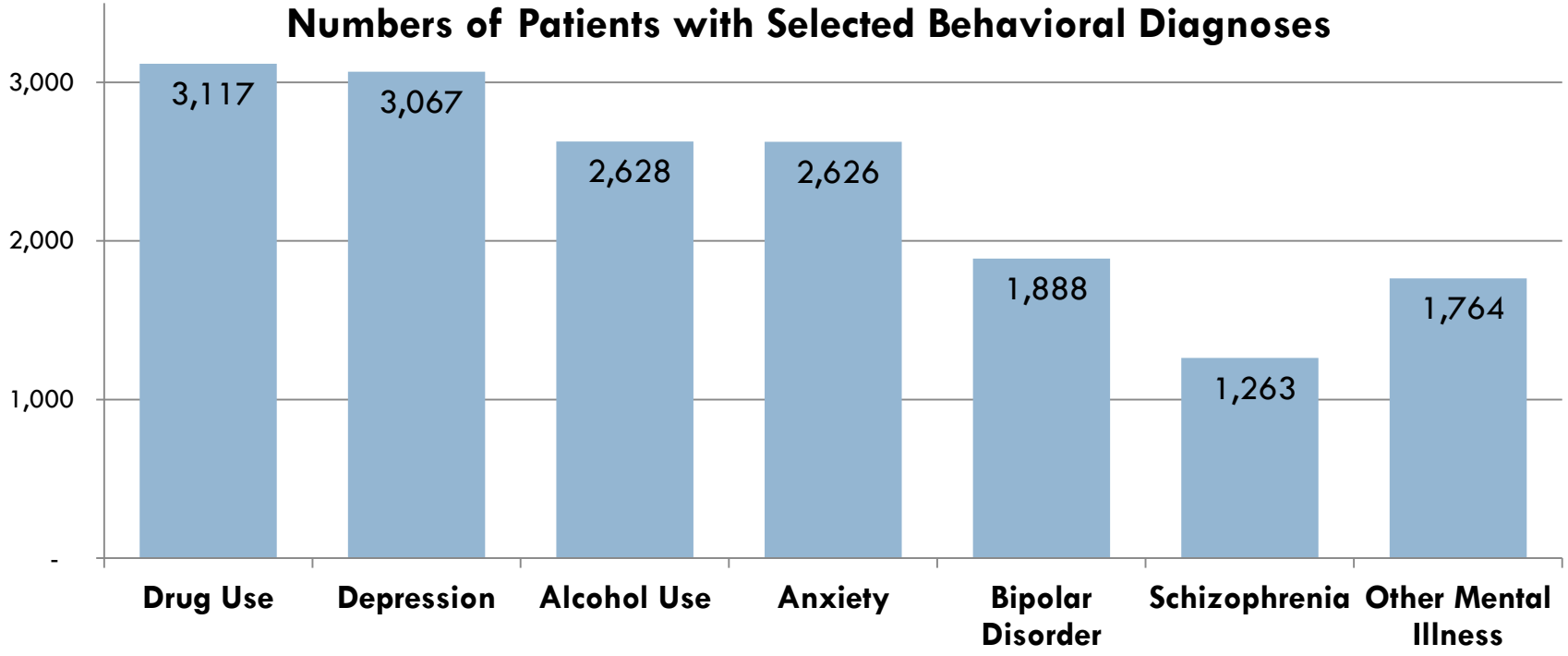
Average Expenditures for Patients with Selected Behavioral Health Diagnoses



% of all patients	48%	47%	40%	40%	29%	19%	27%

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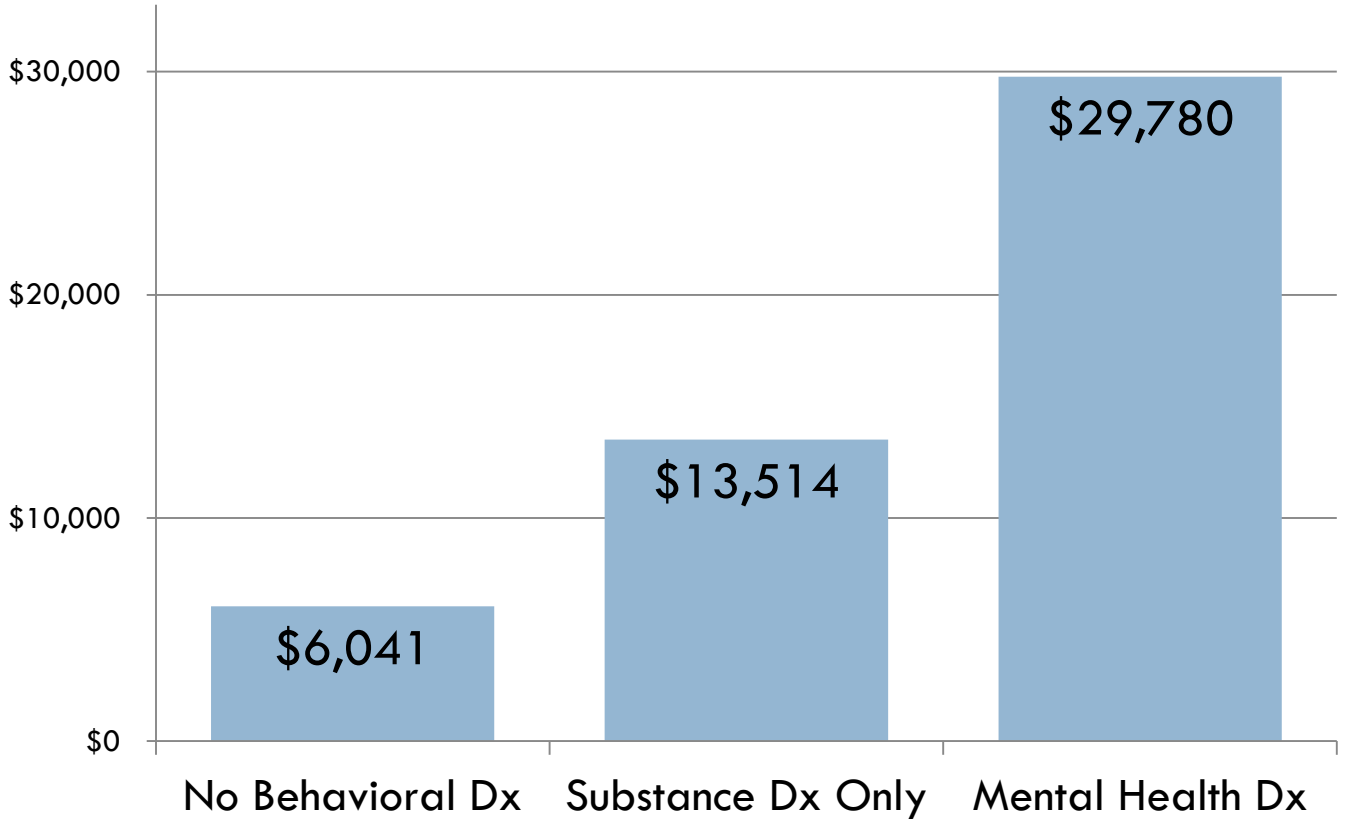
Average Expenditures for Patients with and without Behavioral Diagnoses



