Academy of Architecture for Health
On-line Professional Development

Providing Healthcare in the Prison Environment

Masters Studio Series

11, September 2018

2:00 pm – 3:00 pm ET

1:00 pm – 2:00 pm CT

12:00 am – 1:00 pm MT

11:00 am – 12:00 pm PT

Presenter
Dave Redemske, ACHA, CCHP, ASHE
HDR

Moderator
Yvonne Nagy, AIA, LEED AP
HOK

AIA Knowledge Community
Academy of Architecture for Health

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Masters Studio Series

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Masters Studio Series sessions are tailored to provide healthcare design professionals with sufficient exposure to jump-start interest in wanting to learn more.

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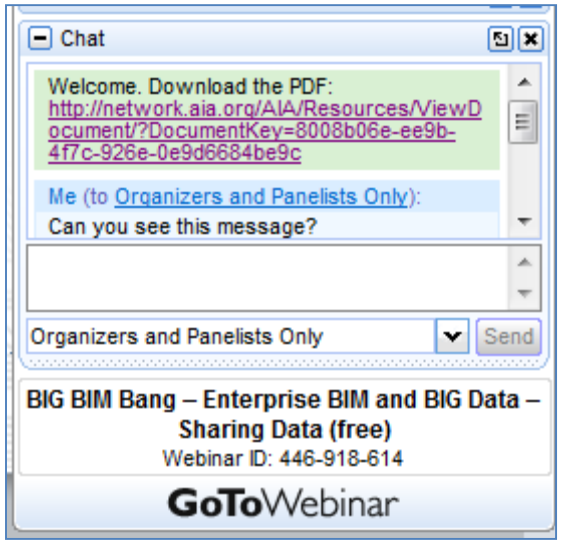

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Providing Healthcare in the Prison Environment

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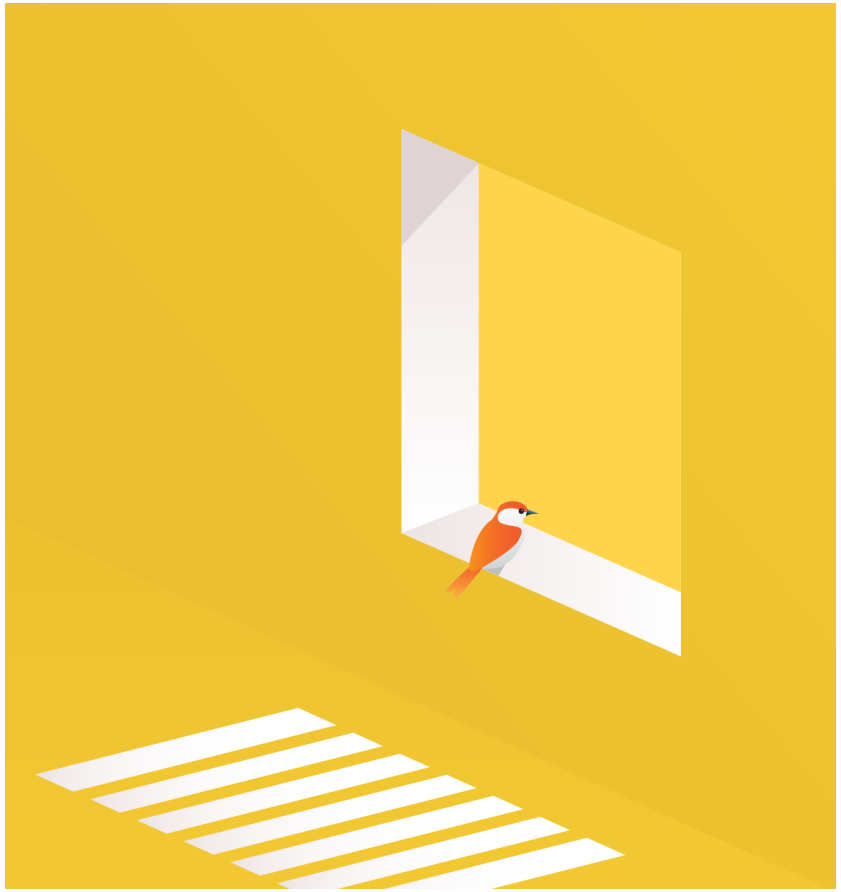

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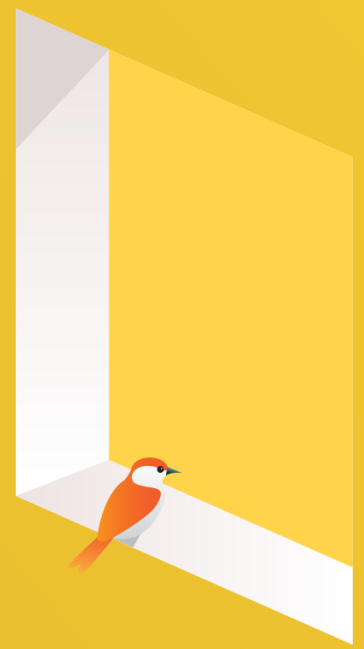
PROVIDING **HEALTHCARE** IN THE **PRISON** ENVIRONMENT

what services belong behind bars and what services belong in the community setting?



David Redemske, ACHA, CCHP, ASHE – Principal, Health Planning

LEARNING OBJECTIVES

ANALYZE

Analyze the community health impacts of mass incarceration.

IDENTIFY

Identify the connections between prison health and underserved community health.

COMPARE

Compare the different models of prison healthcare in relation to the built environment.

EXAMINE

Examine systematic improvements to expand access to care for less cost.

PROCESS OF RESEARCH

01

Systematic Literature Review

744 records identified

159 records were used

02

Research Limited to US Prisons Only

Jails excluded

Juvenile facilities excluded

International facilities excluded

03

Research by Care Types

Ambulatory and General Care
(incl. D&T, Partnerships, & Telemedicine)

Elder care
(incl. Chronic care & Disabilities)

Palliative care
(incl. Hospice & Compassionate release)

Emergency/Trauma care

Dental care

Mental Health care (overview only)

