Syndemics: Part 2

What Infectious Disease Providers Need to Know About Addiction Treatment

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Great Lakes (HHS Region 5)
ATTC Addiction Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

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Part 1

1. What are Syndemics?
2. Syndemics of opioid misuse and HIV/HCV in the Great Lakes Region
3. What roles can health care providers play in addressing Syndemics?
    - Screening
    - Linkage to care
    - Co-location of treatment
    - Care coordination

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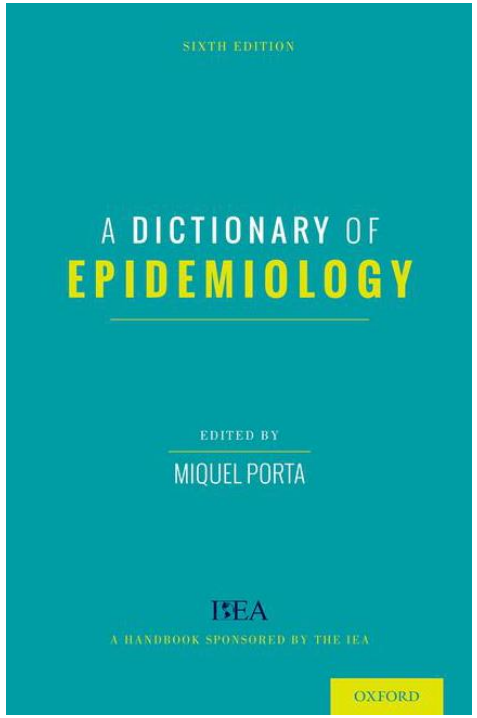
Epidemiology of opioid use disorder and related infections, continued

Syndemic - Two or more afflictions, interacting synergistically, contributing to excess burden of disease in a population. In syndemic theory, individual epidemics are sustained in a community/population because of harmful social conditions and injurious social connections.



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Case Presentation Part 1

Mr. P.

CC “Ripping and Running”

HPI 41 year old man from Milwaukee, WI

- 2012 - Evaluated at UW HIV clinic while incarcerated at Dodge Correctional Institution
- Tested positive for HIV in early 2009, never linked to care
- Antiretroviral naïve

PMH

- HIV/Hepatitis C co-infection
- Cocaine and heroin use
- Bipolar disorder vs. stimulant psychosis
- Hypertension
- Chronic kidney disease