N	1,355	755	4,383

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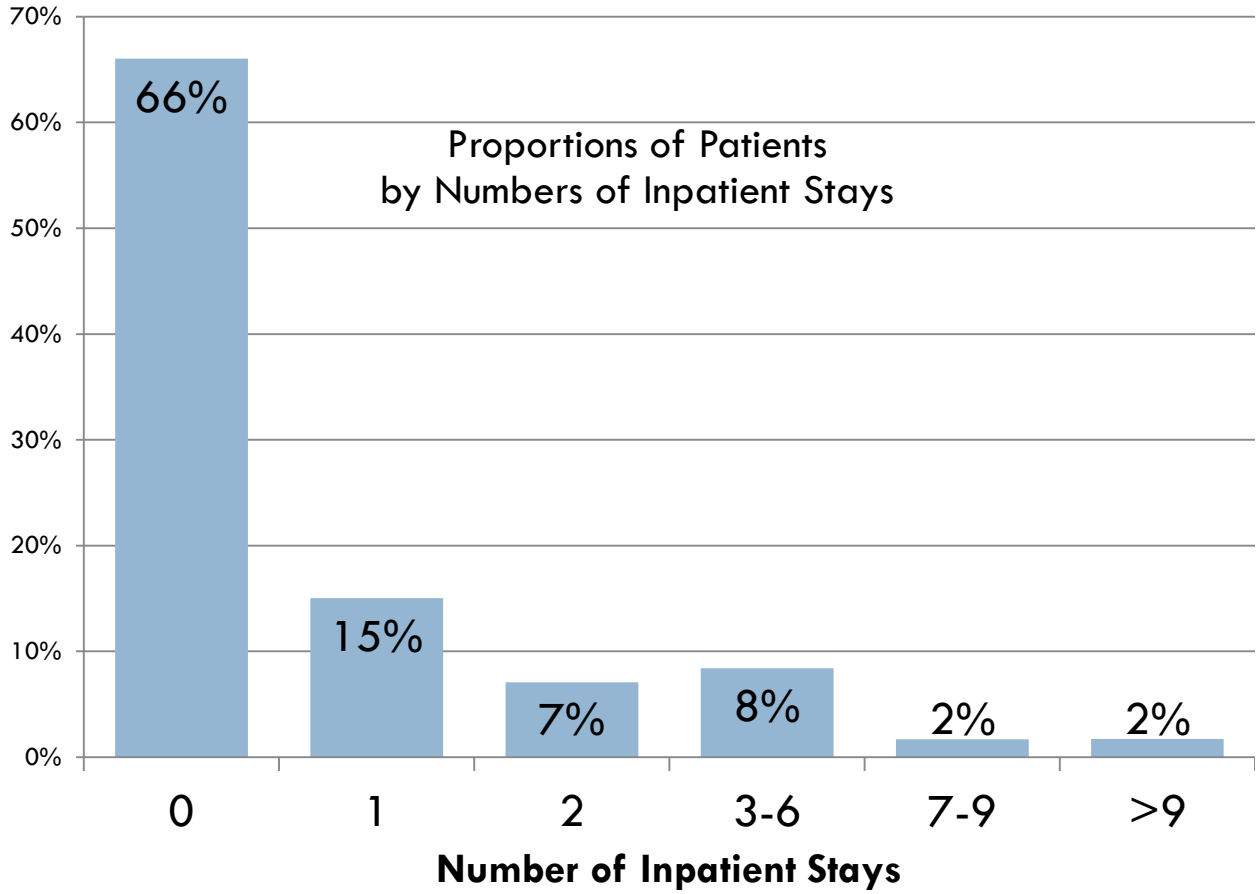
BHCHP Cohort 2010: Inpatient Stays



By comparison, 8% of the entire U.S. population in 2007 used hospital care. Among Massachusetts dual eligibles under age 65, whose average costs are similar to those of BHCHP patients, 18% had a hospital stay.*

*2007 National Health Interview Survey; Breslin Davidson and Dreyfus, "Dual Eligibles in Massachusetts," September 2011.