Women's Health care

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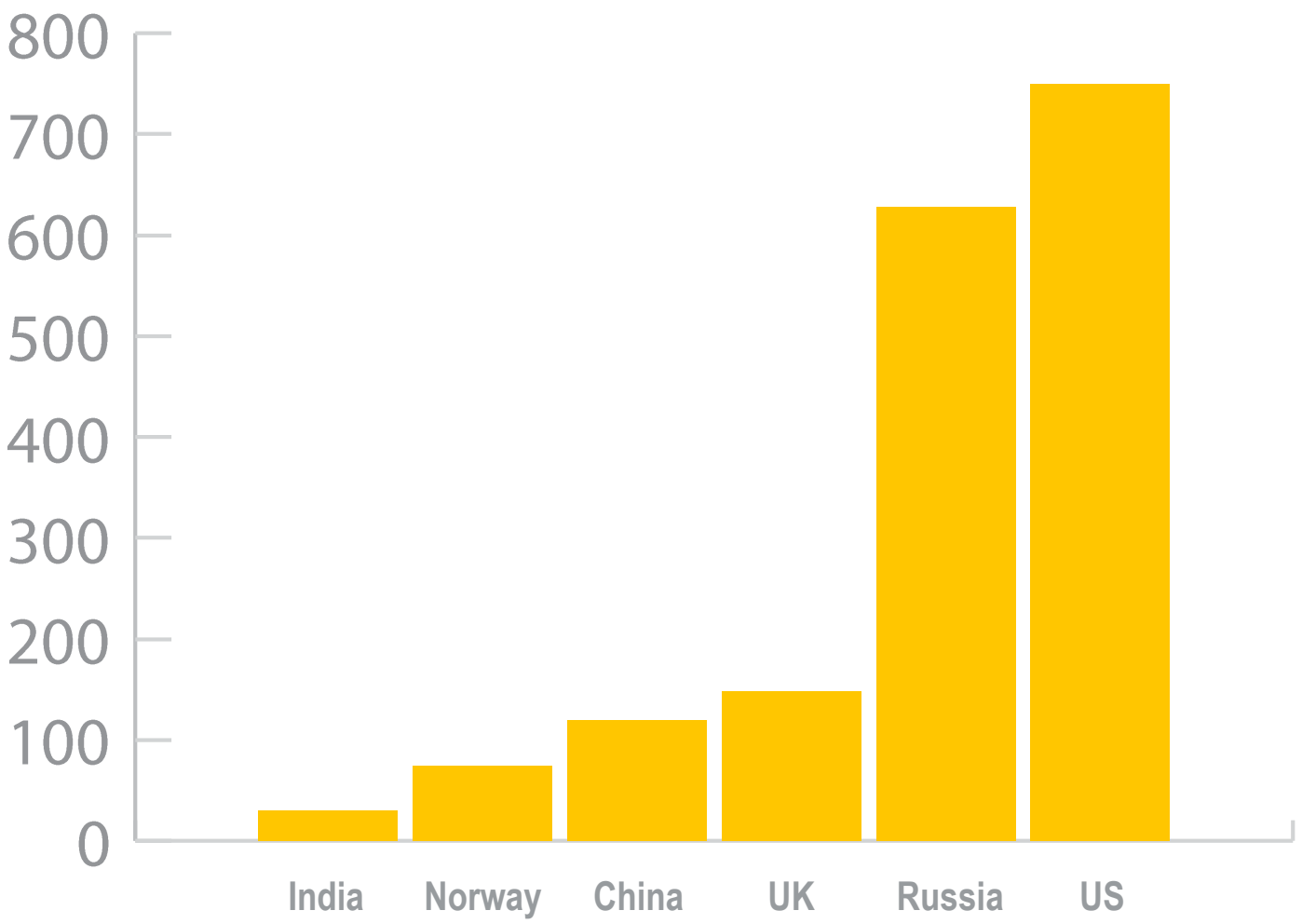
IMPACTS

Imprisonment Rates
per 100,000 Citizens Across the Globe



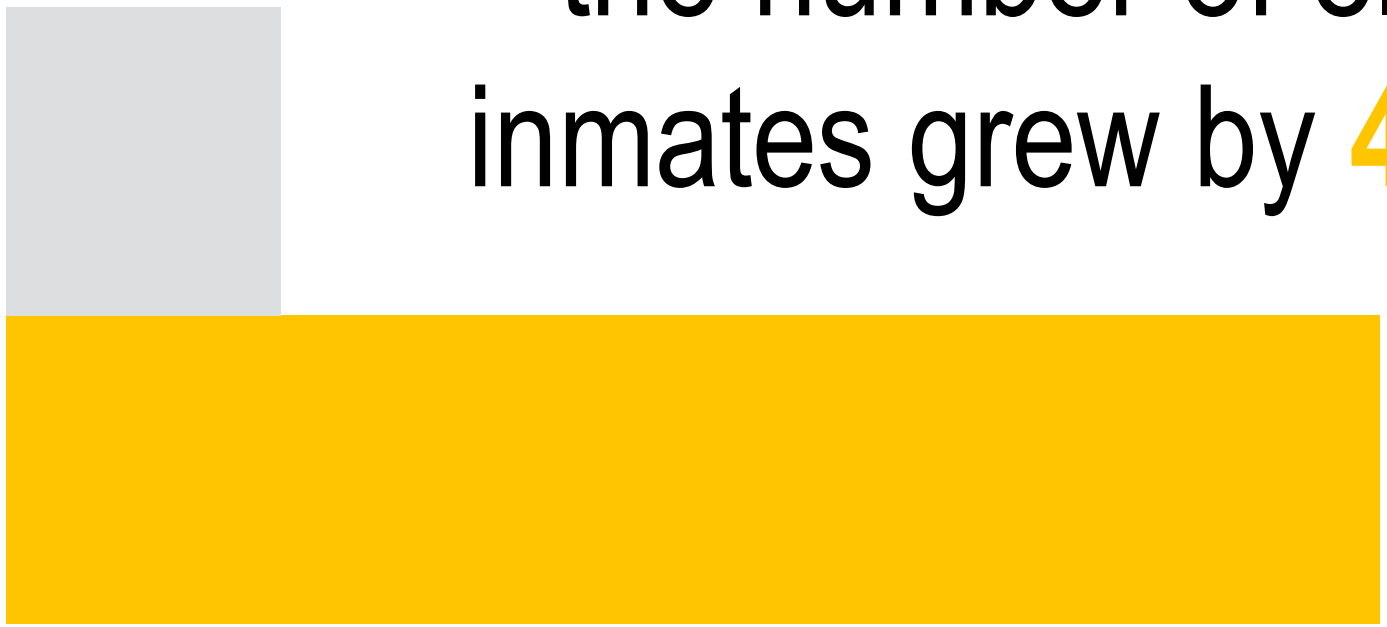
IMPACTS

1,561,500

State and Federal Prisoners (2014)

IMPACTS

Between 1993 and 2013, the number of elderly inmates grew by **400%...**



IMPACTS

…and is anticipated to reach
400,000 by 2030

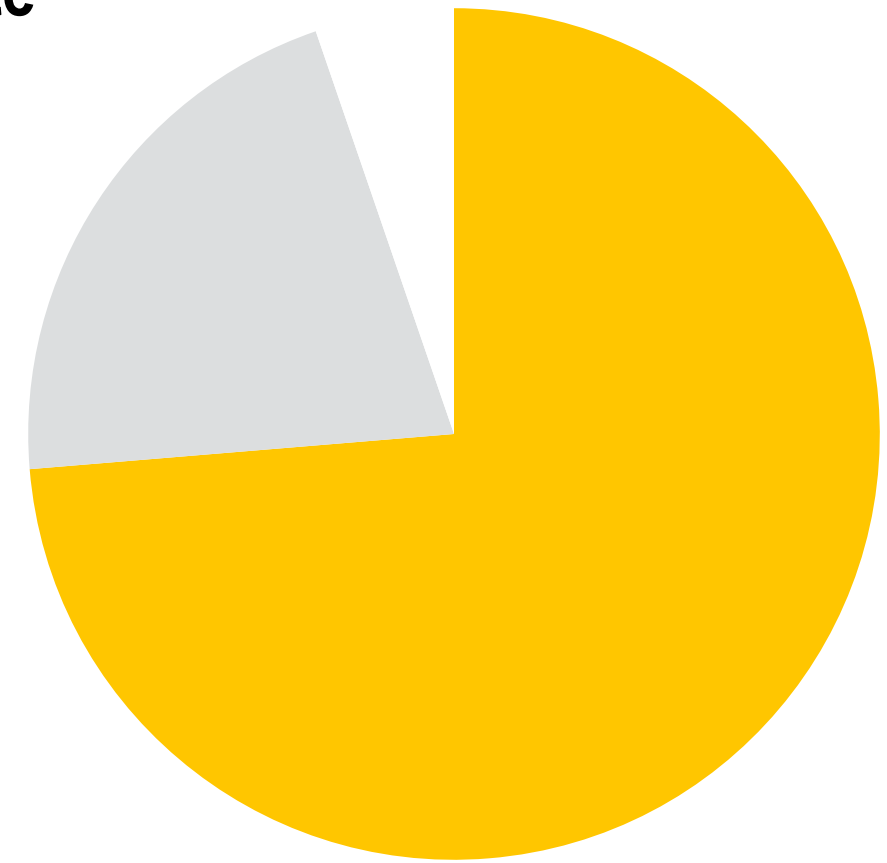
IMPACTS

95% of Inmates Will be Released

IMPACTS

70% Recidivism Rate

(2011)



IMPACTS

COSTS

$40 BILLION

to incarcerate and supervise offenders (2014)

$7.7 BILLION

spent on inmate health care (2011)

$15 BILLION

annually to incarcerate inmates with mental health disorders (2004)

IMPACTS

POLICY DECISIONS

ESTELLE V GAMBLE (1975)

