Health Homes
Missouri CMHC
Mortality Associated with Mental Disorders: Mean Years of Potential Life Lost

<table>
<thead>
<tr>
<th>Year</th>
<th>AZ</th>
<th>MO</th>
<th>OK</th>
<th>RI</th>
<th>TX</th>
<th>UT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>26.3</td>
<td>25.1</td>
<td></td>
<td>28.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>27.3</td>
<td>25.1</td>
<td></td>
<td>28.8</td>
<td>29.3</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>32.2</td>
<td>26.8</td>
<td>26.3</td>
<td>29.3</td>
<td>26.9</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>31.8</td>
<td>27.9</td>
<td></td>
<td>24.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Compared with the general population, persons with major mental illness lose 25-30 years of normal life span.

## Total YPLL by Primary Cause for Public Mental Health Patients with Mental Illness

Combined data for schizophrenia and schizoaffective disorder from 5 US states (MO, OK, RI, TX and UT) from 1997 to 2001

<table>
<thead>
<tr>
<th>Primary cause of death</th>
<th>Total YPLL (Person-years lost)</th>
<th>Deaths (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart disease</td>
<td>14,871.2</td>
<td>612</td>
</tr>
<tr>
<td>Cancer</td>
<td>5,389.9</td>
<td>241</td>
</tr>
<tr>
<td>Suicide</td>
<td>4,726.1</td>
<td>115</td>
</tr>
<tr>
<td>Accidents, including vehicles</td>
<td>3,467.0</td>
<td>98</td>
</tr>
<tr>
<td>Chronic respiratory</td>
<td>2,700.9</td>
<td>113</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1,419.6</td>
<td>61</td>
</tr>
<tr>
<td>Pneumonia/influenza</td>
<td>1,254.2</td>
<td>67</td>
</tr>
<tr>
<td>Cerebrovascular disease</td>
<td>1,195.9</td>
<td>58</td>
</tr>
<tr>
<td>All causes of death*</td>
<td>47,812.2</td>
<td>1,829</td>
</tr>
</tbody>
</table>

*Note: Includes deaths from causes not listed; YPLL = years of potential life lost
Life Expectancy


Change in US General Population Age-Adjusted Mortality (1979-1995)

Mortality Risk From All Causes and From Cardiovascular Disease Increased Among Patients With Schizophrenia Between 1970-2003

Test for time trends of excess relative risks for SMRs were statistically significant ($P<0.001$) for all cause mortality and mortality due to cardiovascular disease.

Maine Study Results: Comparison of Health Disorders Between SMI & Non-SMI Groups

- **SMI (N=9224)**
  - 59.4%
  - 33.9%
  - 30%
  - 28.6%
  - 28.4%
  - 22.8%
  - 21.7%
  - 16.5%
  - 11.5%
  - 11.1%
  - 6.3%
  - 5.9%

- **Non-SMI (N=7352)**
  - 30%
  - 28.6%
  - 28.4%
  - 22.8%
  - 21.7%
  - 16.5%
  - 11.5%
  - 11.1%
  - 6.3%
  - 5.9%
Access To Health Care

- An issue for all people with limited income, particularly preventive care
- Over use of emergency and specialty care
- Complicated by mental illness
- Significantly lower rates of primary care
- Significantly lower rates of routine testing
- Very poor dental care
- Little integration of primary care and psychiatry
Comparison of Metabolic Syndrome and Individual Criterion Prevalence in Fasting CATIE Subjects and Matched NHANES III Subjects

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CATIE N=509</td>
<td>NHANES N=509</td>
</tr>
<tr>
<td>Metabolic Syndrome Prevalence</td>
<td>36.0%</td>
<td>19.7%</td>
</tr>
<tr>
<td>Waist Circumference Criterion</td>
<td>35.5%</td>
<td>24.8%</td>
</tr>
<tr>
<td>Triglyceride Criterion</td>
<td>50.7%</td>
<td>32.1%</td>
</tr>
<tr>
<td>HDL Criterion</td>
<td>48.9%</td>
<td>31.9%</td>
</tr>
<tr>
<td>BP Criterion</td>
<td>47.2%</td>
<td>31.1%</td>
</tr>
<tr>
<td>Glucose Criterion</td>
<td>14.1%</td>
<td>14.2%</td>
</tr>
</tbody>
</table>

Meyer et al., Presented at APA annual meeting, May 21-26, 2005.
At baseline investigators found that:

- **88.0%** of subjects who had dyslipidemia
- **62.4%** of subjects who had hypertension
- **30.2%** of subjects who had diabetes were **NOT** receiving treatment.
Per Member Per Month Costs

Melek et al. Milliman Inc, 2013

Private Sector

Medicare

Medicaid

No Mental Disorder

Any Mental Disorder
MH/SA costs in NY State’s Medicaid Program

MH Disorder
SU Disorder
No MH/SU Disorder

$10,000
$12,000
$14,000
$16,000
$18,000
$20,000
$22,000
$24,000
$26,000
$28,000
$30,000

Behavioral Health costs
Physical Health costs
Why CMHC Healthcare Homes?

• Because addressing behavioral health needs requires addressing other healthcare issues
  • Individuals with SMI, on average, die 25 years earlier than the general population.
  • 60% of premature deaths in persons with schizophrenia are due to medical conditions such as cardiovascular, pulmonary and infectious diseases.
  • Second generation anti-psychotic medications are highly associated with weight gain, diabetes, dyslipidemia (abnormal cholesterol) and metabolic syndrome.
HH Functions: CMHCs are well positioned

- CMHC teams already fulfill many Healthcare Home functions:
  - Providing individualized services and supports
  - Linking consumers to community and social supports
  - Hospital admission and discharge follow-up
  - Communicating with collaterals
  - Have already added primary care nurse liaisons
  - Utilizing health information technology (CyberAccess, CMT reports, etc.) to manage care
CMHC as Health Care Home

- Case management coordination and facilitation of healthcare
- Primary Care Nurse Care Managers
- Medical disease management for persons with SMI
- Preventive healthcare screening and monitoring by MH providers
- Integrated/consolidated CMHC/CHC Services
CMHC-HH Strategy

• Health technology is utilized to support the service system.

• “Care Coordination” is best provided by a local community-based provider.

• MH Community Support Workers who are most familiar with the consumer provide care coordination at the local level.

• Primary Care Nurse Care Managers working within each CMHC provide system support.

• Statewide coordination and training support the network of CMHC Health Homes.
Medical Needs Have Same Priority as MH Needs

• Obtaining a “medical home” – a primary care provider responsible for overall coordination

• Medication adherence – just as important for non-MH meds

• Assisting in scheduling and keeping medical care appointments
What is a CMHC Healthcare Home?

- Not just a Medicaid Benefit
- Not just a Program or a Team
- A System and Organizational Transformation
Practice Transformation

• Planned Care
• Data Driven Care
• Addressing Social Determinates of Health
• Team Care
• Integration of Behavioral and Primary Care
RISKS

If you never try anything new,
You’ll miss out on many of life’s great disappointments.
What is Different about Health Homes?

- Individual Practitioner
- Episodic Care
- Focus on Presenting Problem
- Referral to meet other Needs
- Managed Care
  - Manages access to care
  - Does not change clinical practice

- Integrated Primary/Behavioral Health Care Team
- Continuous Care
- Comprehensive Care Mgt
  - Coordinates care across the healthcare system
  - Data driven population management
  - Transforms clinical practice
  - Emphasizes healthy lifestyles and self-management of chronic health problems

Treatment as Usual

Health Homes
Health Home

Target Populations

• Patients with Diabetes
  – At risk for cardiovascular disease and a BMI > 25

• Patients who have two of the following
  – COPD/Asthma
  – Cardiovascular Disease
  – BMI>25
  – Developmental Disabilities
  – Use Tobacco

• Individuals with a serious mental illness; or with other behavioral health problems who also have
  – Diabetes
  – COPD/Asthma
  – Cardiovascular Disease
  – BMI>25
  – Developmental Disabilities
  – Use Tobacco

Primary Care Health Homes

CMHC Healthcare Homes
Chronic Health Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Primary Care Health Homes</th>
<th>CMHC Healthcare Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma_COPD</td>
<td>34%</td>
<td>25%</td>
</tr>
<tr>
<td>Dev_Disability</td>
<td>3%</td>
<td>27%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>37%</td>
<td>37%</td>
</tr>
<tr>
<td>Heart</td>
<td>69%</td>
<td>43%</td>
</tr>
<tr>
<td>Tobacco</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>Obesity</td>
<td>81%</td>
<td>80%</td>
</tr>
</tbody>
</table>