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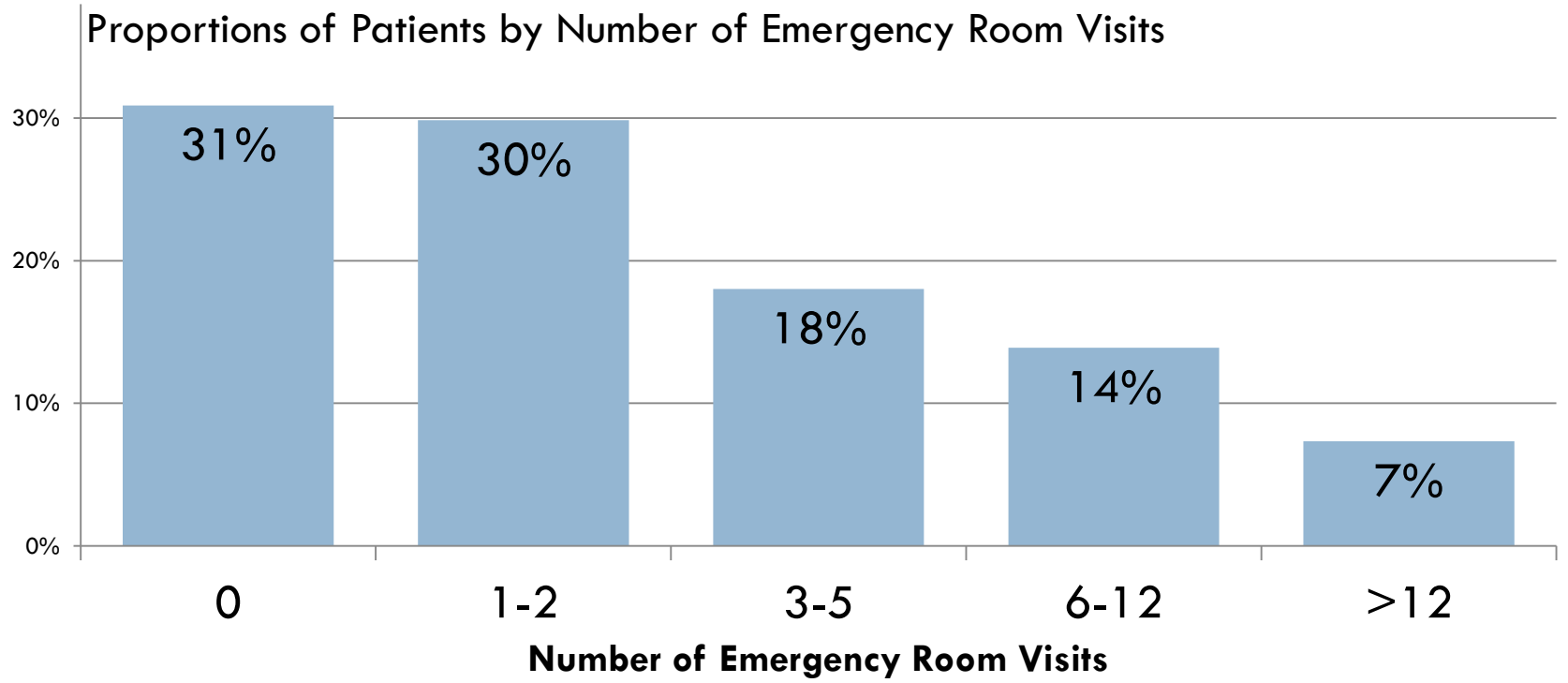
BHCHP Cohort 2010: Emergency Department Use



N	2,006	1,938	1,170	902	477

The average number of ER visits for all patients was 4.0. Of the visits, 64% were to BMC, Cambridge Hospital, MGH or Tufts.

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Mean Expenditures by Quartile

$720

$3,401

$10,023

$47,250

$148,910,462

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Expenditures for Patients with Medicaid Only, for Duals, and for All Patients

	Medicaid-Only	Duals	Combined
Expenditures	$100,812,960	$48,099,906	$148,912,866
Patients	4,733	1,760	6,493
Average*	$21,300	$27,329	$22,934

*Average expenditures were calculated simply as expenditures divided by number of patients without adjustment for partial-year membership.

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Implications for our Care Model

Implications for our Care Model

- First, reactions to this data?

Implications for our Care Model

- Facilitated group discussion
  - Break into groups
  - Answer 3 questions
  - Report out in 15 minutes

Implications for our Care Model

- What are some key *elements of a care model* that would improve the health of a group of similarly high risk people?
- What are the *challenges* of implementing a care model for individuals at high risk?
- How can we *measure the impact* of a care model?

Implications for our Care Model
(notes from brainstorming session)

- Key Elements of a Care Model?
  - Mental health services
  - Case management, intensive CM
  - Permanent Supportive Housing
  - Continuity of care team, medical home
  - Group visits with disease specific care teams
  - Addiction services
  - Integrative health, inc BH, other holistic services
  - Simple process, immediate access
  - Improved communication across health care system

Implications for our Care Model
(notes from brainstorming session)

- Key Elements of a Care Model? (cont)
  - Access to medication, integration of clinical pharmacy services
  - Coordination with hospitals for right care at the right time and right place
  - Working across clinics and systems
  - Street outreach, mobile facilities
  - Interdisciplinary providers-BH and medical care
  - Medical respite
  - Investment in risk stratification and population management-access to data and data analyst
  - Harm reduction services, prevention

Implications for Care Model
(notes from brainstorming session)

- Key Elements of Care Model? (cont)
  - Cultural competence
  - Access to addiction services, including relapse prevention, continuum of care
  - On-site specialty care and/or transportation to specialty care
  - Focus on transitions of care
  - Uniform medical records/access to medical records
  - Employment and education services
  - Community ownership of all members of community- decrease social isolation
  - Measure readiness of change with patients/clients and providers

Implications for our Care Model

(notes from brainstorming session)

CHALLENGES TO IMPLEMENTATION?

- Predictive models and access to data not yet available
- Identifying highest users/lack of data-resources are limited
- Identifying a person as homeless in the data
- Lack of health info exchange
- Current FFS reimbursement
- How to risk adjust, set capitated rate
- Care coordination across system
- Limited resources
- Unmet need, access to multi-year data

MEASURE IMPACT?

- Patterns of utilization
- Evaluate data at individual level
- For top 10% and other 90% (improved overall access)
- Patient/client satisfaction/engagement
- Unmet need and preventive health care
- Improved health outcome
- Reduction in cost

