

# Chronic Disease Management in the Homeless

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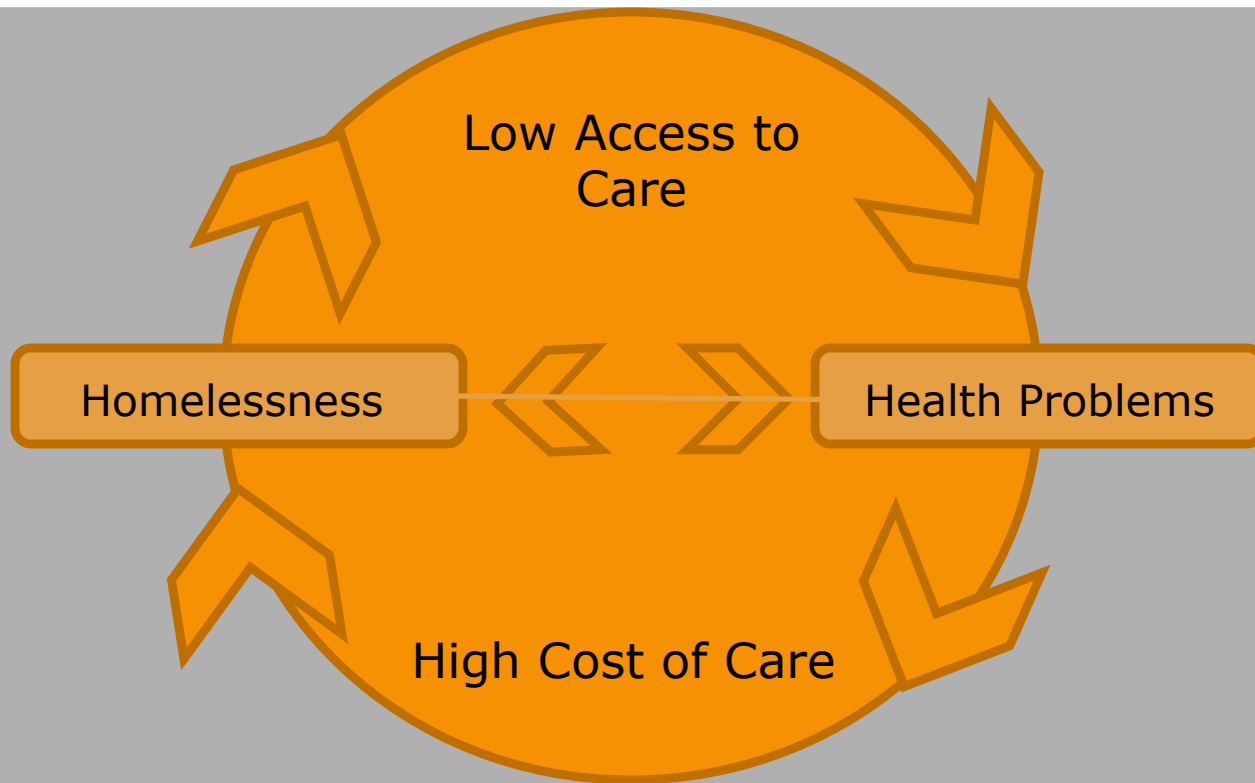
Health Care Center for the Homeless  
“One Community, One Health Center”