% Enrollees with Chronic Health Conditions

% Enrollees with Chronic Health Conditions
Health Homes

Responsibilities

Primary Care Health Homes

- Provide primary care
- Assure access to specialty care, including behavioral health care
- Promote healthy lifestyles
- Support individuals in managing chronic health conditions
- Divert inappropriate ER visits
- Coordinate hospitalizations

CMHC Healthcare Homes

- Provide psychiatric rehabilitation
- Assure access to primary and specialty care
- Promote healthy lifestyles
- Support individuals in managing chronic health conditions
- Divert inappropriate ER visits
- Coordinate hospitalizations
Missouri’s Health Homes

- **Providers**
  - 18 FQHCs
    - 67 Clinics
  - 5 Hospitals
    - 22 Clinics
    - 14 Rural Health Clinics
- **Enrollment**
  - 15,526 adults
  - 428 children
  - 15,954 total

- **Providers**
  - 28 CMHCs
    - 120 Clinics/Outreach Offices
- **Enrollment**
  - 16,611 adults
  - 2,387 children
  - 18,998 total

Primary Care Health Homes

CMHC Healthcare Homes
Healthcare Home Team Members

Healthcare Home Director

- **Champions** Healthcare Home practice transformation
- **Oversees** the daily operation of the HCH
- **Tracks enrollment**, declines, discharges, and transfers
- **May serve as a NCM** on a part-time basis
  - HCHs must have at least a half-time HCH Director
- **Coordinates** management of HIT tools
- ** Develops MOUs** with hospitals and coordinates hospital admissions and discharges with NCMs
Healthcare Home Team Members

Nurse Care Managers

- Champion healthy lifestyles and preventive care
- Provide Population Based Care Management
- Provide Individual Care Management
  - Initially review client records and patient history
  - Participate in annual treatment planning including
    - Reviewing and signing off on health assessments
    - Conducting face-to-face interviews with consumers to discuss health concerns and wellness and treatment goals
  - Consult with CSS’s about identified health conditions of their clients
  - Coordinate care with external health care providers (pharmacies, PCPs, FQHC’s etc.)
Healthcare Home Team Members
Primary Care Physician Consultant

- Assures that HCH enrollees receive care consistent with appropriate medical standards
- Consults with HCH enrollees’ psychiatrists as appropriate regarding health and wellness
- Consults with NCM and CPR team regarding specific health concerns of individual HCH enrollees
- Assists with coordination of care with community and hospital medical provider
- Documents individual client care and coordination in client records
Healthcare Home Team Members

Psychiatrists, QMHPs, PSR and CSWs

- Continue to fulfill current responsibilities
- Collaborate with Nurse Care Managers in providing individualized services and supports
- CSWs are trained as health coaches who
  - Champion healthy lifestyle changes and preventive care efforts, including helping consumers develop wellness related treatment plan goals
  - Support consumers in managing chronic health conditions
  - Assist consumers in accessing primary care
Establishing Standard Health Indicators

• *What gets measured gets done*
Comprehensive Care Management

- Identification and targeting of high-risk individuals
- Monitoring of health status and adherence
- Development of treatment guidelines
- Individualized planning with the consumer
Step 1 – Create Disease Registry

- Get Historic Diagnosis from Admin Claims
- Get Clinical Values from Metabolic Screening
- Combine into EHR Disease Registry
- Online Access available to all Providers
Metabolic Syndrome Disease Registry

• Metabolic Syndrome
  • Obesity - weight height
  • Cholesterol
  • Triglycerides
  • Blood pressure
  • Blood sugar

• Screening Required Annually since 2010

• Disease registry with results maintained on PROACT

• Billing Code under Rehab Option
Step 2 – Identify Care Gaps and ACT!

• Compare Combined Disease Registry Data to accepted Clinical Quality Indicators

• Identify Care Gaps

• Sort patients with care gaps into agency specific To-Do lists

• Send to CMHC nurse care manager

• Set up PCP visit and pass on info with request to treat
Initial Results

• Provide specific lists of CMHC clients with care gaps as identified by HEIDIS indicators to CMHC primary care nurse liaisons quarterly

• Provide HEIDIS indicator/disease state training on standard of care to CMHC MH case managers

• First quarter focus on indicator one-asthma substantially reduced percentage with care gap
  • Range 22% - 62% reduction
  • Median 45% reduction
Care Coordination

- Coordinating with the patients, caregivers and providers
- Implementing plan of care with treatment team
- Planning hospital discharge
- Scheduling
- Communicating with collaterals
Provide Information to Other Healthcare Providers

• HIPAA permits sharing information for coordination of care

• Nationally consent not necessary

• Exceptions:
  • HIV
  • Substance abuse treatment – not abuse itself
  • Stricter local laws
Use of Health Information Technology to Link Services

- Medicaid requires hospitals to notify MHN within 24 hours of a new admission of any Medicaid enrollee and provide information about diagnosis, condition and treatment for authorization of an inpatient stay using a web based tool.