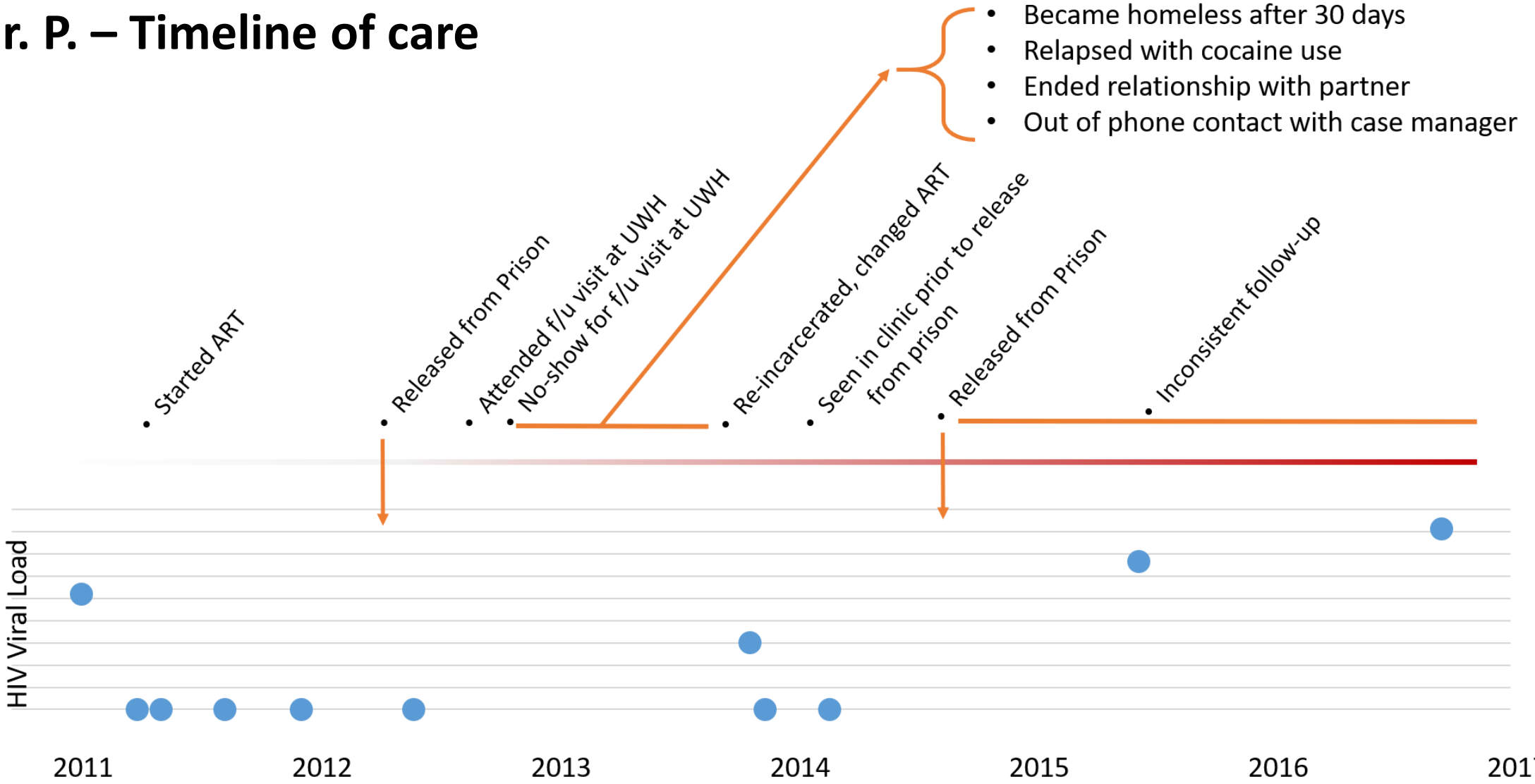
Case Presentation Part 2

HIV RNA & CD4+ Count History

Date	HIV RNA (copies/ml)	CD4+ (cells/mcl)	Notes
12/21/11	26,043	634	Started Atripla Feb 2012
3/14/12	93		
4/19/12	<20	846	
7/23/12	<20	590 (25%)	
11/15/12	<20	597 (27%)	
5/2/13	<20	670 (31%)	
9/17/14	3,550		Efavirenz resistance detected
10/10/14	87		Truvada + Darunavir+ ritonavir started
1/14/15	<20	520 (25%)	
4/21/16	33,400	440 (22%)	
7/19/17	40,650	375 (18%)	
2018	???	???	

Case Presentation Part 3

Mr. P. – Timeline of care



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Case Presentation Part 4

Mr. P. – Causes of treatment failure

- Inconsistent medication adherence
- Antiretroviral drug resistance
- Untreated mood disorder
- Untreated substance use disorder
- Lack of social support
- Unstable housing

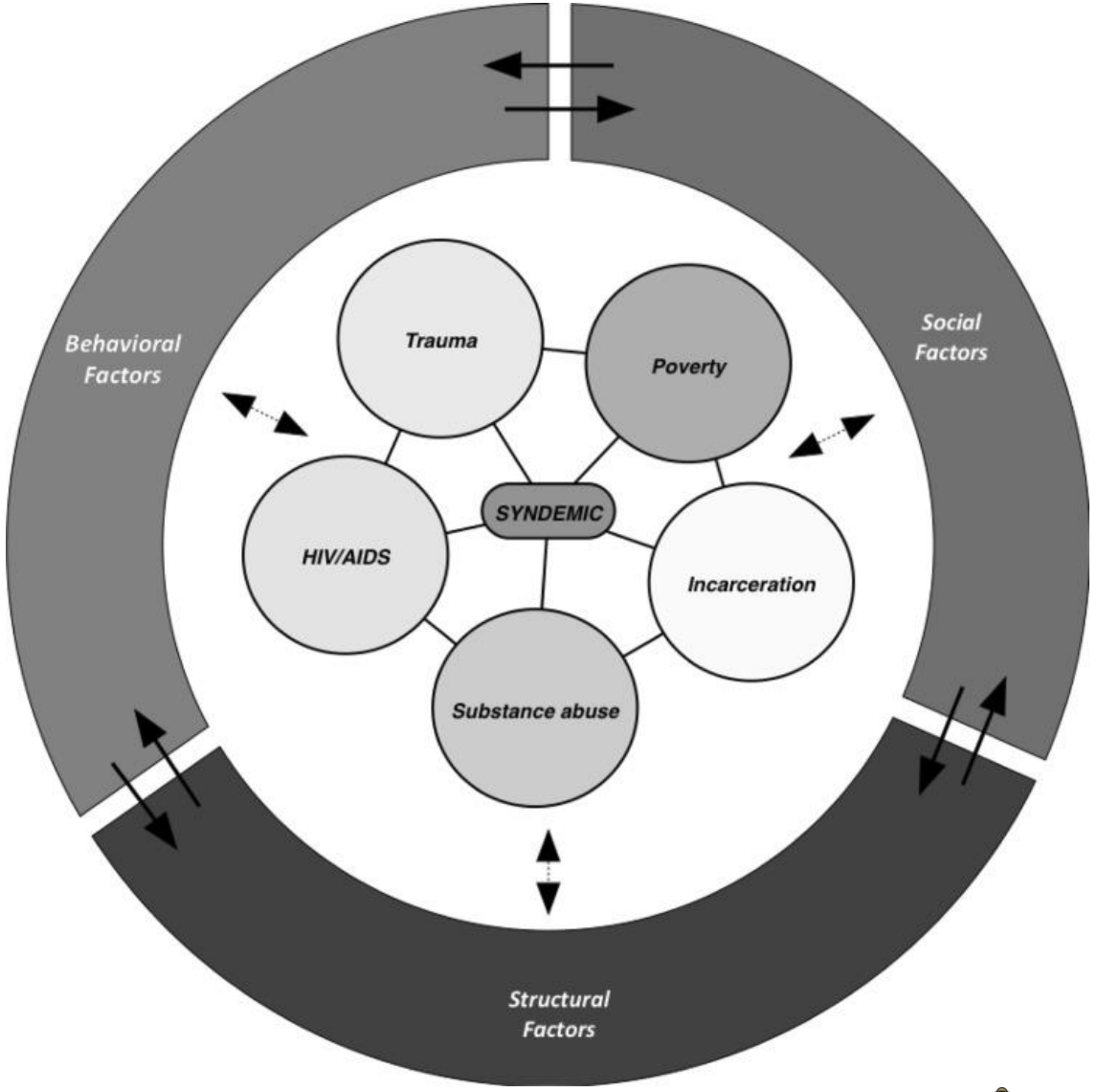
Syndemic theory Part 1

Using Syndemic Theory to Understand Vulnerability to HIV Infection

- Merrill Singer, 1996:
  - Substance Abuse
  - Violence
  - AIDS

} "SAVA"

- HIV in the criminal justice system
  - Racial disparities
  - Addiction
  - Poverty



Wilson et al. J Urban Health. 2014 Oct; 91(5): 983–998.