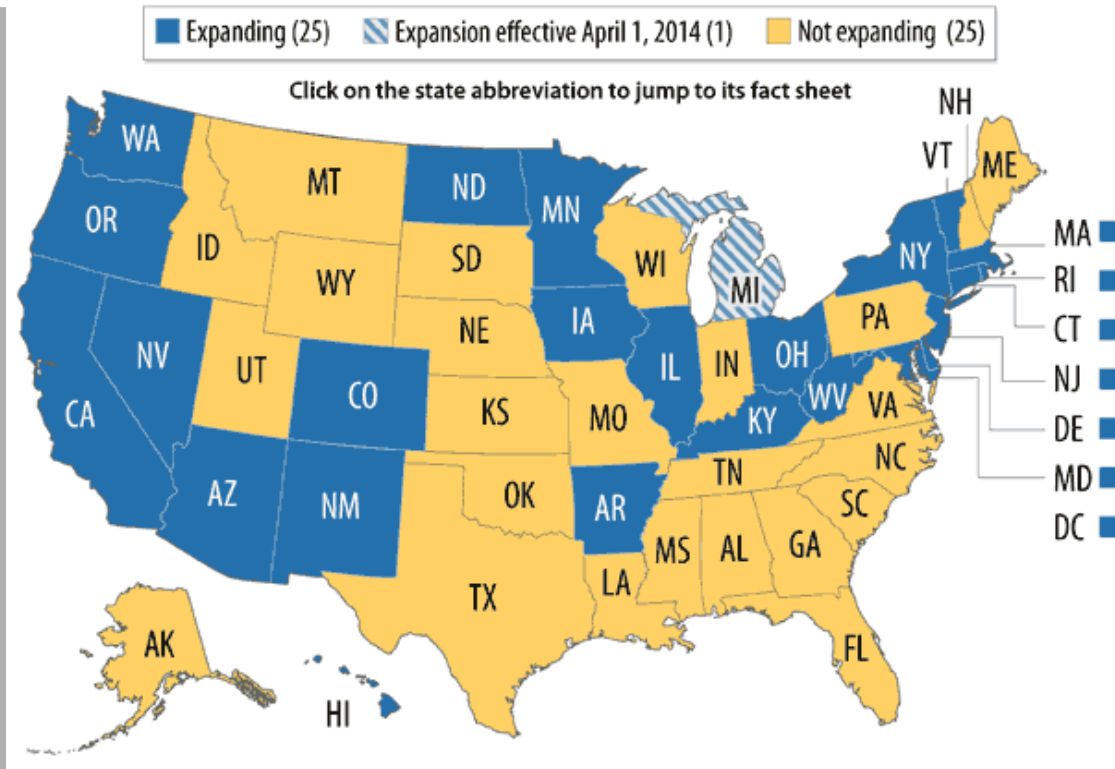
- Endemic nature of chronic diseases in the homeless population
- Increased rate of hospitalizations in homeless with chronic diseases/ disproportionate use of resources
- Morbidity and mortality rates disproportionately higher in those who are homeless vs. housed
- Need to provide education on adaptive chronic care management strategies in an effort to reduce exacerbations of chronic disease
- Disproportionate number of disabled individuals experiencing homelessness 37% vs 15.3 % in general population (Maness & Khan, 2014)



## The Issue of Chronic Disease



- Homelessness may arise from physical or mental disability that brings on poverty, but once someone becomes homeless, poverty and deprivation reinforce each other in a vicious circle
  - Chronic disease follows the same model



- Enhanced access to care
- Increased number of homelessness patients evaluated in a variety of settings/private practices, emergency departments, community clinics

# ACA Expansion

- More than half of those living on the streets have one or more chronic diseases
- Higher rate of chronic disease if have history of substance abuse including tobacco, alcohol, etc.
- Most prevalent diseases: hypertension, coronary artery disease, diabetes, infectious diseases (Hep C, HIV, TB)

1. Heart Disease
2. COPD
3. Liver related disorders
4. Infectious disease
5. Diabetes
6. Cancer



## Prevalence of Chronic Diseases

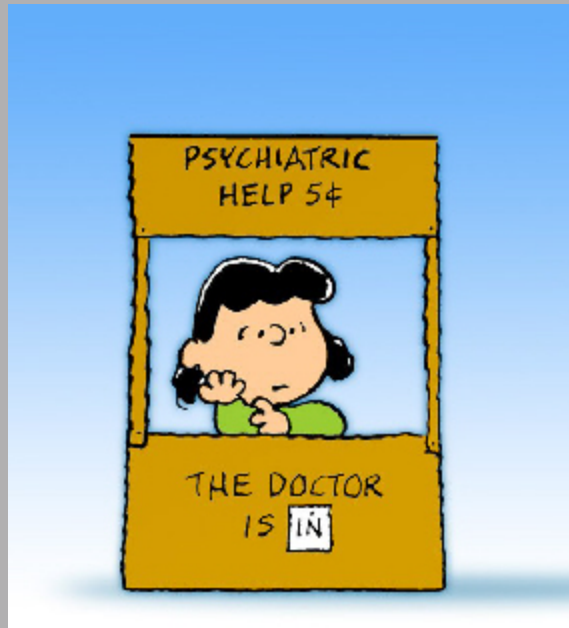
- More than 80% of homeless people have at least one chronic health condition & more than 50% have a mental health disease
- **The presence of chronic medical conditions such as CHF, cardiac arrhythmias, HIV/AIDS, & chronic diseases of the lungs, kidney & liver have all been documented to further increase the risk of death**
- **Substance abuse is also common and is estimated to affect 40-60% of the population**
- **High prevalence of HIV at 9-19%, hypertension at 30-60% and latent TB infection at 32-43% have been consistently documented**

(Chicago Housing for Health Partnership publication entitled : "Chronic Medical Illness and The Homeless")  
(August 2011 edition of International Public health journal)

## **Increased Prevalence of Chronic Diseases**

- Mental illness should not be overlooked in correlation to chronic disease; most prevalent diagnoses include:

1. Schizophrenia
2. Major Depression
3. Bipolar
4. PTSD
5. Anxiety



These conditions challenge overall health, wellbeing, and TX adherence.