- A daily data transfer listing all new hospital admissions discharges is transferred to the HH data analytic staff

- New admits are matched to the list of all persons assigned and/or enrolled in a healthcare home.

- An Automated email notifies the healthcare home provider of the admission.
A Typical CCIP Participant

- A 47 year old male
- More than one major targeted disease
- Likely has a major cardiovascular diagnosis and diabetes
- Likely has experienced a major cardiac event
- A third have a major behavior health co-morbidity
- A generally motivated cohort

<table>
<thead>
<tr>
<th>Disease</th>
<th>Number of Individuals</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>9,817</td>
<td>39.7%</td>
</tr>
<tr>
<td>CAD</td>
<td>16,982</td>
<td>68.8%</td>
</tr>
<tr>
<td>CHF</td>
<td>5,746</td>
<td>23.3%</td>
</tr>
<tr>
<td>COPD</td>
<td>8,155</td>
<td>33.0%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>12,939</td>
<td>52.4%</td>
</tr>
<tr>
<td>GERD</td>
<td>12,592</td>
<td>51.0%</td>
</tr>
<tr>
<td>Sickle Cell</td>
<td>558</td>
<td>2.3%</td>
</tr>
<tr>
<td>Behavioral Disability</td>
<td>8,395</td>
<td>34.0%</td>
</tr>
</tbody>
</table>

*Includes co-morbid conditions
HbA1c testing provides an estimation of average blood glucose values in people with diabetes. Enrollees in the CCIP program received substantially more HbA1c testing than those not enrolled.
CCIP enrollees with coronary artery disease (CAD) received lipid (cholesterol) testing at twice the rate of non-enrollees.
ER visits decreased more substantially than projected representing another key cost driver for savings.
Trend Analysis of Total Costs

MO HealthNet Average Total Monthly Costs for CCIP Disease
Eligible Population

Average Total Monthly Costs for CCIP-enrolled participants were below projection. March 2008 demonstrates a $321 PMPM savings.
## Cost Savings in CMHCs

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Period (CY2006)</td>
<td>$1,556</td>
</tr>
<tr>
<td>Expected Trend</td>
<td>16.67%</td>
</tr>
<tr>
<td>Expected Trend with no Intervention</td>
<td>$1,815.81</td>
</tr>
<tr>
<td>Actual PMPM in Performance Period (FY2007)</td>
<td>$1,504.34</td>
</tr>
<tr>
<td>Gross PMPM Cost Savings</td>
<td>$311.47</td>
</tr>
<tr>
<td>Lives</td>
<td>6,757</td>
</tr>
<tr>
<td>Gross Program Savings</td>
<td>$25,254,928</td>
</tr>
<tr>
<td>Vendor Fees</td>
<td>$1,301,560</td>
</tr>
<tr>
<td>Net Program Savings</td>
<td>$23,953,368</td>
</tr>
<tr>
<td>NET PMPM Program Savings</td>
<td>$295.41</td>
</tr>
<tr>
<td>Net Program Savings/(Cost) as percentage of Expected PMPM</td>
<td>16.3%</td>
</tr>
</tbody>
</table>
Outcomes

Reducing Hospitalization

<table>
<thead>
<tr>
<th>% of Patients with at least 1 Hospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Care Health Homes</td>
</tr>
<tr>
<td>2011: 23.9</td>
</tr>
<tr>
<td>2012: 15.7</td>
</tr>
<tr>
<td>CMHC Healthcare Homes</td>
</tr>
<tr>
<td>2011: 33.7</td>
</tr>
<tr>
<td>2012: 24.6</td>
</tr>
</tbody>
</table>
## Initial Estimated Outcomes