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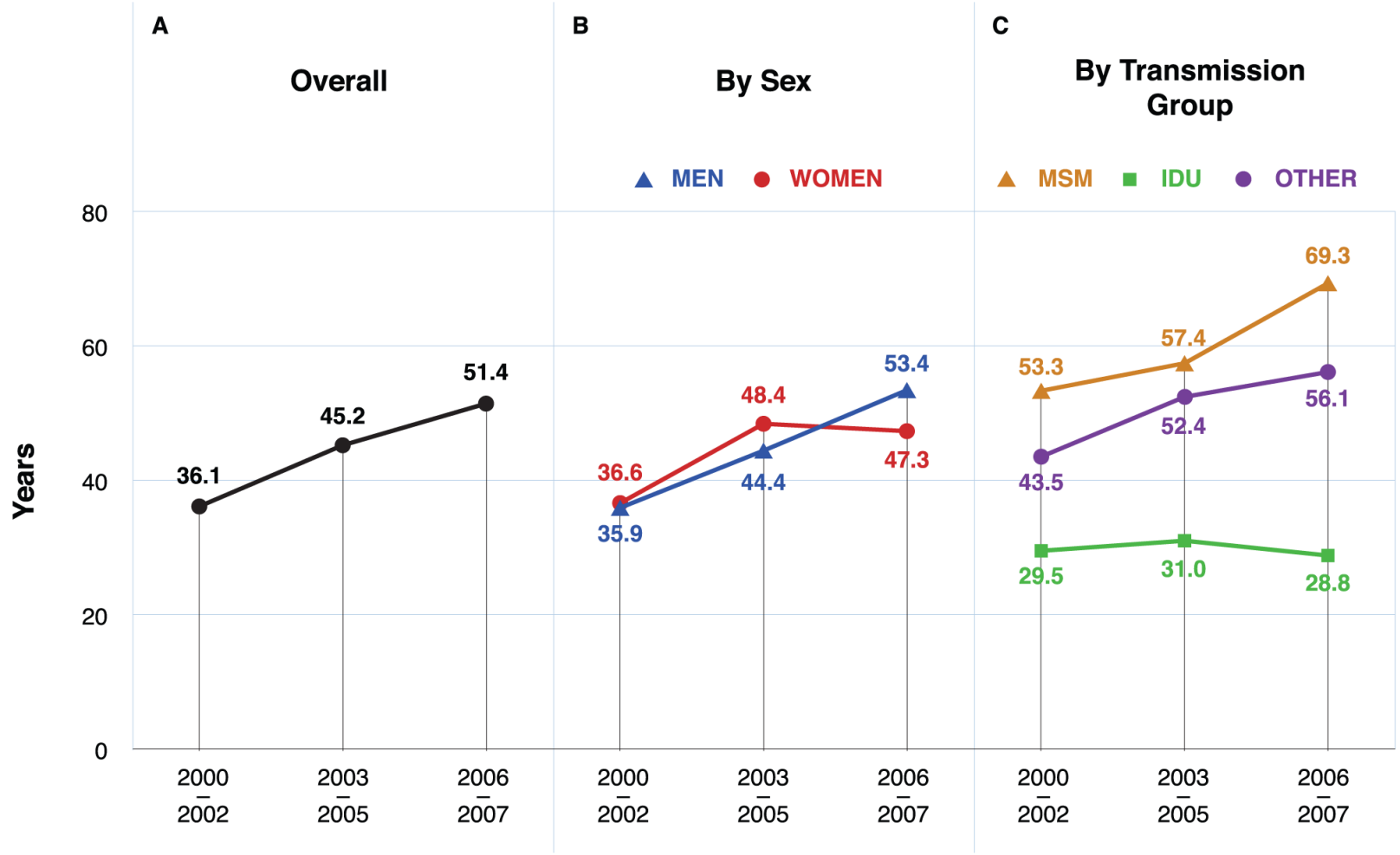
Syndemic theory Part 2

Life expectancy at age 20, people living with HIV/AIDS



Samji H. *PLoS One*. 2013; 8(12): e81355

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What should all clinical providers know about HIV and addiction?

1. Drug interactions with “pharmacokinetic boosters” ritonavir and cobicistat
2. Co-management of substance use disorder enhances HIV treatment adherence
3. Flexible, patient-centered care coordination strategies are essential

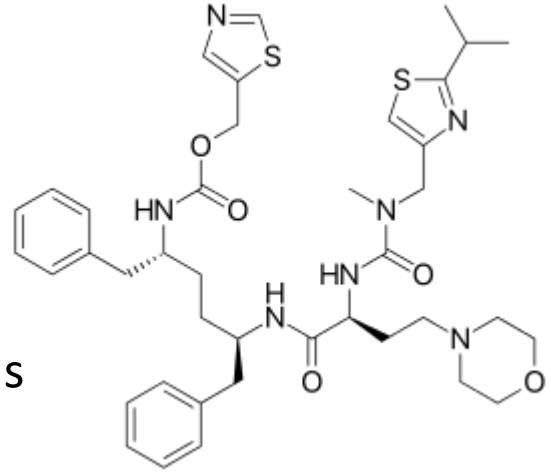
Drug Interactions Between Treatment for HIV and Opioid Use Disorder

- No major drug interactions between Integrase inhibitors and methadone or buprenorphine
- No major drug interactions between boosted PIs and methadone or buprenorphine
- Buprenorphine and unboosted ATV should be avoided—low levels of ATV
- EFV, NVP, and LPV/RTV markedly reduce the levels of methadone, resulting in development of withdrawal symptoms

Altice FL, et al. Lancet. 2010;376:367-387.