Inmates have a constitutional right to care

BOWRING V GODWIN (1977)

Psychiatric concerns were included as a "serious medical need"

Alternatives to incarceration

Drug Courts
Mental Health Courts
Compassionate release

Three Strikes

Deinstitutionalization

339 beds per 100k (1955)
22 beds per 100k (2005)
2 beds per 100k (2005 – California)
3 largest inpatient mental health treatment facilities

War on Drugs and **Mandatory Minimum** Sentencing; Elimination of **parole**

IMPACTS

STANDARD OF CARE

- Inmates have a **constitutional right to health care** specifically because they cannot seek that care on their own(1)
- Established the legal benchmark of "**deliberate indifference**" to the inmate's "**serious medical needs**" as the criteria of judging the legality of a jurisdiction's correctional health program(2)
    - » Unreasonably delayed or denied access to physician for diagnosis or treatment(3)
    - » Failure to administer physician prescribed treatment(3)
    - » Denial of professional medical judgment(3)
- The most commonly accepted definition is the **"community standard of care"**(4)

(1) Anno, 2004; McDonald, 1999
(2) Anno et al., 1996; Anno, 2004; Kinsella, 2004; Macmadu & Rich, 2015; Raimer & Stobo, 2004;US Department of Justice, Office of the Inspector General, 2008
(3) Kinsella, 2004; Rold, 2008
(4) Kinsella, 2004

IMPACTS

1 FEDERAL FACILITY

+

238 STATE FACILITIES

in

32 STATES

were under court order to **improve conditions** (2004)

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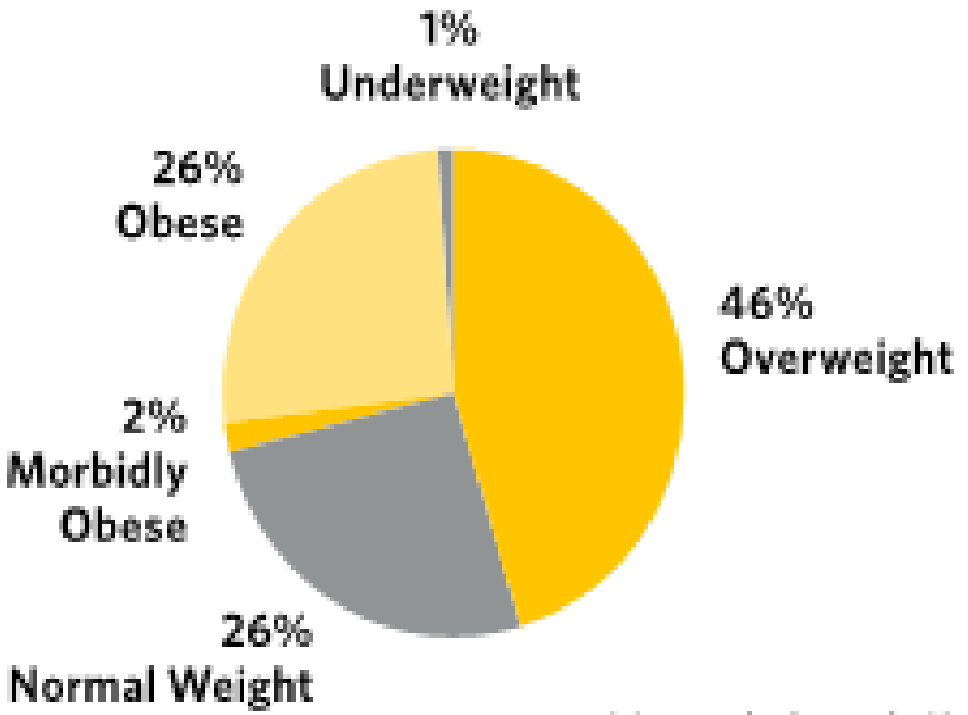
CONNECTIONS

As compared to 20 years ago, today's inmates are **older**, **sicker**, and receiving **longer sentences**(1)

(1) Graves, 2007

CONNECTIONS

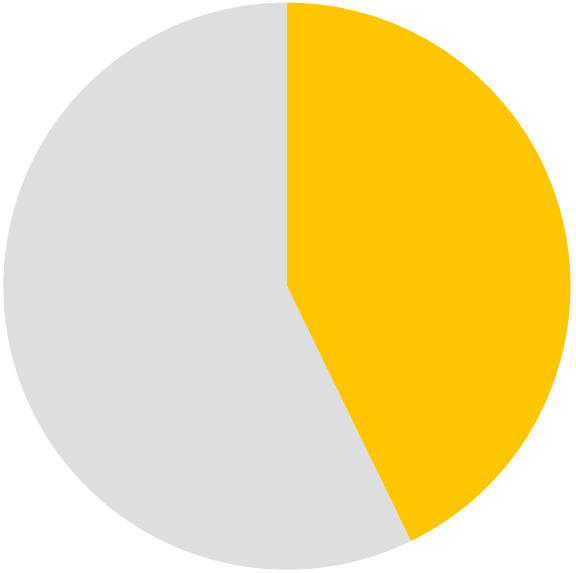
Nearly 75% of all inmates are overweight or obese.



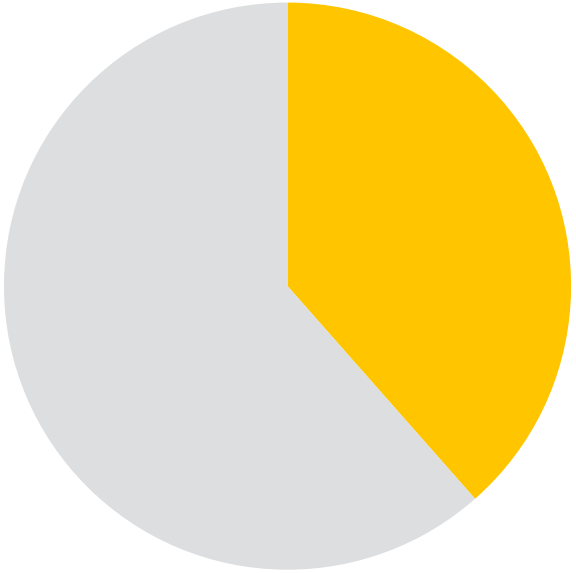
Maruschak et al. (2015)

CONNECTIONS

42.8% of State



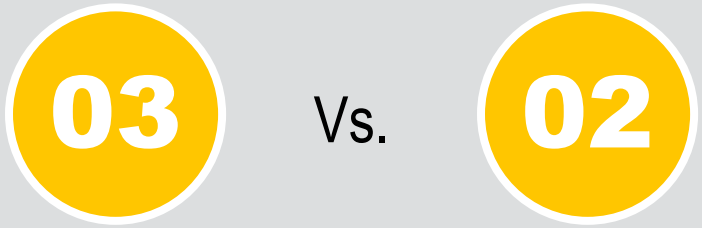
38.5% of Federal



Prisoners Report a Chronic Condition

CONNECTIONS

- On average older inmates also have **three chronic conditions**(1), compared to two chronic conditions on average in the community(2).



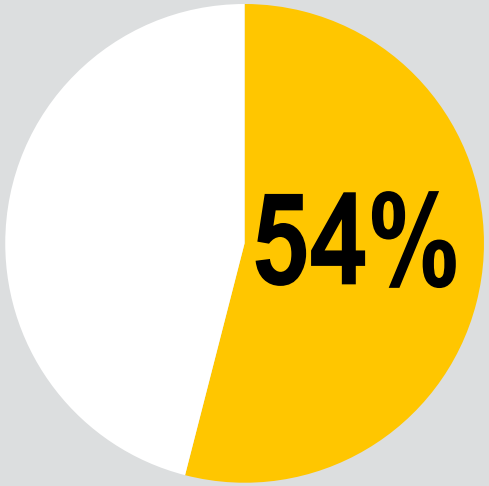
- The **most common** chronic conditions among the incarcerated include
  - heart disease
  - diabetes
  - arthritis
  - cancer(3)
  - hypertension
  - ulcers
  - prostrate issues(4)
  - renal and pulmonary disease
  - cirrhosis
  - neurological disease(5)

(1) Mara, 2002; Mitka, 2004; Smyer & Burbank, 2009
(2) Mara, 2002
(3) Beckett et al., 2003; Williams et al., 2012
(4) Anno et al., 2004; Colsher et al., 1992
(5) Hall, 1990; Smyer & Burbank, 2009.