Population Management

Examples and Outcomes

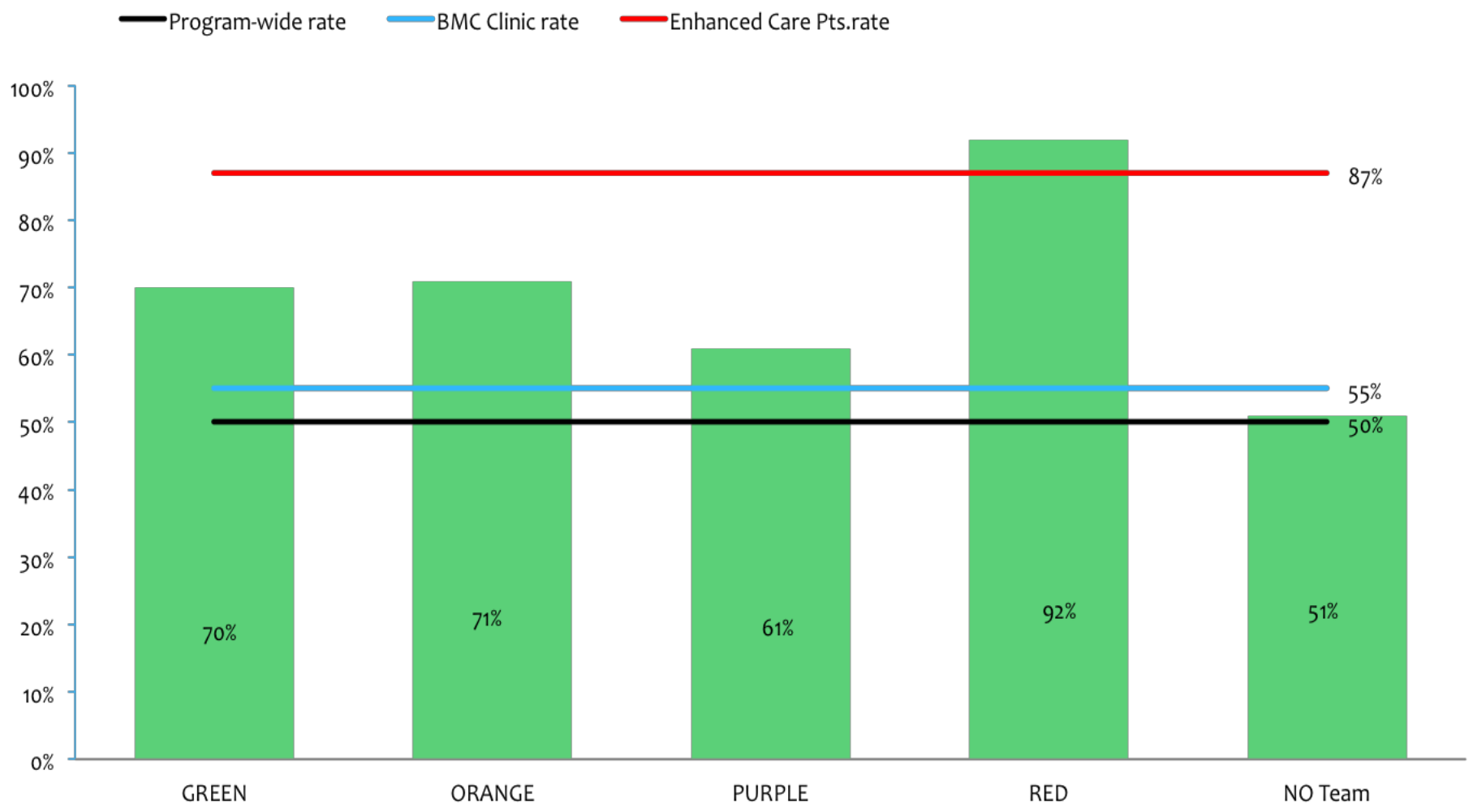
Examples

1. PCMH "Enhanced Care" for highest risk people
2. "Community support workers" engage vulnerable, newly housed people
3. PSH for people with frequent ED visits

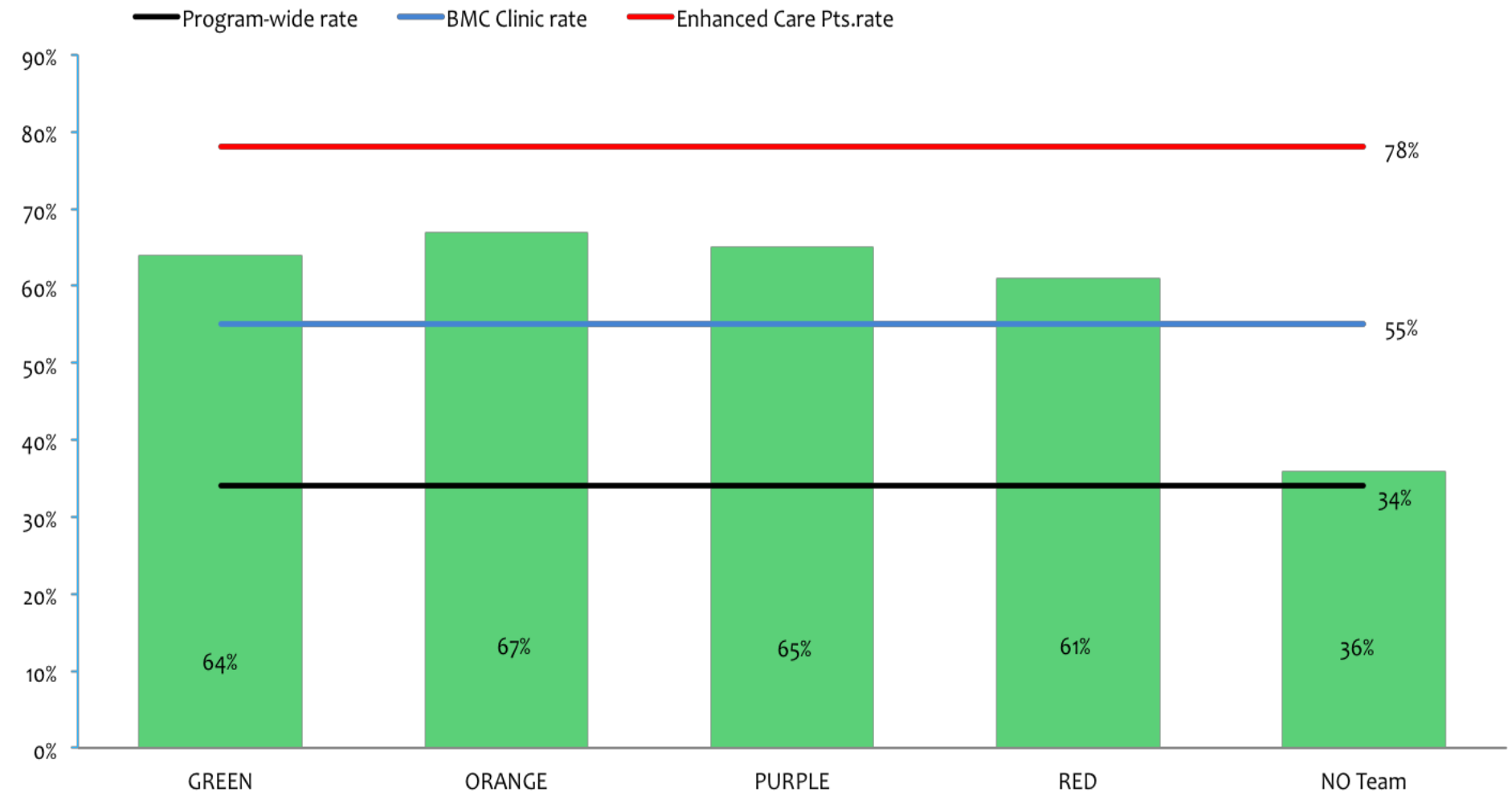
1. PCMH "Enhanced Care"