DHHS ART guidelines. March 2018.

Cobicistat: a pharmacokinetic enhancer used to boost antiretroviral drug levels



- FDA approved ni 2012 as part of co-formulated antiretroviral drug interactions
- Does not have activity against HIV itself (unlike ritonavir)
- Potent inhibitor of cytochrome P450 (CYP3A) enzymes
- Enhances activity of drugs that are metabolized by these enzymes:
  - Synthetic Glucocorticoids
  - Warfarin
  - Statins
  - Erectile dysfunction agents
  - Sedative-hypnotics

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Impact of Opioid Agonist Therapies on HIV Treatment

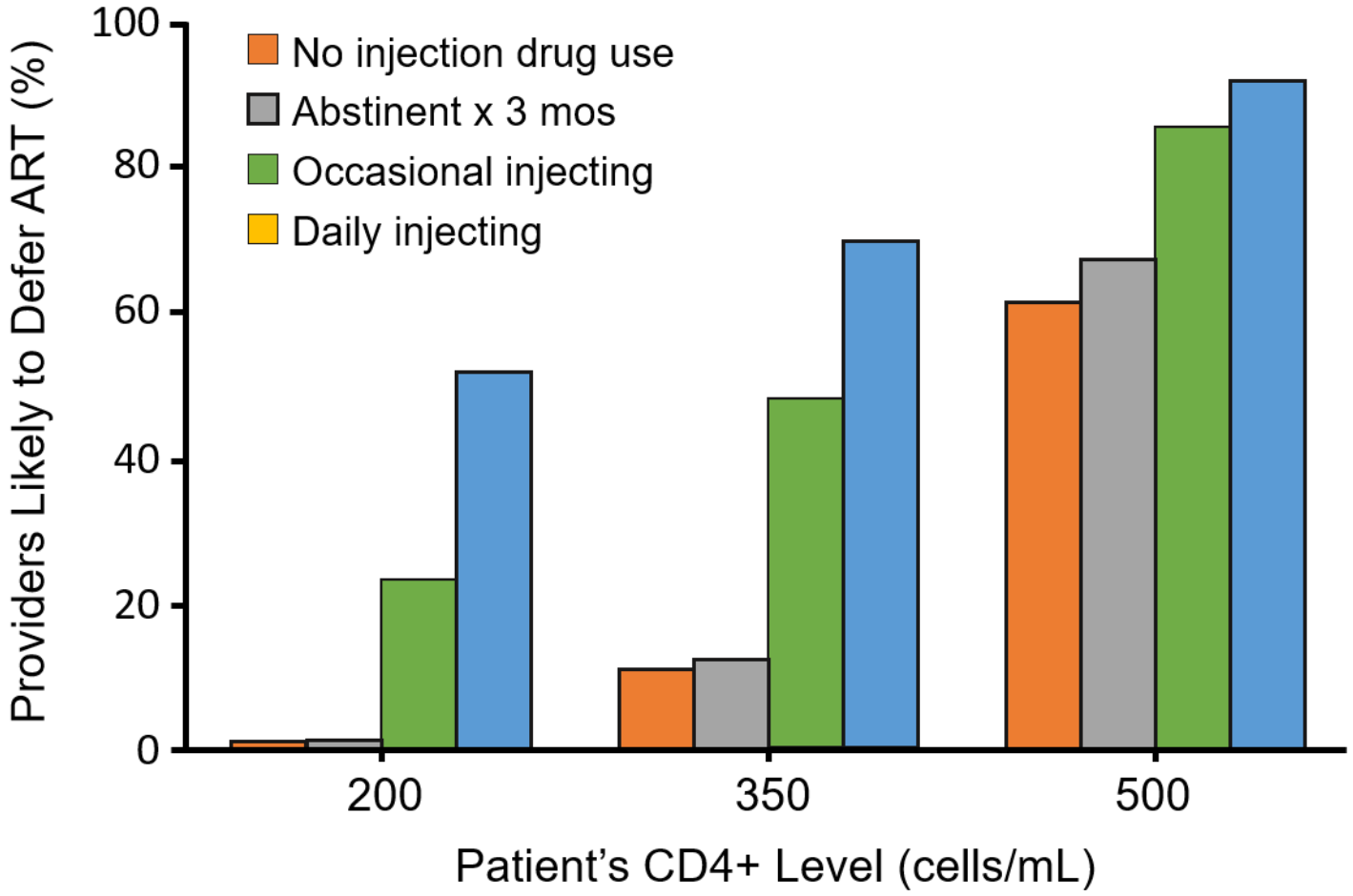
Outcomes

- OAT improves a number of non-HIV outcomes[1,2]:
  - Reduced opioid use
  - Increased physical and mental health quality of life
  - Reduced criminal behavior and incarceration
  - Reduced emergency department use
  - Increased employment
  - Improved management of comorbid conditions
- For people with HIV, OAT improves[3]:
  - Access to and retention in HIV care
  - ART prescription (+54%)
  - ART adherence (+2-fold), also decreases ART discontinuation (-23%)
  - Viral suppression (+45%)

1. Mattick RP, et al. The Cochrane Library. Update Software; 2003. 2. Mattick RP, et al. The Cochrane Library. Update Software; 2004. 3. Low AJ, et al. Clin Infect Dis. 2016;63:1094-1104.