CONNECTIONS

- About **three out of 10** state and federal inmates reported at least one disability in 2011-2012(1).
- The **most common** disabilities include(2)
  - vision
  - hearing
  - ambulatory
  - self-care
  - independent living
  - cognitive

- Prisoners were nearly **three times** more likely to have a disability than those in the general community(2).
- Fifty four percent of prisoners surveyed reported a co-occurring chronic condition along with their disability(2).



(1) Bronson, Maruschak, & Berzofsky, 2015
(2) Bronson et al., 2015

CONNECTIONS

Over 50% of the incarcerated population suffers from symptoms of a psychiatric condition… (2015)

CONNECTIONS

…70% of those have a substance abuse disorder (2012)

CONNECTIONS

- Comorbidities exist in **85%** of elder inmate patients(1), and at least **20%** have mental health disorders(2).
- **Cognitive impairment** is the most common geriatric syndrome in prisons(3).
  - Substance abuse
  - Stress and
  - Traumatic brain injury (TBI)
- One study found that cognitive impairments were diagnosed in **40%** of inmates 55 years old and older(3).
- **Dementia** is one of the leading causes of higher healthcare costs within prisons(3).
- Many also suffer from other conditions that require constant care(4)
  - **Parkinson's** disease
  - **Alzheimer's** disease
- **Dementia, depression, anxiety** and other mental health issues are exacerbated by the prison environment(4)
  - Noise
  - Overcrowding
  - Other inmate behaviors

(1) Smyer & Burbank, 2009
(2) Mitka, 2004
(3) Williams et al., 2012
(4) Beckett et al., 2003

CONNECTIONS

- Most **male prisoners** are(1)…
  - Non-white
  - Poorly educated
  - Of low socioeconomic status
  - Prior drug users
  - Unattached, between 17 and 30 years old
  - From urban areas

- Most **female prisoners** are(2)…
  - Disproportionately women of color
  - 30–35 years of age
  - Typically convicted of a drug or drug-related crime
  - Suffering from fragmented families, where other family members are also in the criminal justice system
  - Survivors of physical and/or sexual abuse (as adults and children)
  - Suffering from substance abuse issues, as well as many physical and mental health problems
  - High school or GED graduates, but with little vocational training, and varied work histories

(1) Graves, 2007
(2) Covington, 2007

CONNECTIONS

- Before incarceration **70 percent** of female inmates were living on less than **$1,000 a month**(1)
- Over **two thirds** of women in prison have children under the age of 18, and **15 percent** have infants that are six weeks old, or younger(2)
- Nearly **1.3 million** children have mothers who are incarcerated(3)
- Since 1991, there has been a **131 percent increase** in the number of women inmates who have minor children(4)
- Incarceration causes breakdowns of stable relationships, which results in risky sexual partnerships which then leads to increased rates of sexually transmitted diseases (STDs, HIV, and unwanted pregnancies)(5)

(1) Kruttschnitt, 2010
(2) Baldwin & Jones, 2000; Braithwaite et al., 2008; Freudenberg, 2002; Kruttschnitt, 2010; Zaitzow, 1999
(3) Braithwaite et al., 2008
(4) Fisher & Hatton, 2009; Hatton & Fisher, 2011
(5) Rich et al., 2011; Schnittker et al., 2015; Winter, 2008

CONNECTIONS

Because no country has ever incarcerated their population at such **high rates**, the full social and public health effects may not be known for some time(1)

(1) Rich et al., 2011; Schnittker et al., 2015

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COMPARE

- **WHERE** CARE TAKES PLACE

On site (local)

On site (regional)

Off site

Telemedicine

- **PARTNERSHIPS**

Public Health

Academic Medical Centers

Private providers

For profit private contractors

GENERAL CARE

- According to the WHO, at minimum, primary care interventions are required at prisoner intake, before release and at required times during incarceration(1)
  - They deemed these times to be the highest risk to the health of prisoners(1)
- **Historically, the ability to provide adequate health care for inmates had been hampered by inadequate facilities.** Prisons have typically lacked the required healthcare spaces other than sick call. Most had no ability to isolate patients for infections; they were unable to provide 24-hour skilled nursing care; access to diagnostic and testing equipment was rare; and inmates with chronic conditions were not separated into specialized housing.

(1) Møller et al., 2007
(2) McDonald, 1999

GENERAL CARE

Health Services Located On-Site at Corrections Facilities

Pharmacy	
Sick Call	*In the housing pods for acute, low to moderately severe health needs that can be treated with over-the-counter medication*
Nursing Clinic	*Open 5 days a week*
Patient Education	*For chronic conditions*
Substance Abuse & Mental Health	*Treatment Services*

(Conklin et al., 2002)

WHERE STATES PROVIDE MEDICAL CARE

Outpatient Medical Care

Exclusively Off-Site	0	states
Both Off-site and On-Site	25	states
Exclusively On-Site	19	states

Inpatient Medical Care

Exclusively Off-Site	4	states
Both Off-site and On-Site	38	states
Exclusively On-Site	2	states

(L. Maruschak et al., 2016)

GENERAL CARE

WHERE STATES PROVIDE IMAGING AND OTHER DIAGNOSTIC TESTING

Computed Tomography (CT)

Exclusively Off-Site	34	states
Both Off-site and On-Site	7	states
Exclusively On-Site	3	states

Of those states that provided the service on-site, five states reported using mobile technology

Magnetic Resonance Imaging (MRI)

Exclusively Off-Site	34	states
Both Off-site and On-Site	8	states
Exclusively On-Site	2	states

Ultrasound (US)

Exclusively Off-Site	25	states
Both Off-site and On-Site	13	states
Exclusively On-Site	6	states

(L. Maruschak et al., 2016)

WHERE STATES PROVIDE CARDIOLOGY SERVICES

General Cardiology

Exclusively Off-Site	2	states
Both Off-site and On-Site	17	states
Exclusively On-Site	25	states

For those states that provided services both off-site and on-site, they noted that prisoners were typically sent off-site for surgeries or cardiac procedures

Electrocardiogram (ECG) testing

Exclusively Off-Site	0	states
Both Off-site and On-Site	11	states
Exclusively On-Site	33	states

(L. Maruschak et al., 2016)

WHERE STATES PROVIDE PERIOPERATIVE SERVICES

Sigmoidoscopies

Exclusively Off-Site	33	states
Both Off-site and On-Site	16	states
Exclusively On-Site	3	states

