Treating Hepatitis C in the Setting of Homelessness and OUD

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Speaker Disclosure

- Jody Gilmore ANP-BC, MSN, discloses she is on the speakers bureau for Abbvie

- Ms. Gilmore attests that clinical recommendations are **evidence-based** and **free of commercial bias.**

Objectives:

- Obtain a better understanding of the impact of homelessness in the treatment of hepatitis C virus(HCV)
- Increase knowledge of barriers to treating HCV, in people who are unsheltered or with SUD
- Increased knowledge of HCV treatment

Drug Addiction Coexists with Numerous Compounding Realities

- Poverty, homelessness, marginalization
- Dual diagnoses (mental health comorbidities)
- Incarceration
- Medical stigmatization

Committee on a National Strategy for the Elimination of Hepatitis B and C. National Academies of Sciences, Engineering, and Medicine (NASEM). 2016. https://www.ncbi.nlm.nih.gov/books/NBK368067/. Accessed April 3, 2018.

Spectrum of Drug Use

Injection

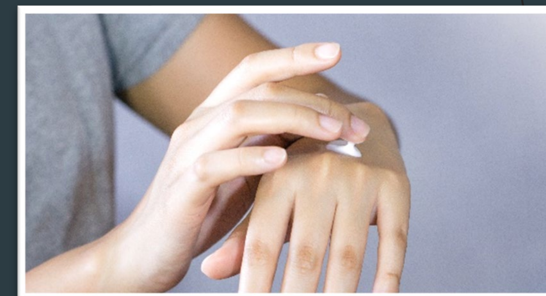
Smoking

Eating/Drinking

Abstinence

Snorting

Vaporizing


Skin Absorption

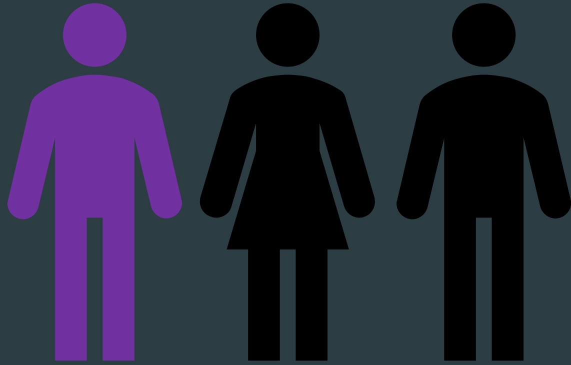
Highest Risk → Lowest Risk

Slide courtesy of BRIDGE HCV

Two Epidemics Intertwined:

HCV Infection Is a Serious Health Consequence of Injection-Drug Use

- HCV antibody prevalence among people who inject drugs is estimated to be 70% to 77%



1 of 3 people who inject drugs acquires HCV infection in the first year of injecting

45% to 85% of individuals chronically infected with HCV are unaware of their status

CDC. Surveillance for Viral Hepatitis—United States, 2015. https://www.cdc.gov/hepatitis/statistics/2015surveillance/pdfs/2015HepSurveillanceRpt.pdf. Accessed April 3, 2018., Slide courtesy of BRIDGE HCV

The Patient's Reality[1–3]

Limited access to health care

Poor quality of life

Alcohol consumption

Use of multiple substances

Homeless or living in temporary accommodations (shelter, prison)

Poorly educated (secondary education or less)

"I am treated like a criminal and this makes it hard to take care of my health."

"There are no friendly health care services near me where I live."

"I would like to give up drugs, but I cannot get help."