Reluctance to Initiate ART in PWID

- Cross-sectional survey of ART prescribers in North America (N = 662)



Westergaard RP, et al. J Int AIDS Soc. 2012;15:10.

Slide credit: clinicaloptions.com

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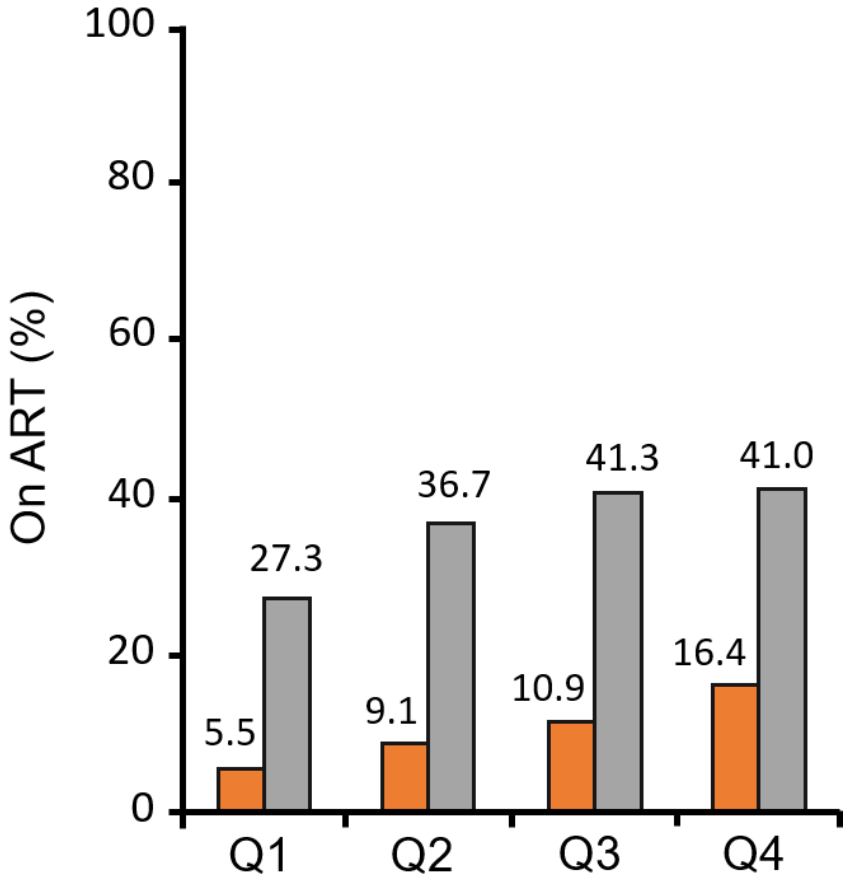
BHIVES: Integration of Buprenorphine Into HIV Clinical Care Settings

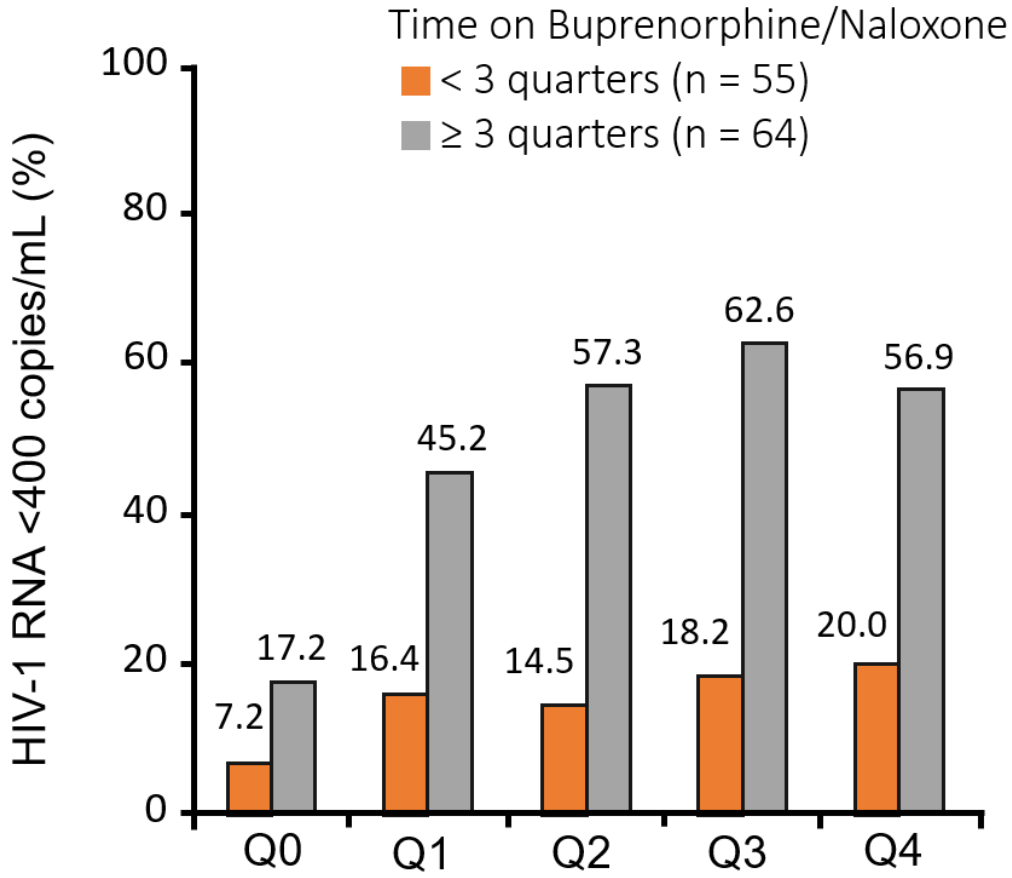
- Prospective, cohort study of people with HIV and opioid dependence (N = 295) who initiated buprenorphine/naloxone
  - 10 diverse HIV clinical care settings (hospital-based HIV clinics, community health centers, research HIV clinic)
- **Initiating buprenorphine/naloxone resulted in increased initiation of ART**
- Best outcomes when both buprenorphine and ART prescribed by the same provider
- Succeeded best if there were a coordinator ("the glue")
  - Nurse (N = 5)
  - Substance abuse counselor (N = 3)
  - Health educator (N = 2)
  - Pharmacist (N = 1)