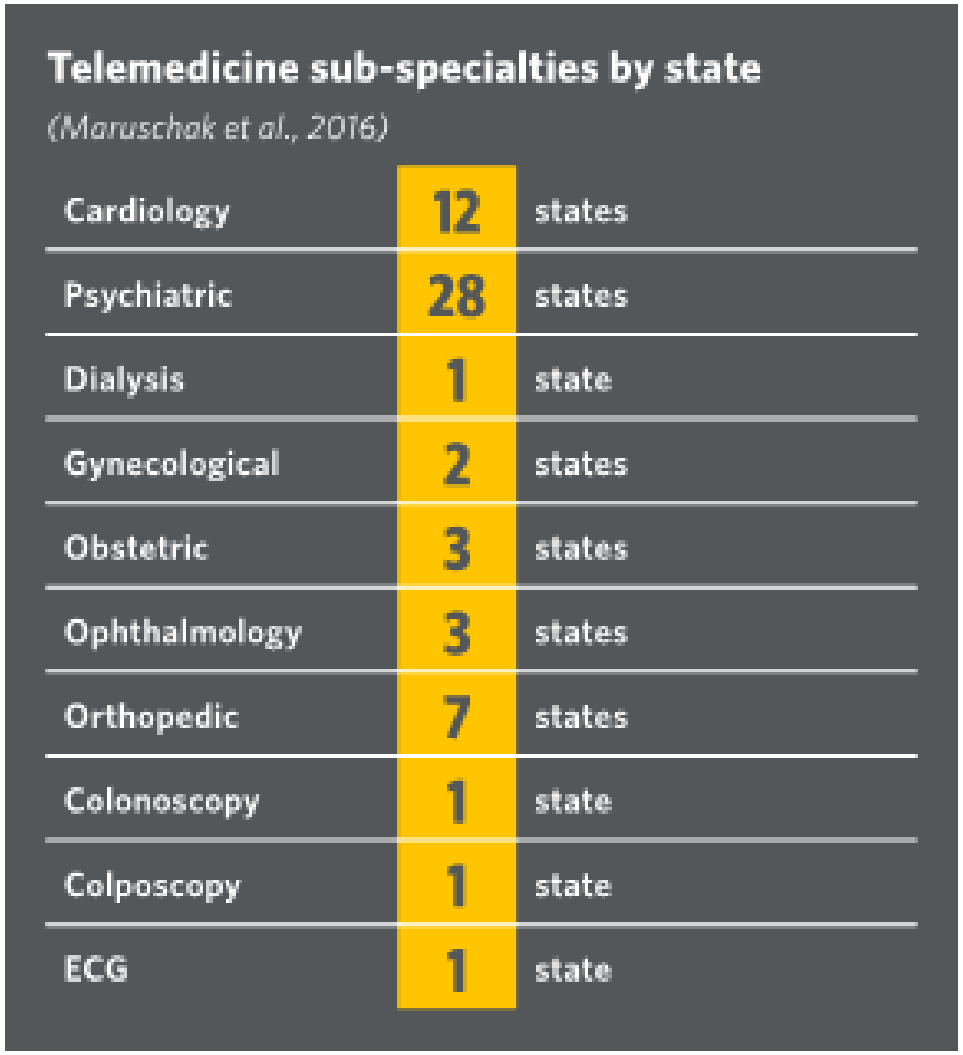
Two states did not provide the procedure

Colonoscopies

Exclusively Off-Site	37	states
Both Off-site and On-Site	6	states
Exclusively On-Site	1	state

(L. Maruschak et al., 2016)

GENERAL CARE



ELDER CARE

COSTS

- Though the research is hard to reconcile, it is estimated that older inmates can cost from **three to nine times more** to incarcerate than younger inmates. This is estimated to be caused by the greater use of health services by older inmates(1)
- It is estimated that it costs an average of **$70,000** annually to house an elderly inmate, which is three times more than a younger inmate.

(1) Ahalt et al., 2013; Anno et al., 2004; Mara & McKenna, 2000; Smyer & Burbank, 2009; Williams, Stern, Mellow, Safer, & Greifinger, 2012). Carson, et al. 2016

ELDER CARE

- Physiologically, prisoners are **10-12 years** older than their chronological age(1)
  - Fifty years old is considered elderly for an inmate(1)
- Causes of the age disparity(2).
  - Lack of adequate medical care
  - Substance and alcohol abuse
  - Poor diet
- Older inmates use a **larger amount of scarce healthcare services** as compared to other inmates(3).
- Prison **ADL's** and Accessibility

(1) Beckett et al., 2003; Mara, 2002; Mitka, 2004; Williams, Goodwin, Baillargeon, Ahalt, & Walter, 2012). Anno et al., 1996; Anno, 2004; Kinsella, 2004; Macmadu & Rich, 2015; Raimer & Stobo, 2004;US Department of Justice, Office of the Inspector General, 2008

(2) Smyer & Burbank, 2009; Williams et al., 2012

(3) Anno et al., 2004

ELDER CARE

State strategies to manage elderly inmate population health *(Kinsella, 2004)*

Group or create geriatric facilities	26	states
Geriatric programs or recreational activities	29	states
Special work assignments	15	states
Hospice and end of life programs	18	states
Compassionate release programs	36	states
Early release planning	37	states

Housing options for Aging and Elderly Inmates *(Beckett et al., 2003; Hall, 1990; Mara, 2002)*

- **A** Integration into general population ("mainstreaming")
- **B** Senior housing units
- **C** Hospice units
- **D** Skilled Nursing units ("retirement communities")
- **E** Assisted Living units, dedicated to older inmates
- **F** Transferring to less secure facilities

ELDER CARE

Where states provide long-term care services

35 of the participating states provided those services exclusively on-site *(Maruschak et al., 2016)*

12 of those states 12 provided care in dedicated units and six provided care in reserved beds *(Maruschak et al., 2016)*

6 of those states provided care in reserved beds *(Maruschak et al., 2016)*

One of the participating states reported providing this care off-site through a sister agency (Maruschak et al., 2016). Traumatic brain injury (TBI) rehabilitation, ventilator patients, and intensive physical therapy were common reasons the eight states reported, occasionally providing care off-site for transporting their patients *(Maruschak et al., 2016)*

Where states provide chronic care services

31 of the responding states provided all care for inmates with common chronic conditions on-site *(Maruschak et al., 2016)*

13 of the responding states provided chronic care services both on-site and off-site *(Maruschak et al., 2016)*

Where states provide dialysis services

24 of the participating states reported providing this service exclusively on-site *(Maruschak et al., 2016)*

10 states provided the service both on-site and off-site *(Maruschak et al., 2016)*

10 states provided the service exclusively off-site *(Maruschak et al., 2016)*

PALLIATIVE CARE

- Between 2001 and 2007 the death rate for prisoners aged 55 and older was **2,123 per 100,000**, nearly four times that of the next lower age group(1)
- In addition, **45.7%** of all prison deaths in 2007 were of those aged 55 and older(1)
- Developing hospice care and palliative care programs for inmates has been an important way of **reducing healthcare costs,** while also providing the psychological, physical, social and spiritual care to those facing terminal illnesses(2)

(1) Williams et al., (2012)
(2) Courtwright et al., 2008; Stone et al., 2012; Wion & Loeb, 2016

PALLIATIVE CARE

- **Issues** surrounding Prison Hospice Programs
  - Eligibility **standards**
  - Pain **management**
  - **Family inclusion** concerns(1)
  - **Frequency** of visitation(2)
  - Defining a patient's **"family"**
  - **Inmate-**volunteers(3)
  - **Cessation** of curative treatment
  - **Lack** of public support for comfort care

(1) Linder & Meyers, 2007
(2) Hoffman et al. 2011
(3) Wion & Loeb, 2016

PALLIATIVE CARE

51% out of **49** responding agencies provided a prison hospice program. Of that 51%:

20%	offered the service in a separate unit
22%	offered the service in the infirmary
4%	offered the service as part of the housing unit
8%	offered the service as an outpatient program

(Anno et al., 2004)

Additionally, only 44 percent of the respondents reported that staff is assigned exclusively to the hospice unit

(Anno et al., 2004)

EMERGENCY/TRAUMA CARE

- **There is little to no research on the actual volumes of inmate-patients being seen in the community hospital setting**(1).
- The stress of incarceration, along with the issues caused by TBI, create a prison environment where **traumatic injuries are common**(2). However, prison injuries are largely perceived as a disciplinary and management issue related to violent behaviors and unavoidable accidents(3).
- Besides injury, **drug abuse** is another reason for inmates being transferred to the emergency department(4).
- Continuing to treat the inmate patient in community-based emergency departments also begins to **affect wait times** for community-based patients(5).

(1) Natterman, et al., 2016
(2) Henning et al., 2015
(3) Sung, 2010
(4) Butterfeld et al., 2015
(5) Lara-Millán, 2014

EMERGENCY/TRAUMA CARE

In 2004, 32 percent of the 1.2 million state prisoners in the U.S. had been injured since their incarceration *(Sung, 2010)*.