- Risk stratification tool created
- 200 patients designated most vulnerable
- Enhanced care model includes:
  - Designation in EHR
  - Clinical care management by RNs
  - Case conferencing by multidisciplinary teams
  - Separate tracking of quality measures

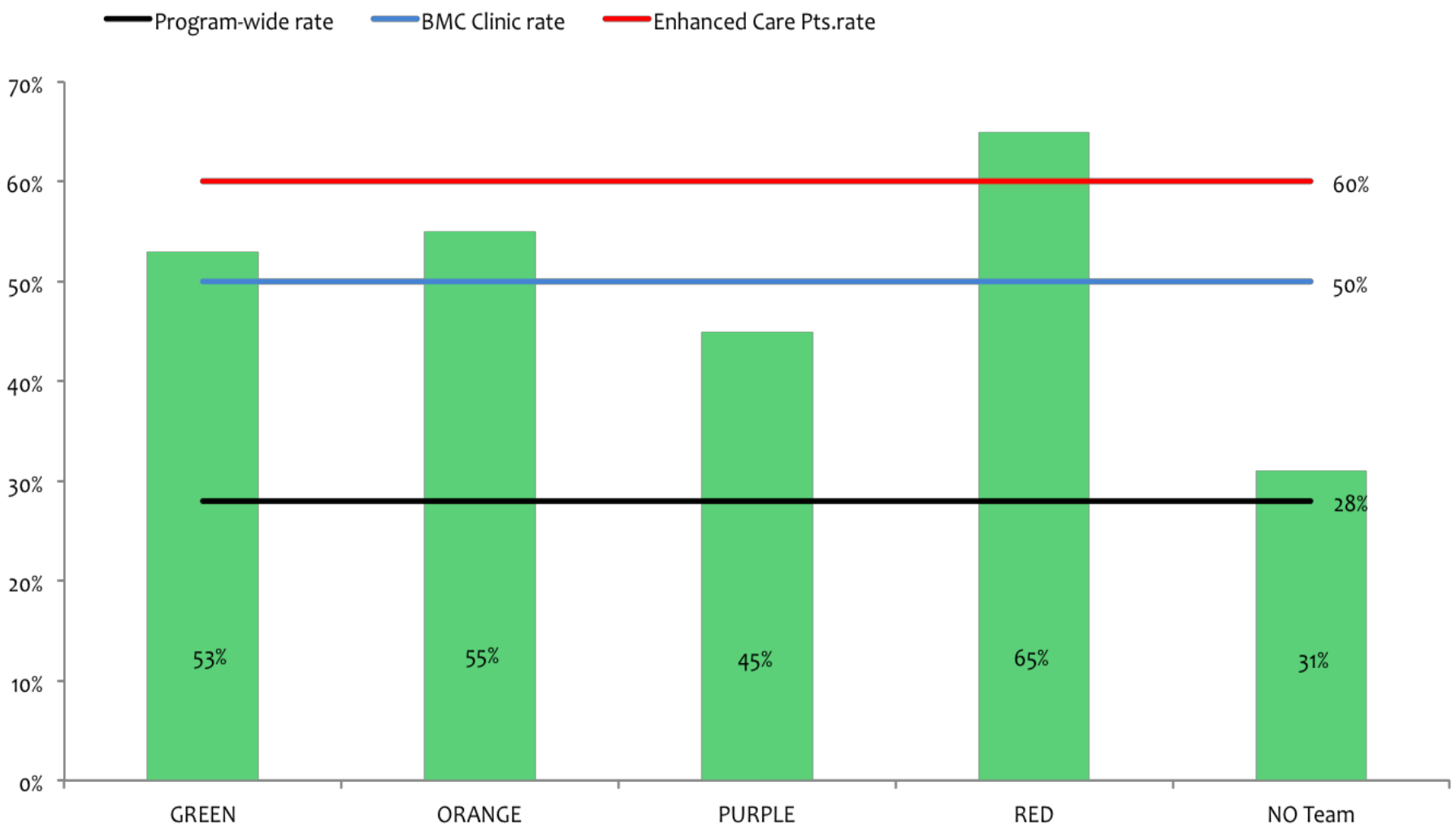
Cervical Cancer Screening



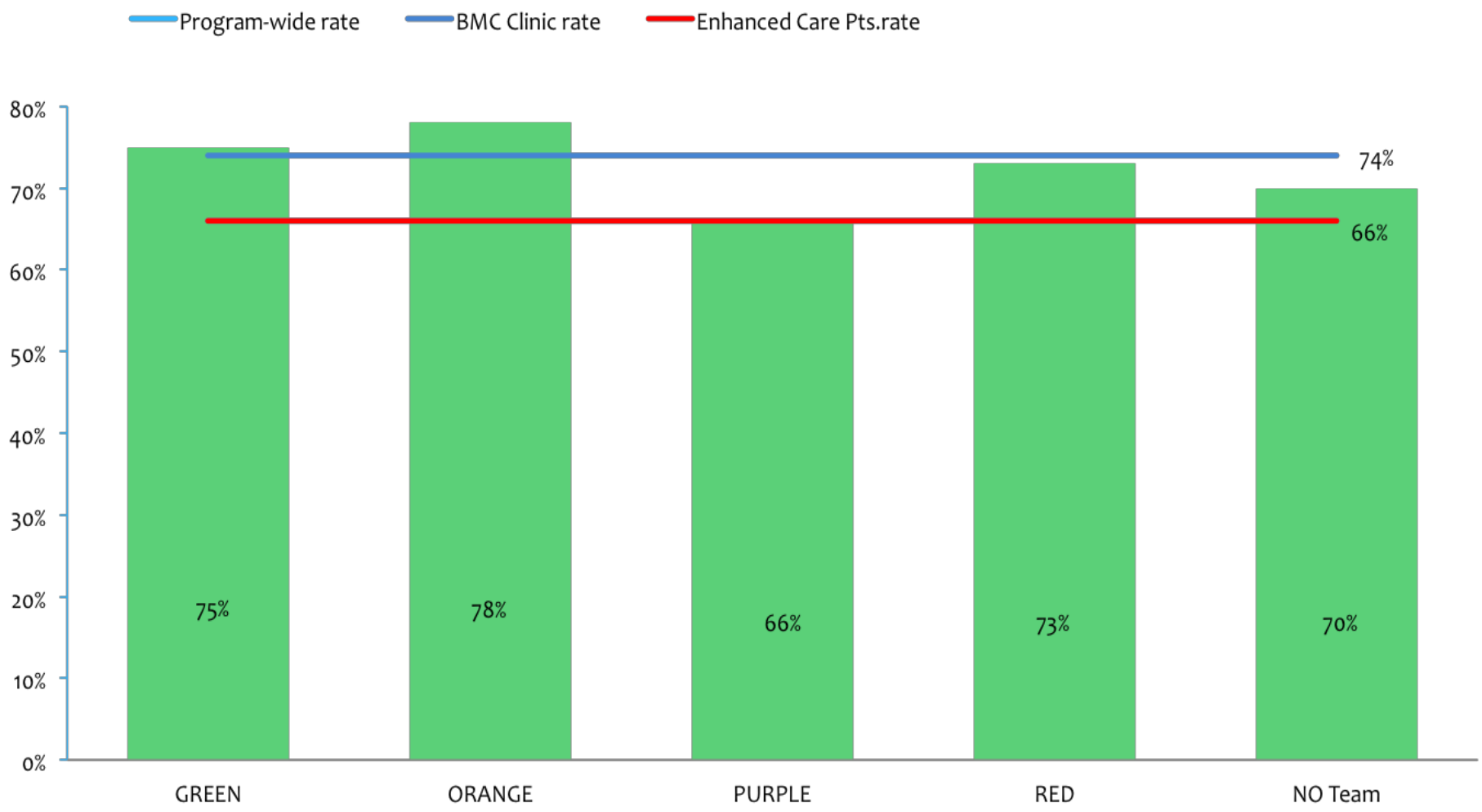
Breast Cancer Screening



Colon Cancer Screening

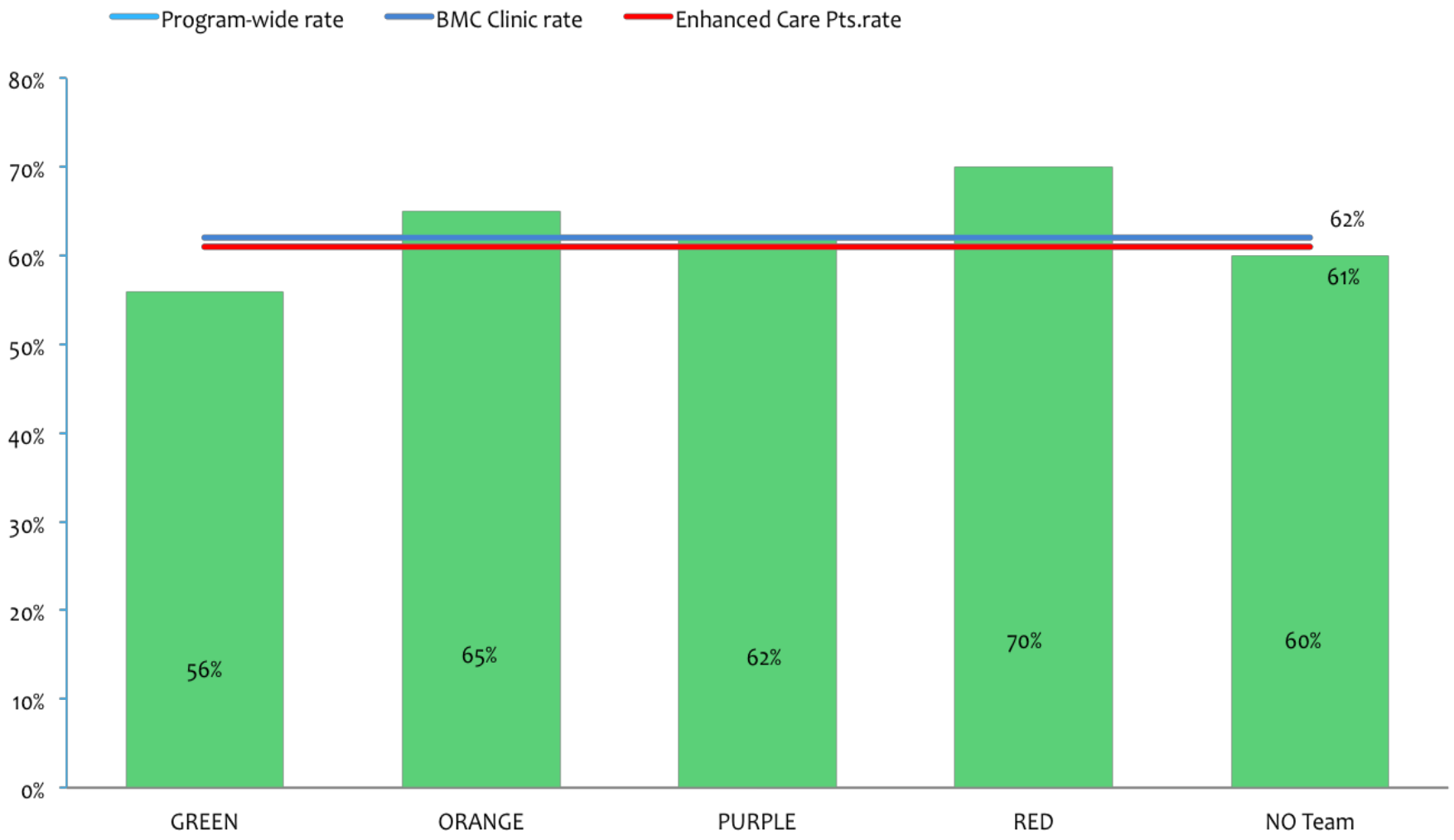


Diabetics with A1C<9