Altice FL, et al. J Acquir Immune Defic Syndr. 2011;56(suppl 1):S22-S32.

Weiss L, et al. J Acquir Immune Defic Syndr. 2011;56(suppl 1):S7-S13.

BHIVES Subanalysis: Patients Not on ART at Baseline





Altice FL, et al. J Acquir Immune Defic Syndr. 2011;56(suppl 1):S68-S75.

BHIVES: Lessons Learned From Integrating Buprenorphine Into HIV Care

- Required multiple prescribers within a “practice”
- Needed a “glue” person to anchor the program
  - Counselor, nurse, etc
- Challenges of “culture” between HIV and addiction and new practices
  - Urine screens
- Polysubstance use and mental illness comorbidities created additional challenges

Altice FL, et al. J Acquir Immune Defic Syndr. 2011;56(suppl 1):S68-S75.

Systems Linkages and Access to Care Initiative

- HRSA “Special Project of National Significance”
- Grants to health departments in 6 states

  (LA, MA, NY, NC, VA, WI)
- *WI Project (started 6/1/13)*:
  - Embeds patient navigators in HIV clinics
  - Program coordinated at state (DHS) level
  - Intervention offered to all HIV+ clients in WI prison system who plan to live in Milwaukee or Madison after release.

WI Linkage to Care Project

“The LTC Specialists are resource-intensive considering their small caseloads, but fill an important gap in existing, often overtaxed case management systems.”

WI Linkage to Care Program: Main barriers to care identified

- Social isolation
- Low health literacy
- Low motivation
- Failed linkages to needed services (e.g. addiction treatment)
- Lack of a personal relationship with providers