32% Prisoners Injured

1.2M U.S. Prison Inmates

(Sung, 2010)

When compared to ED admissions for the general population

VIOLENCE-RELATED INJURIES **14X** higher for inmates

ACCIDENT-RELATED INJURIES **2.3X** higher for inmates

(Sung, 2010)

17% Aged 35 or Younger

13% Aged 45 or older

State Inmates reported being injured in a fight *(L. M. Maruschak, 2012)*

Injuries Result of Violent Conduct

75.7%

OF WHICH

74.7% Reported as "Assault With a Fist"

(Henning et al., 2015)

Injuries Reported as Non-Violent

23.5%

OF WHICH

62.7% Reported as Slips & Falls

23.7% Reported as "Activities Related to Sports"

Violence-Related Injuries	Accident-Related Injuries
15,700 per 100,000	22,000 per 100,000

(Sung, 2010)

The 32% prevalence rate of injuries among prisoners is much higher than the other leading health conditions such as:

Arthritis 15.3%	Heart Problems 6.1%
Hypertension 13.8%	Hepatitis 5.3%
Tuberculosis 9.4%	HIV 1.6%
Asthma 9.1%	

(Sung, 2010)

However, it is lower than the incidence of:

Mental Health 56%	Substance Abuse 53%

(Sung, 2010)

EMERGENCY/TRAUMA CARE

7.1.7 LOCATION OF CARE

Emergency Services Locations

Exclusively Off-Site	15	states
Both Off-site and On-Site	29	states
Exclusively On-Site	0	states

Of the 29 states that reported providing emergency services both off-site and on-site:

On-site services included triage, stabilization, and basic suturing	18	states
Provided at least one emergency room, or emergency department within the prison facility	3	states

(L. Maruschak et al., 2016)

EMERGENCY/TRAUMA CARE

- **Alternatives to the ED**
  - New Jersey – Partnering with Physicians to return to infirmary level of care as soon as possible(1)
    - 400 per 1,000 persons visit the ED in the community
    - 29 inmates per 1,000 visit the ED
  - Ohio – created an Urgent Care center(2)
    - Estimates the cost of care to be as low as **10% of the costs** to send the inmate to the local hospital.
- **Telemedicine**
  - Could reduce the amount of transport to local ED's by **42%**(3)

(1) Reeves et al., 2014
(2) Geisler, Gregory T. et al, 2011
(3) Vo, 2008

DENTAL CARE

- The major obstacles to providing the community standard of dental care in prisons are **staffing and finances**(1).
- The scope of dental care is much narrower than in the general community. The primary focus is to **control pain** (both chronic and acute), to **stabilize dental pathology**, and **maintain and restore function**(2).
- Periodontal disease and dental caries are arguably the **most common diseases** in the correctional healthcare setting. The main factors driving this observation include(3)
  - The lack of prior preventive dental care by the average prisoner.
  - Behavioral issues, such as illicit drug use.
  - Socioeconomic challenges.
  - Untreated chronic conditions, such as HIV, hepatitis C, and cardiovascular disease, that complicate dental treatment.

(1) Treadwell & Formicola, 2005
(2) Shulman & Sauter, 2012
(3) Costa, 2014

DENTAL CARE

Inmate Dental Needs

93%	required preventative dentistry counseling
93%	required removal of prophylaxis and calcium
32%	required Type I and Type II periodontal therapy
12%	required Type III and Type IV periodontal therapy

Barnes et al.(1987)

Ringgenberd (2011) noted that up to 71 percent of inmates need some kind of dental care intervention.

Dental Services Locations

Exclusively off-site	0	states
Both off-site and on-site	37	states
Exclusively on-site	7	states

Oral Surgery Locations

Exclusively off-site	9	states
Both off-site and on-site	31	states
Exclusively on-site	4	states

MENTAL HEALTH CARE

Prisons were **never intended** to be care centers for the mentally ill; however, that is one of their **primary functions** today[1].

(1) Abramsky, 2003

MENTAL HEALTH CARE

- The lack of adequate community mental health resources shows a **direct link** to the number of incarcerated individuals with a mental illness(1).
- Thousands have been prosecuted for crimes **they would have never committed**, if they had been given access to therapy, medication and assisted living facilities in the community(1).
- Los Angeles County Jail, Chicago's Cook County Jail and New York's Riker's Island now **house more people with serious mental illness** than in any of the nation's psychiatric hospitals(2).
- Inmates who were diagnosed with any mental health disorder were **70% more likely** to re-offend, than an inmate without a mental health diagnosis(3).

(1) Abramsky, 2003
(2) Macmadu & Rich, 2015
(3) Reingle Gonzalez & Connell, 2014

MENTAL HEALTH CARE

- Law enforcement, and legal and mental health professionals are concerned that prisons have become the **main treatment option for people with mental illness**(1).
- Even where good quality care, provided by mental health professionals, is being provided in prisons, it still doesn't solve the issue of treating the mentally ill in an **environment designed for punishment and not treatment**(1).
- **In 22 states, there are approximately 90 mental health courts currently operating**(2). A study in Connecticut noted that the cost of offenders who were diverted into drug treatment programs was about one third of the cost of those who were not(2).

(1) Lamb & Weinberger, 2005
(2) Abramsky, 2003

MENTAL HEALTH CARE

- As a comparison, community treatment programs cost an estimated **$60** day per inmate, while housing someone with a mental illness in prison can cost an estimated **$137** per day, per inmate(1).

(1) Kinsella, 2004

MENTAL HEALTH CARE

- Mentally ill prisoners are typically **housed in segregated units**, even though the isolated confinement can cause psychiatric breakdown (1).

Though mentally ill prisoners account for only

18%

of the prison populations

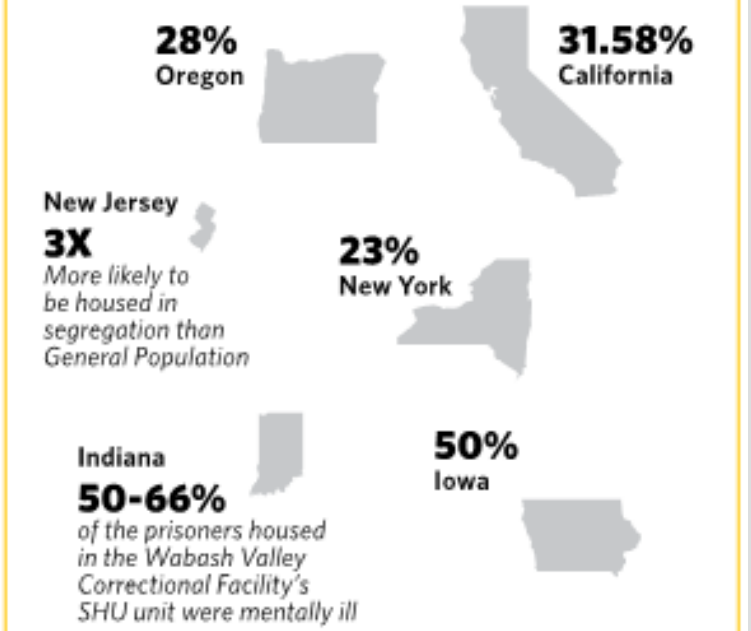
They account for

41%

of the disciplinary infractions.

(Abramsky, 2003)

At the time of their study, Abramsky (2003) noted that states were housing mentally ill inmates in segregation in the following percentages:



(1) Abramsky, 2003

MENTAL HEALTH CARE

Types of Mental Health Services	
Mental health screening at intake	70%
Psychiatric assessment	65%
24-hour mental healthcare	51%
Therapy/counselling by trained mental health staff	71%
Discharge planning services	66%

It was noted that specialized intermediate care units can treat 80 percent of the inmate's mental health problems. While 33 states operate some kind of long-term intermediate care for the seriously mentally ill inmate, most were designed for only the psychotic inmate. Sheltered, supportive, or assisted housing for mentally ill inmates was only provided in five states.