## Mental Illness





- Traumatic brain injury (TBI) greater than 5 times rate in general population
- Multidisciplinary treatment approach: PCP, neuropsychiatric provider, cognitive rehabilitation.
- Treatment of comorbidities: Sleep disturbance, anxiety/depression, seizures

(Hwang, Colantonia & Chiu, 2008)

## Cognitive Disorders/TBI



- 90% of suicide victims have a history of mental illness
- Major depression/bipolar within 15-24% of all deaths
- High prevalence of depression among the homeless
- Rate of suicide attempt 24-46%
- 61% suicidal thoughts
- Increased risk of suicide in chronically homeless
- Risk factors: age younger than 30, Hispanic ethnicity, lower educational level

(Power et al, 2008)

# Suicide

- Addiction chronic, recurring and disabling
- **Precipitating factor and consequence of homelessness**
- Prevalence higher in homeless vs housed individuals



**Substance abuse**



- High cause of morbidity & mortality in homeless persons 45-64 yrs. of age
- Stress secondary to insecurity related to food, shelter and safety
- High prevalence of hypertension
- 40-50% of homeless more likely to die from heart disease than counterparts
- Contributing factors include: hyperlipidemia, tobacco abuse, alcohol abuse, illegal stimulant abuse

(Current cardiology reviews, January 2009 5(1), 69-77)

## Cardiovascular Disease

- Retrospective chart review of 100 patients of housed vs homeless patients to assess differences in prevalence of chronic disease and risk factors: hypertension, hyperlipoproteinemia, diabetes, tobacco abuse:
- Results: **No difference in prevalence of diabetes and hyperlipidemia, higher rate of tobacco use and hypertension in homeless population**

(Szerlip, 2002)

## Prevalence Study

- Majority of persons presenting with acute complaints have underlying chronic disease
- Chronically homeless consume an inordinate amount of resources as a result of frequent ER visits and prolonged hospitalizations
- Hospitalized at 4-5 times rate of those housed
- Higher rate of psychiatric hospitalizations
- Inadequately managed post-hospital care/increased readmission rates

## Hospitalizations

- The life expectancy for a homeless person ranges between 42 and 52 years.
- President and CEO of Health Care for the Homeless Maryland once said: "Homeless folks tend to live half as long as folks who have homes...**it's not always because they freeze to death.** The major cause is untreated chronic disease."



## Increased Mortality Rates

- Numerous studies have documented that the mortality rates among homeless people are 3-4 times greater than the general population
- **The average age at the time of death has consistently been in the mid-forties for those experiencing homelessness**
- Mortality rates in persons experiencing homelessness are 3-5 times greater than the general population
- Limited preventative care
- Poor control of risk factors: weight control, tobacco abuse, poor nutrition, poor hygiene, access to preventative health care

## Mortality Rates



- Prospective study in Boston 2003-2008 tracked over 28,000 patients' mortality rates among homeless vs housed patients.
- Higher rates of mortality in homeless secondary to drug overdose, cancer and heart disease.
- Conclude that interventions to reduce mortality centered around behavioral health and enhanced public health initiatives.

(Baggett et al, 2013)

## Mortality Study

- Prevalence is staggering; more than 30% go undiagnosed
- Contributes to high prevalence of renal disease
- Self monitoring and regular medical appointments are critical to disease management
- Dietary modifications integral to care
- Difficulty accessing supplies and equipment; storage of medication is a challenging



# Diabetes

- Reduction in screening due to decreased access to primary care services
- Increased risk factors including poor nutrition, smoking, alcohol use, decreased exercise, exposure to elements, lack of education
- Delay in diagnosis contributes to higher morbidity and mortality rates
- Lower socio-economic status associated with increased rates of cervical cancer, for example, often due to poor follow up on abnormal pap smears.