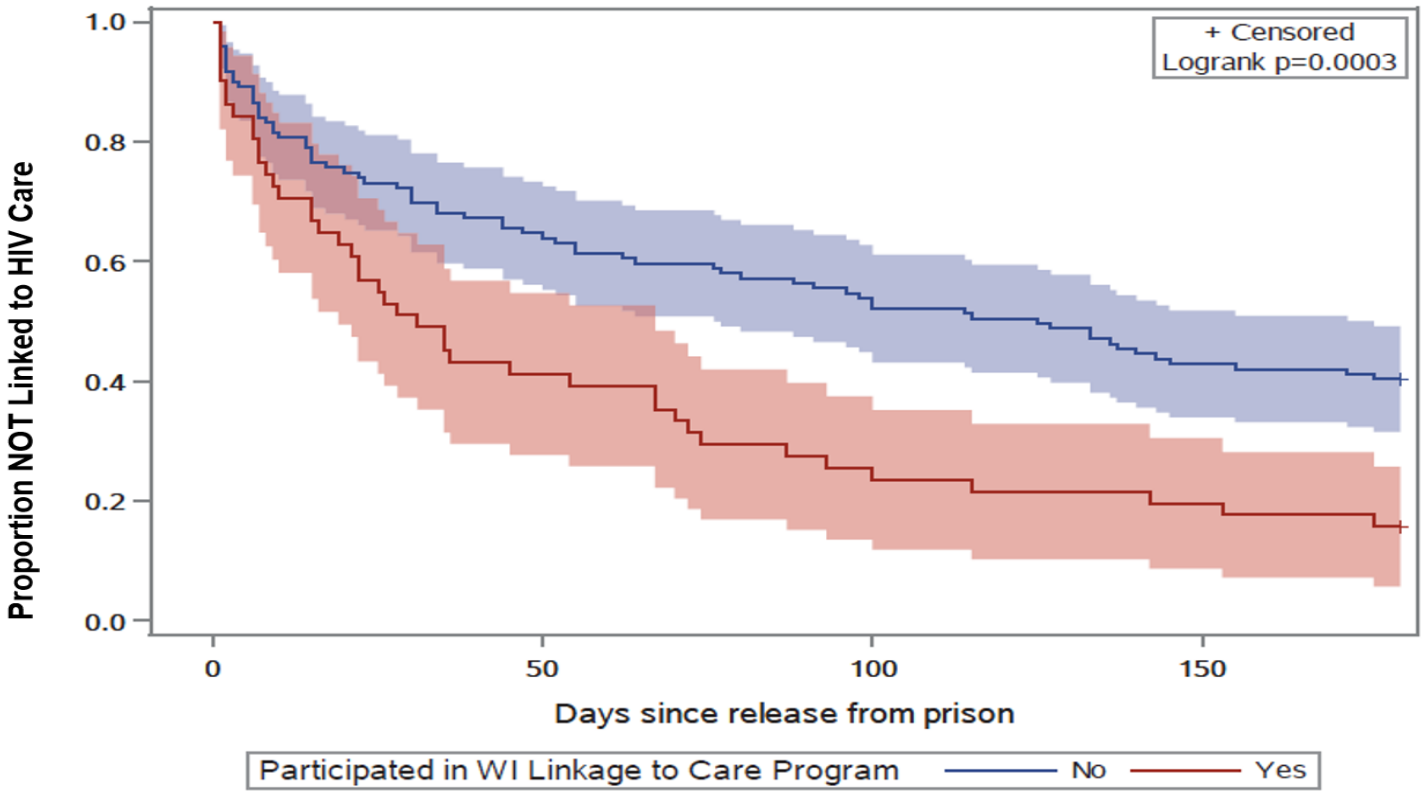
Wisconsin Transitions Study

Qualitative results – LTCS as “navigator”

“when I first got out, I was so institutionalized, I was not ready for the world. And I, I’ll try to put it in words, it was, I was like almost shell-shocked, like the world was too busy and too fast for me to keep up. Like, I couldn’t even really navigate on the city buses, that’s how crazy incarceration is, what it does to the mind. . .”

“. . . so [LTC specialist] being there here to help me and tell me little things like that, it really meant a lot because I needed that.”

Figure 1: Time to linkage to HIV care, by participation in the WI Linkage to Care program, with 95% confidence intervals



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Care coordination –

Examples:

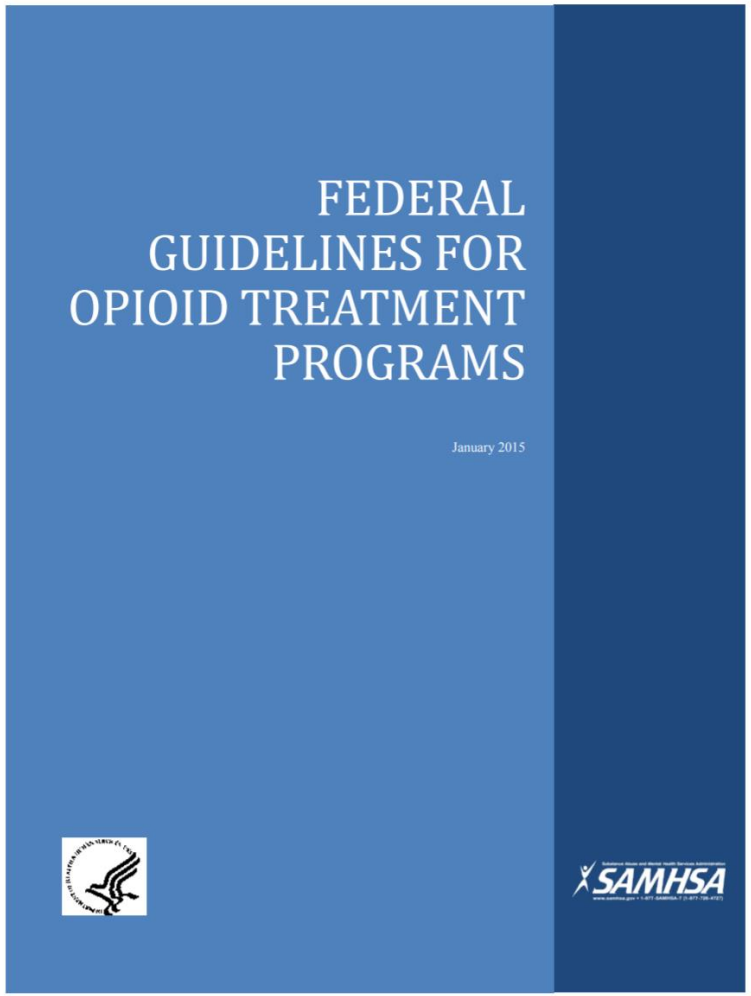
- Patient navigators
- Peer navigators
- Recovery coaches
- Linkage to care specialists
- Transitional case managers
- Care coordinators

Many have been tried

Most probably work

Few are sustainably funded

From Part 1: Question about HIV risk screening in addiction treatment settings



HIV Prevention

Programs should develop and implement a plan for educating about and testing patients for HIV/AIDS. The information provided may address topics such as HIV/AIDS testing procedures, confidentiality, reporting, follow-up care, counseling, safer sex, social responsibilities, universal precautions, and sharing of drug injection equipment.

HCV Prevention

Consistent with resources, OTPs should screen and test for HCV and HBV either directly or by referral. Program staff should receive education on and teach patients how to treat and prevent the different forms of viral hepatitis, especially HCV, because it is the most common blood borne virus among persons who inject drugs. These viruses may affect patients' health, mental health, and dosage levels of opioid medications. Messages patients should receive regarding HCV include but are not limited to:

- HCV is four times as prevalent as HIV.
- You don't have to look sick to be sick.
- HCV medications can be given safely with methadone and buprenorphine.
- Patients can be treated and often cured.