Program-wide rate = Enhanced Care Pts. Rate

Hypertensive Patients with BP <140/90

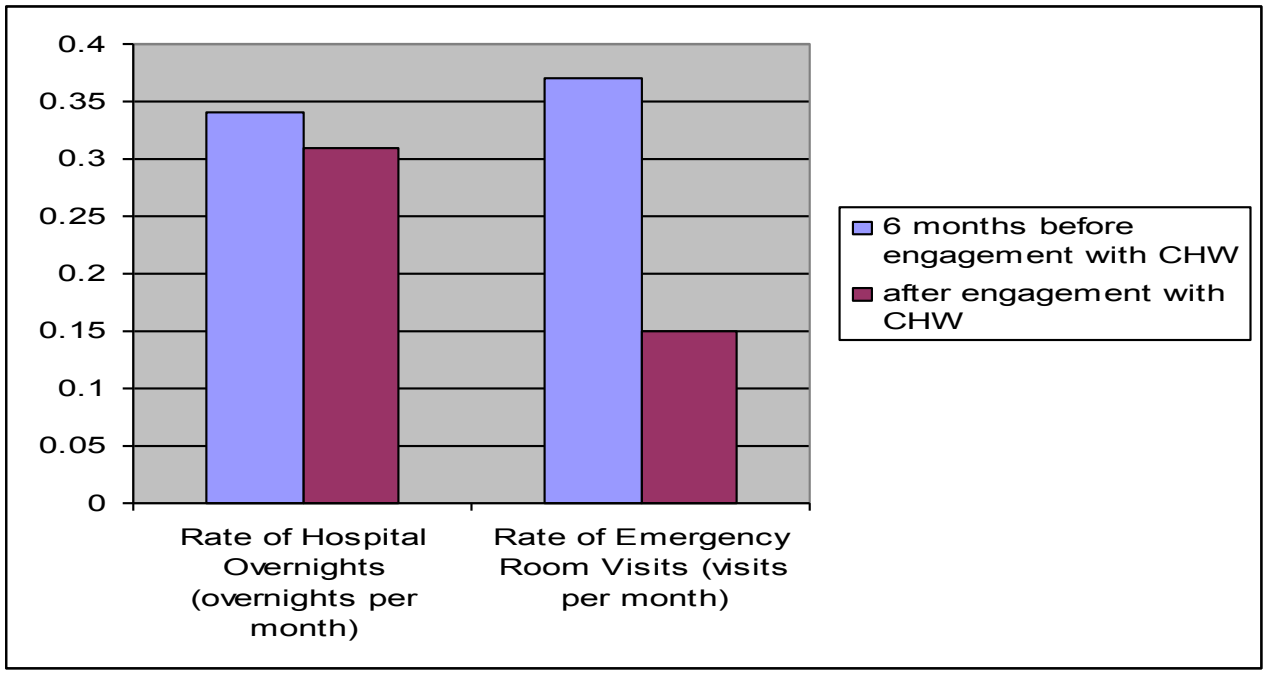


Program-wide rate = Enhanced Care Pts. Rate

2. Community Support Workers Engage Vulnerable, Housed Persons

- Within each PCMH team, added a community support worker to engage Enhanced Care patients who were recently housed but not doing well
  - Case load of each worker is 20 patients
  - Mobile outreach, intensive case management
  - Home visits with PCPs