Outpatient Mental HealthCare Locations		
Exclusively on-site	44	states

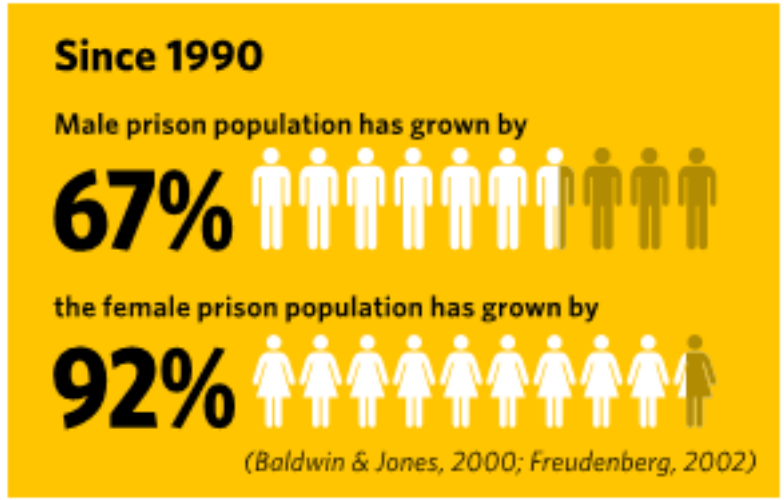
Inpatient Mental Health Care Locations		
Exclusively on-site	27	states
Both on-site and off-site	14	states
Exclusively off-site	3	states

Of the 27 states that reported providing services exclusively on-site:		
Clarified that a prisoner with a serious mental health issue may be transferred to an off-site facility	3	states
Off-site mental health facilities had dedicated secured units for the treatment of prisoners	3	states

(Maruschak et al., 2016)

WOMEN'S HEALTH CARE

- The number of female inmates has grown so fast that **one third** of the women currently housed in corrections institutions around the world are in the U. S.(1).
- Since 1990, the number of women receiving sentences of more than one year has increased by **80%**(2).
- Because women make up only **10%** of the prison population, little attention has been paid to their unique health needs(3).
- Women seek medical care **two and one half times more often** than their male counterparts(4).



(1) Kruttschnitt, 2010
(2) Baldwin & Jones, 2000; Cardaci, 2013
(3) R. Aday & Farney, 2014; Baldwin & Jones, 2000; Braithwaite et al., 2008; Cardaci, 2013;Covington, 2007; Hoskins, 2004
(4) R. Aday & Farney, 2014; Zaitzow, 1999

WOMEN'S HEALTH CARE

- **Programs** for women inmates(1).
  - **Nursery programs**, which allow women inmates to keep and care for their infants for a limited period. Most of these programs require the inmate to participate in child development courses.
  - **Mentoring/self-esteem programs**, which allow women to support each other as they develop skills in interpersonal relationships, leadership and communication.
  - **Survivor groups**, which provide support for women who have survived domestic violence or sexual abuse.
  - **Women's health education**, which provide basic sex education classes, including HIV prevention.
- Though educational programs have been shown to reduce recidivism, especially among female inmates, **most programs were eliminated** as part of the Violent Crime Control and Law Enforcement Act of the mid 1990s(2).

(1) Baldwin & Jones, 2000
(2) Kruttschnitt, 2010

WOMEN'S HEALTH CARE

AMBULATORY , CHRONIC AND ELDER CARE

Mamography Locations

Exclusively on-site	18	states
Both on-site and off-site	16	states
Exclusively off-site	10	states

Of the states that reported providing services on-site:

Mobile units	17	states
Equipment at one facility	1	states

Number of Inmates Infected with HIV From 1991 to 1995 rose by: *(Zaitzow, 1999)*

88% for Female Inmates

28% for Male Inmates

8.7% of female inmates reported being HIV- positive, or have confirmed AIDS

Gynecological Services Locations

Exclusively off-site	3	states
Both off-site and on-site	27	states
Exclusively on-site	14	states

Colposcopy Services Locations

Exclusively off-site	23	states
Both off-site and on-site	12	states
Exclusively on-site	9	states

(L. Maruschak et al., 2016)

Screening Pap Smears

62% of women inmates reported Pap smear screenings

40% of the Pap smears reported an abnormal result, which is 6 times greater than the general population

(Magee et al., 2005; Springer, 2010)

Facilities screening, or performing routine examinations, for the following conditions:

ASKED ABOUT:		*TESTED FOR:*	
Menopause	98%	Cervical Cancer	92%
Asthma	92%	Heart Disease	88%
Arthritis	88%	Hypertension	86%
Urinary Incontinence	71%	Diabetes	85%

(Reviere & Young, 2004)

40% of women inmates tested for HCV tested positive

20X more than the general population

Springer (2000)

WOMEN'S HEALTH CARE

CHILDBIRTH

- Because of the gender-neutral prison policies enacted in the 1970s, **non-violent female offenders were treated the same way as violent male offenders**(1). This means that during hospitalization, women inmates can be **shackled for any reason**, included during childbirth(1).
- The landmark decision of Nelson v. Correctional Medical Services, the U.S. Court of Appeals for the Eighth Circuit held that: Without regard to whether she posed a security or fight risk, **shackling a women while she was in labor violated her Eighth Amendment rights**(1).

(1) Cardaci, 2013

Childbirth in Prison

4-10% pregnancy rate among women in prison

1,400 inmates give birth each year

54% of pregnant inmates reported receiving prenatal care

(Baldwin & Jones, 2000; Braithwaite, Treadwell, & Arriola, 2008; Cardaci, 2013; Hatton & Fisher, 2011; Hoskins, 2004; Macmadu & Rich, 2015; Maruschak, 2012; Sufrin, Creinin, & Chang, 2009)

Obstetrical Services Locations

Exclusively On-Site	1	states
Both On-site and Off-Site	34	states
Exclusively Off-Site	9	states

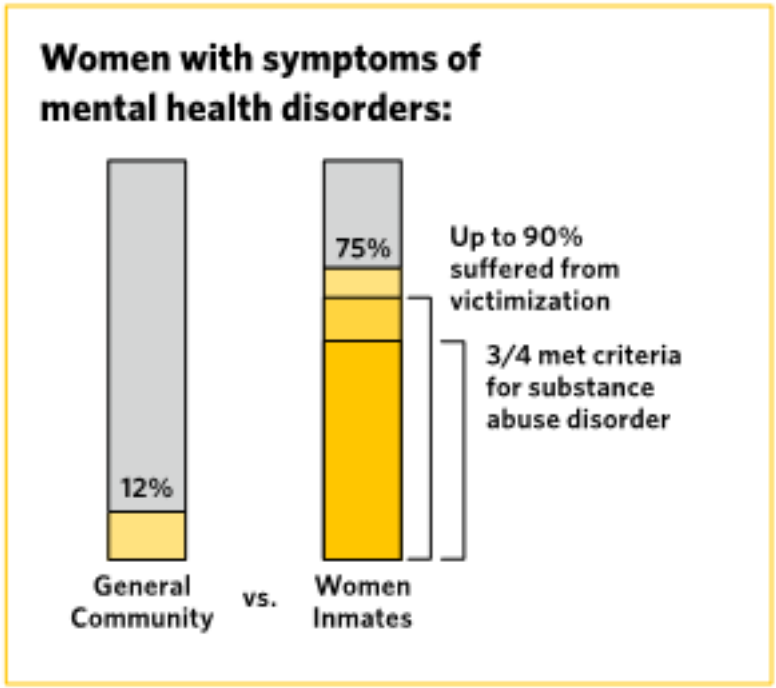
Of the states who reported providing the service both off-site and on-site:

Preferred to send inmates off-site for child birth	29	states

(L. Maruschak et al., 2016)

WOMEN'S HEALTH CARE

MENTAL HEALTH



(Covington, 2007; Ferguson, Pickelsimer, Corrigan, Bogner, & Wald, 2012; Hatton & Fisher, 2011 Fisher & Hatton, 2009; Reviere & Young, 2004)

Percentage of individuals with Symptoms of Mental Disorders

73%	12%	55%
of Female Inmates	of Females in the General Population	of Male Inmates

(Covington, 2007; Ferguson, Pickelsimer, Corrigan, Bogner, & Wald, 2012; Hatton & Fisher, 2011).