Substance Abuse and Mental Health Services Administration

SAMHSA ADVISORY

www.samhsa.gov • 1-877-SAMHSA-7 (1-877-726-4727)

Behavioral Health Is Essential To Health • Prevention Works • Treatment Is Effective • People Recover

Hepatitis C Screening in the Behavioral Healthcare Setting

Recommendations:

Identification of Chronic HCV Infection Among People Born During 1945–1965

Adults born during 1945–1965 should receive one-time testing for HCV without prior ascertainment of HCV risk.

2. Prevention and Control of HCV Infection and HCV-Related Chronic Disease

Routine HCV testing is recommended for all people who ever injected drugs illicitly, including those who injected once or a few times many years ago and do not consider themselves users of drugs.

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Exhibit 2. Percentage of Substance Abuse Treatment Facilities That Offer Hepatitis C Services: N-SSATS* Data[39]

Primary focus of facility	Number of facilities	Percentage offering screening for hepatitis C (%)	Percentage offering hepatitis education, counseling, or support (%)
Substance abuse treatment services	7,990	24.4	51.0
Mental health services	997	20.3	25.7
Mix of mental health and substance abuse treatment services	4,732	20.5	40.5
General health care	228	87.7	74.1
Other/unknown	364	22.8	42.9
All facilities	14,311	23.8	45.9

*The *National Survey of Substance Abuse Treatment Services (N-SSATS)* is an annual census of facilities providing substance abuse treatment throughout the 50 states, the District of Columbia, and other U.S. jurisdictions.

HIV/STD/Hepatitis Risk Assessment Tool - MN Dept of Health

PART THREE: INJECTION HISTORY		
7. Have you ever injected drugs or anything else, such as hormones, steroids, or non-prescription medications?	❒ Yes ❒ No	If *no*, skip to Question 12 If *yes*, continue with Questions 8, 9, 10 and: ❒ Provide/refer to risk reduction counseling
8. Have you been tested for <u>HIV</u> since the last time you injected? ***(Skip to Question 9 if client has HIV/AIDS)***		
❒ Yes ❒ No ❒ Don't know	If *no or don't know*: ❒ Provide/refer to HIV testing	
9. Have you been tested for <u>hepatitis B</u> since the last time you injected? ***(Skip to Question 10 if client has been vaccinated for hepatitis B)***		
❒ Yes ❒ No ❒ Don't know	If *no or don't know*: ❒ Provide/refer to hepatitis B testing and vaccination If *yes and client has never had hepatitis B*: ❒ Provider/refer to vaccination	If *yes and client still has hepatitis B and is not receiving treatment:* ❒ Provide/refer to treatment
10. Have you been tested for <u>hepatitis C</u> since the last time you injected? ***(Skip to Question 11 if client currently has hepatitis C)***		
❒ Yes ❒ No ❒ Don't know	If *no or don't know*: ❒ Provide/refer to hepatitis C testing *and* ❒ Provide education on possibility of re-infection	
If client <u>is currently infected</u> with HIV, hepatitis B, and/or hepatitis C, continue with Question 11 ***If not, skip to Question 12***		
11. Have you ever shared needles and/or other injection equipment?	❒ Yes ❒ No	If *yes*: ❒ Provide/refer to risk reduction counseling *and* ❒ Recommend that partner(s) get tested for infection(s) that client has

PART FOUR: OTHER QUESTIONS	
12. These questions have focused on the highest risk behaviors. What questions or concerns do you have about these or other risk behaviors?	**13. What questions or concerns do you have about another person's behaviors that might put you at risk?**

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A brief screening tool to assess the risk of contracting HIV infection among active injection drug users

Dawn K. Smith, MD, MPH, MS[1], **Yi Pan, PhD**[1], **Charles E. Rose, PhD**[1], **Sherri L. Pals, PhD**[1], **Shruti H. Mehta, PhD, MPH**[2], **Gregory D. Kirk, MD, MPH, PhD**[2], and **Jeffrey H. Herbst, PhD**[1]

[1]Division of HIV/AIDS Prevention (DHAP), National Center for HIV, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), Centers for Disease Control and Prevention (CDC), Atlanta, GA

[2]Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

ARCH – IDU Risk Scoring Sheet

1	How old are you today (years)?	If <30 years, If 30- 39 years, If 40-49 years, If ≥50 years,	score 38 score 24 score 7 score 0		
2	In the last 6 months, were you in a methadone maintenance program?	If yes, If no,	score 0 score 31		
3	In the last 6 months, how often did you inject heroin?	If 1 or more times, If 0 times,	Injection sub-score 1 Injection sub-score 0		
	In the last 6 months, how often did you inject cocaine?	If 1 or more times, If 0 times,	Injection sub-score 1 Injection sub-score 0		
	In the last 6 months, how often did you share a cooker?	If 1 or more times, If 0 times,	Injection sub-score 1 Injection sub-score 0		
	In the last 6 months, how often did you share needles?	If 1 or more times, If 0 times,	Injection sub-score 1 Injection sub-score 0		_____
	In the last 6 months, how often did you visit a shooting gallery?	If 1 or more times, If 0 times,	Injection sub-score 1 Injection sub-score 0		_____
	Composite Injection Score			Add down the 5 injection subscores above If 0, If 1, If 2, If 3, If 4, If 5,	 score 0 score 7 score 21 score 24 score 24 score 31	_____
				Add down the three entries in the right column to calculate total score	TOTAL SCORE* _____

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HIV/STD/Hepatitis Risk Assessment

- Any assessment is better than no assessment

- Having conversations about risk reduction and infectious disease screening shows that you care about clients as a person

- Knowledge is power = Any HIV/HCV testing is better than no testing