### ER & Hospitalization Savings

<table>
<thead>
<tr>
<th>Admissions/1000</th>
<th>ER Visits/1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>-7.64%</td>
<td>-8.17%</td>
</tr>
<tr>
<td>Hospital Savings</td>
<td>ER Savings</td>
</tr>
<tr>
<td>$3,261,983</td>
<td>$1,084,971</td>
</tr>
<tr>
<td>Total Savings</td>
<td></td>
</tr>
<tr>
<td>$4,346,954</td>
<td></td>
</tr>
<tr>
<td>PMPM Cost</td>
<td></td>
</tr>
<tr>
<td>$5,302,892</td>
<td></td>
</tr>
<tr>
<td><strong>Net Savings</strong></td>
<td></td>
</tr>
<tr>
<td>$955,938</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Admissions/1000</th>
<th>ER Visits/1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>-14.58%</td>
<td>-7.93%</td>
</tr>
<tr>
<td>Hospital Savings</td>
<td>ER Savings</td>
</tr>
<tr>
<td>$11,991,137</td>
<td>$1,521,982</td>
</tr>
<tr>
<td>Total Savings</td>
<td></td>
</tr>
<tr>
<td>$13,513,119</td>
<td></td>
</tr>
<tr>
<td>PMPM Cost</td>
<td></td>
</tr>
<tr>
<td>$9,314,076</td>
<td></td>
</tr>
<tr>
<td><strong>Net Savings</strong></td>
<td></td>
</tr>
<tr>
<td>$4,199,043</td>
<td></td>
</tr>
</tbody>
</table>

### Primary Care Health Homes

- Hospital Savings: $3,261,983
- ER Savings: $1,084,971
- Total Savings: $4,346,954
- PMPM Cost: $5,302,892
- **Net Savings**: $955,938

### CMHC Healthcare Homes

- Hospital Savings: $11,991,137
- ER Savings: $1,521,982
- Total Savings: $13,513,119
- PMPM Cost: $9,314,076
- **Net Savings**: $4,199,043
Outcomes
Medication Adherence

% Continuously enrolled CMHC Health Home Clients with an MPR > .80
by Medication Type

CMHC Healthcare Homes
Outcomes
Adults with Asthma
on Controller Medications

CMHC Healthcare Homes
Outcomes
Children with Asthma on Controller Medications

CMHC Healthcare Homes
Outcomes
Hospital Discharge Care Coordination

Primary Care Health Homes
Outcomes

Adult Substance Abuse Screening & Follow-Up

Primary Care Health Homes
Outcomes

Adult Weight Screening & Follow-Up

Primary Care Health Homes
Collaborative Progress: Mental Health

<table>
<thead>
<tr>
<th></th>
<th>St. Louis Central</th>
<th>Columbia</th>
<th>St. Louis South</th>
<th>Kansas City</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1c</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>BP</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>LDL</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Tobacco Cessation</td>
<td>+</td>
<td>+</td>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Pediatric Asthma</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Adults Asthma</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Pediatric BMI</td>
<td>-</td>
<td>U</td>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Adult BMI</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>U</td>
</tr>
</tbody>
</table>
What Makes it Possible?

- A Relationship of Basic Trust between:
  - Department of Mental Health
  - MO Coalition of CMHCs
  - State Medicaid Authority
  - State Budget Office
  - MO Primary Care Association

- Transparent use of Health Information Technology to identify and monitor problems, and assess performance

- Willingness of all partners to tolerate risk

- Funding Primary Care Nurse Care Managers
Training and Technical Assistance

• Introduction and Orientation
• Healthcare Home Implementation
  • Access to Care
  • Healthcare Home Administration
  • Data and Care Management Reports
  • Physicians Institute
• Disease Management and Clinical Training
  • Introduction to Disease Management
  • Motivational Interviewing
  • TEAMcare
  • Wellness Coaching
State Medicaid Health Home Amendments

- **Approved Health Home State Plan Amendment (SPA)**: Idaho, Iowa, Missouri, New York, North Carolina, Ohio, Oregon, Rhode Island
- **Health Home SPA “On the Clock” (officially submitted to CMS)**: Alabama, Maine, New York (phase II), Wisconsin
- **Draft Health Home SPA Under CMS Review**: Illinois, Oklahoma, West Virginia
- **Approved Health Home Planning Request**: Alabama, Arizona, Arkansas, California, District of Columbia, Idaho, Kansas, Maine, Minnesota, Mississippi, Nevada, New Jersey, New Mexico, North Carolina, Washington, West Virginia, Wisconsin
- **No Activity**: Alaska, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Montana, Nebraska, New Hampshire, North Dakota, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Wyoming
CHANGE

When the Winds of Change Blow Hard Enough,
The Most Trivial of Things can turn into Deadly Projectiles.