	FEMALE INMATES	GENERAL POPULATION
Reported being sexually abused as a child	59%	20-27%
Reported being physically abused by an intimate partner	75%	22%

1 in 4 women in state prisons reported being sexually abused before the age of 18

(Byrd & Davis, 2009; Hatton & Fisher, 2011; Hoskins, 2004; Zaitzow, 1999)

LEARNING OBJECTIVES

ANALYZE

Analyze the community health impacts of mass incarceration.

IDENTIFY

Identify the connections between prison health and underserved community health.

COMPARE

Compare the different models of prison healthcare in relation to the built environment.

EXAMINE

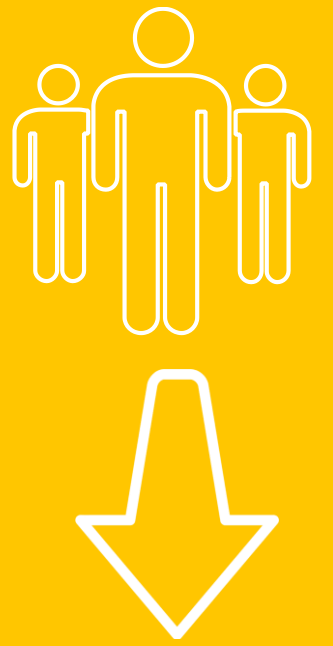
Examine systematic improvements to expand access to care for less cost.

CONCLUSIONS

SERVICE AND POLICY

Service and policy changes to **reduce** the inmate population

- **Expand** community based services
- **Continuity** of care
- **Alternatives** to incarceration
- Sentencing **policies**
- **Expand** compassionate release
- **Expand** parole



CONCLUSIONS

DECISION CHECKLIST

Development of a **checklist** to help state departments of corrections determine where they should provide care

- What are the inmate-patient volumes?
- Who are the potential off-site health delivery partners?
- What is the capacity to provide care on-site?
- What is the capacity and amiability to provide care to inmate patients?

CHECKLIST

What are the inmate-patient volumes?

1. How many inmates do you currently house?
2. What is the age range of your inmates?
3. What is the average length of sentence?
4. What are your inmates common medical and mental health conditions?
    a. Did those conditions require hospitalization?
    b. If so, what was their average length of stay?

CHECKLIST

Who are the potential off-site health delivery partners?

1. Potential partners could include: public health facilities, academic health facilities, community health facilities, regional correctional medical centers, private for-profit providers, features of, or combinations of all.
2. What is their **capacity** to treat inmates?
    a. What is their average daily census?
    b. Do they have capacity to treat your inmate-patient volume?
    c. What services do they provide (e.g. ambulatory care, emergency care, chronic care, elder care, hospice care, mental healthcare, dental care, and women's healthcare)?
    d. Is their staff **trained** in providing care to inmates?
        i. If not, can a training program be created?
    e. Do they have **dedicated and secured** inmate nursing units?
        i. If not, do they have capacity to create them?
        ii. If not, what are their safety and security concerns and protocols?
    f. What is their capacity for **technology**?
        i. Do they have a telemedicine program? Can that program be used to treat your inmates without requiring transport?
        ii. Do they use an electronic medical record system? Can that system be expanded into your prison environment?
        iii. Do they have a PACS system for diagnostic imaging? Can that system be expanded into your prison environment?
        iv. Is there an ability to merge their health information technology systems with your systems?
    g. How far are they located from your prison facility?
        i. What are the costs for **transportation**?
        ii. What is your capacity to transport (e.g. van, bus, ambulance, air)?
        iii. How will emergency transports be handled?
3. Are they **accredited** by any organization (NCCHC, ACA, JCAHO, or state departments of health)?
4. What is your **contract model** with your health partners? Will you have performance criteria (e.g., health outcomes) in your contracts?
5. What are the **costs of care** in their facilities?
6. What are their health **outcomes**?

CHECKLIST

What is the capacity to provide care on-site?

1. What is your **capacity** to treat inmates?
    a. What is your average daily mental health and medical health census?
    b. Do you have capacity to treat your inmate-patient volume?
    c. What services can you provide (e.g. ambulatory care, emergency care, chronic care, elder care, hospice care, mental healthcare, dental care, and women's healthcare)?
        i. What is the backup plan for emergencies?
        ii. Are you going to be a regional correctional health facility or a stand-alone correctional health facility?
    d. Do you have **adequate health staff**? If not, can more be hired? If so, can they be retained?
    e. Do you have **dedicated** mental and medical health treatment areas?
        i. If not, can they be created?
        ii. Do you have the required **ancillary support** (i.e. lab, pharmacy, materials handling, dietary, sterile storage, linen storage, laundry, and sterile processing), to support your correctional health treatment areas?
        iii. Are your correctional health treatment areas set up as dedicated spaces, or are those areas **flexible and adaptable** for multiple uses?
        iv. Is the use of **mobile technology** an option for your location or prison system?
    f. What is your **technology** capacity?
        i. Do you have a telemedicine program? If not, is there a potential for providing this type of care in your prison system?
        ii. Do you have an electronic medical records system? If not, would your prison system invest in one?
        iii. Do you have a PACS system for diagnostic imaging? If not, would your prison system invest in one?
        iv. Do you have any health information technology systems? If not, would your prison system invest in any?
    g. **How far away** are you located from other prison facilities in your system?
        i. What are the costs for transportation to those facilities?
        ii. What is your capacity to transport (e.g. van, bus, ambulance, air)?
        iii. How will emergencies be handled?
2. Are you **accredited** by any organization (NCCHC, ACA, JCAHO, or state departments of health)? If not, are you working towards accreditation?
3. What is your **staffing model** (employed, contracted, or private providers)? If you are using private providers, is there performance criteria (e.g., health outcomes) in your contracts?
4. What are your **costs of care** in your facilities?
5. What are your health **outcomes**?

CHECKLIST

What is the capacity and amiability to provide care to inmate patients?

1. What is your **capacity** to treat inmates?
    a. What is your average daily census?
    b. Do you have capacity to treat the inmate-patient volume?
    c. What services can you provide to inmate-patients (e.g., ambulatory care, emergency care, chronic care, elder care, hospice care, mental healthcare, dental care, or women's healthcare)?
    d. Is your staff **trained** in providing care to inmates?
        i. If not, can a training program be created and implemented?
    e. Do you have **dedicated** secured inmate-patient **treatment spaces**?
        i. If not, do you have capacity to create them?
            1) If so, does your state have a certificate-of-need process?
            2) If not, what are your safety and security concerns and protocols?
            3) How will your patients react to inmate-patients being cared for in the same treatment areas?
    f. What is your **technology** capacity?
        i. Do you have a telemedicine program? Can that program be used to treat inmate-patients, without transporting them to your facility?
        ii. Do you have an EMR system? Can that system be expanded into the prison environment?
        iii. Do you have a PACS system for diagnostic imaging? Can that system be expanded into the prison environment?
        iv. Is there an ability to merge your health information technology systems with the prison systems?
    g. How geographically **far** away are you from the prison facility?
        i. How will emergency transports be handled?
2. What are your **accreditations** (JCAHO,or state departments of health)? Does the state department of corrections wish to be NCCHC-, or ACA-accredited?
3. What is your preferred **contract model** with the prison facilities? Will you allow performance criteria (e.g., health outcomes) in your contracts? What is your payer mix?
4. What are your **costs of care**? What will your billing rates be to the state department of corrections?
5. What are your health **outcomes**?

CONCLUSIONS

IMPROVEMENTS

Systematic **Improvements**

- Collecting **data**
- Remove **variation**
- **Evidence based** design
- Use of **technology**
- Expand **research**

Time for Questions and Comments

Moderator

Yvonne Nagy, AIA, LEED AP

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