  - Tracking of utilization of ED and hospital, quality measures

Utilization and Quality Outcomes



- N = 68 patients
- 9% decrease in hospital utilization after engagement with CSW
- 60% decrease in ER utilization after engagement with CSW

- 100 percent housing retention
- 81% of women up to date with cervical cancer screening
- 63% of women up to date with breast cancer screening
- 66% of patients with diabetes have A1C under 9

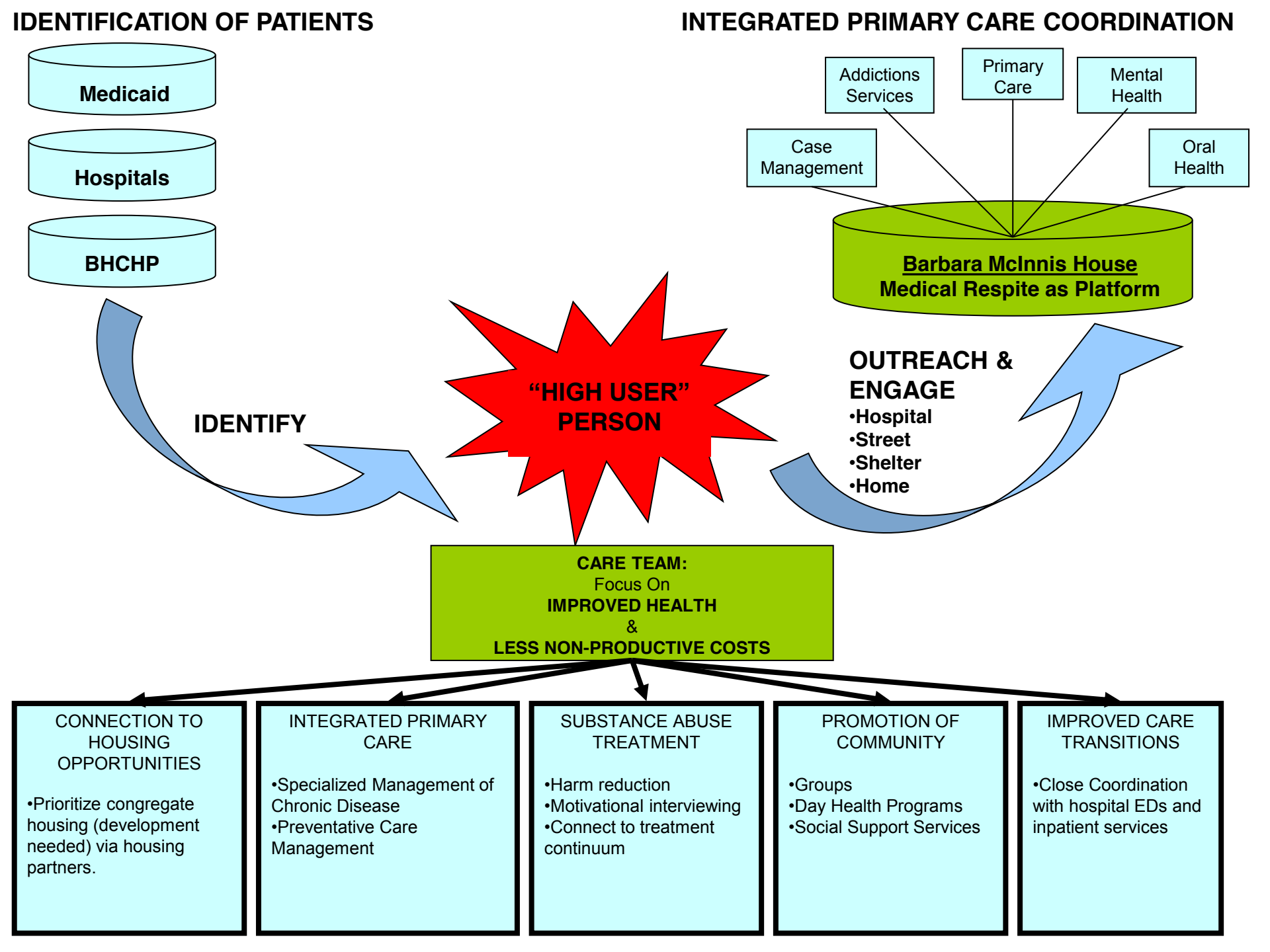
BOSTON HEALTH CARE *for the* HOMELESS PROGRAM