(Chaus, Chin, Chang et al, 2002)

**Cancer**

- Hepatitis C: **10-20 times higher prevalence** in homeless persons
- Risks include needle sharing, previous incarceration, poor health, tattooing (when poor infection-control practices are used)
- More than half unaware of hepatitis status
- Increased comorbidity with HIV infection

Wulffson, June 2012, Hepatitis C, Examiner.com

**Liver Disease**



- Increased prevalence of infectious diseases including STIs
- Due to lack of preventative measures (i.e. condoms) and reality of survival sex / abuse / etc.
- Many cases of syphilis go undetected due to lack of access to care
- For syphilis, it is difficult to reassess titers post treatment due to issues related to adherence
- Requires collaboration with state officials in tracking and treating cases

## **Infectious Diseases**

- Incidence of HSV 2 greater than 25% in homeless female adolescents with multiple partners
- Longer duration of infectiousness
- Rate significantly higher than matched housed female adolescents

Noell et al, 2001, STD's, 28(1), 4-10

## Herpes

- **6.1 to 6.7% prevalence** in homeless population
- Increased incidence in males age 30-59 years of age, increase in African-Americans
- Notable increased risk in those with history of substance use
- **Co-infection rate with HIV 30%**

Haddad et al, 2005, JAMA, 293(22), 2762-2766

# Tuberculosis



- Incidence in general population 0.4%
- Homeless population **3 to 4%**
- Increased likelihood in those participating in risky behaviors: substance use, needle sharing, unprotected sex, exchange of sex for drugs or money

(National Coalition for the Homeless, July, 2009)

**HIV**



- Must be regular and uninterrupted
- Difficult to achieve due to lack of access to stable housing, refrigeration, clean water, bathrooms and food

(CDC, National Prevention Information Network, 2010)

**Treatment for HIV/TB**

- Tobacco abuse
- Alcohol abuse
- Intravenous drug use
- Stress / trauma
- Environmental exposure
- Suppressed immunity
- Lack of preventative care
- Sleep deprivation
- Malnutrition: high sodium, high carb diet



## **Risk Factors Associated with Chronic Diseases**

- Lack of housing / respite
  - Social isolation
  - Transportation
  - Lack of financial resources
  - Access to medications
  - Medication storage
  - Limited access to nutritious food
  - Literacy
- 
- **Barriers to treatment resemble risk factors associated with chronic diseases.**

## **Barriers to Treatment**

- Discuss limitations in patient ability to follow treatment plan
- Empower patient to set goals and determine priorities
- Assess clinical outcomes
- Treat patient in multidisciplinary manner

(Health Care of Homeless Persons, 2004, O'Connell)



## General Treatment Approaches in Chronic Disease Management

- Modify medication management to enhance compliance and reduce exacerbations of chronic disease
- Reduce barriers related to storage, access and cost of medications to maintain uninterrupted medication regimens
- Institute special considerations for medication use: diuretics causing dehydration, statins can precipitate liver injury with underlying hepatic disease, bupropion can be pulverized to get high
- Institute preventative screening tests: HIV, Hepatitis, Pap, BP, FBS, FOBT, PHQ9, PPD

(Maness & Khan, 2014)

# Treatment

- Continuity of care suffers when providers lose their patients to the streets, with no ability to follow up on their efforts or ascertain outcomes
- Without a secure location in which to recuperate, patients have difficulty adhering to the medical advice of their providers, ranging from difficulty following recommended medication schedules to inability to rest, eat appropriately and drink plenty of liquids
- The patient's inability to adhere to the recommended treatment may then result in complications and emergencies, which in turn result in increased costs to the medical system
- Patients and providers are both frustrated and dissatisfied when medical treatment seems ineffective, due to incomplete recuperation and can impact upon trust

*(Reference: Medical Respite Services for Homeless People: Practical Models)*

## **Negative Outcomes, Why?**



- Integration of primary care and behavioral health, outreach (including street outreach)
- Recognize importance of collaboration
- Results include enhanced rates of adherence with medical regimens; improved clinical endpoints



## **Multidisciplinary Management**

- 70% of all patient visits have psychosocial basis
- High prevalence of anxiety/depression
- Two thirds of patients are users of ETOH/ substance use and/or have underlying mental illness accounting for 69% of hospitalizations
- **One third of those with chronic illness have underlying depression**

## **Multidisciplinary Management: A Rationale**

- **Integration of primary care and behavioral health is critical**
- Provide recovery oriented supportive services: Peer mentoring, group therapy
- Collaboration with detox program staff, outpatient addiction treatment programs (i.e. adapted clinical guidelines for opiate use disorders)

## **Substance Abuse Treatment Strategy**

- Care initiated post exacerbation of chronic disorders
- Modify management strategy in controlled environment
- Provision of shelter, food, support, transportation and case management services
- Minimize rate of hospitalization
- Cost effective approach

## **Chronic Care Management and Recuperative Care**

- Intensive case management services
- Multidisciplinary approach
- Enables implementation of preventative health recommendations
- Prevents exacerbations of chronic disease
- Reduction in hospitalizations, overall cost

Doran et al, 2013



## Permanent Supportive Housing

*-a coordinated team approach to homeless health care-*

affordable housing

social work

physicians

dentistry

public policy

nursing



Health & Housing

addiction counseling

physician assistants

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**Thank You!**