3. PSH for Persons with Frequent ED Visits

- Define "high user"
  - Minimum of 10 ED visits in any 6 month period
- Individuals identified from:
  - Medicaid
  - Local Emergency Departments
- Current target population identified is 200 individuals

Program Goals

- To improve **health and housing outcomes** for chronically homeless high users of emergency services.
- To place participants in permanent housing and provide support services necessary for **housing retention**.
- To **reduce the utilization of expensive emergency medical services** and promote coordinated primary care, behavioral health, and addiction services.

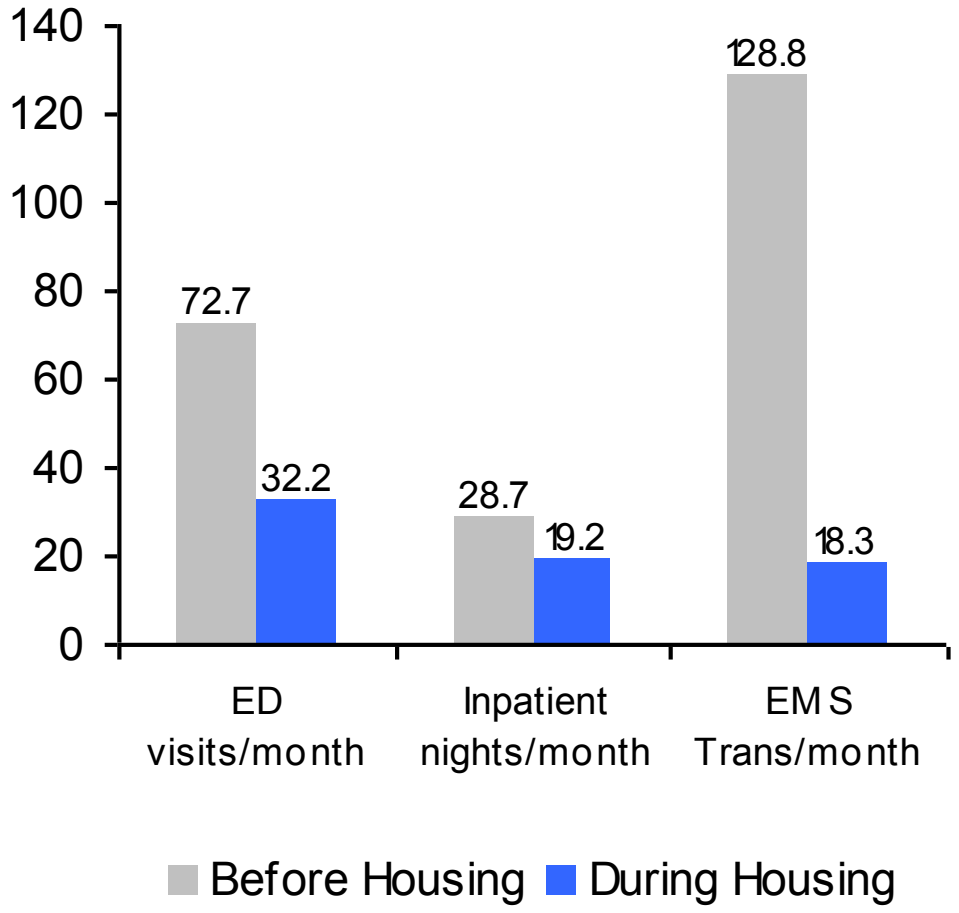

IDENTIFICATION OF PATIENTS
INTEGRATED PRIMARY CARE COORDINATION
Medicaid
Hospitals
BHCHP
Addictions Services
Primary Care
Mental Health
Case Management
Oral Health
Barbara McInnis House
Medical Respite as Platform
IDENTIFY
"HIGH USER" PERSON
OUTREACH & ENGAGE
•Hospital
•Street
•Shelter
•Home
CARE TEAM:
Focus On
IMPROVED HEALTH
&
LESS NON-PRODUCTIVE COSTS
CONNECTION TO HOUSING OPPORTUNITIES
•Prioritize congregate housing (development needed) via housing partners.
INTEGRATED PRIMARY CARE
•Specialized Management of Chronic Disease
•Preventative Care Management
SUBSTANCE ABUSE TREATMENT
•Harm reduction
•Motivational interviewing
•Connect to treatment continuum
PROMOTION OF COMMUNITY
•Groups
•Day Health Programs
•Social Support Services
IMPROVED CARE TRANSITIONS
•Close Coordination with hospital EDs and inpatient services

Supportive Housing Outcomes

56% reduction
in emergency department visits

33% reduction
in inpatient hospital stays

86% reduction
in EMS ambulance transports



n=26

In Conclusion

- Accurate data is critical in understanding population characteristics
- Care model should be informed by data and tailored to meet the needs of a specific population
- Tracking outcomes is key component to success of care model