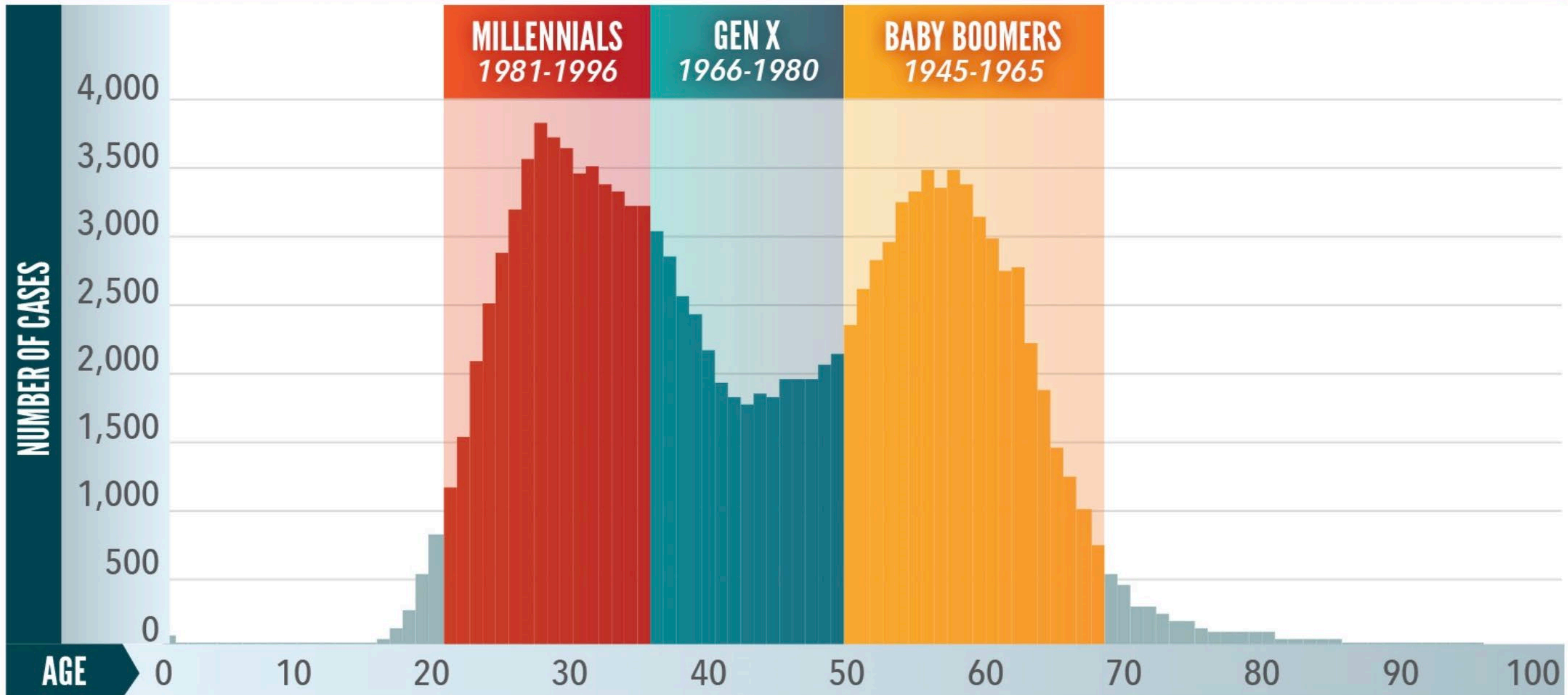
"I cannot get opioid-substitution therapy/syringes because it is illegal."

"Health care workers do not trust me, as if I just want drugs."

"Without clean needles and syringes, I have to share."

Image source: Ramers CB. International Conference on Viral Hepatitis (ICVH 2016). March 14-15, 2016; San Francisco, CA. Adapted from:
1. Bamvita JM, et al. *Hepat Res Treat.* 2014; 2014:631481; 2. Cowan P, Butler R. *SAGE Open.* October-December 2013:1-13; 3. Harris M, et al. Hepatitis C testing & treatment for PWID: Barriers and Facilitators to Hepatitis C Treatment for People Who Inject Drugs. 2012. http://ljwg.org.uk/wp-content/uploads/2013/09/Barriers-and-facilitators-to-hepatitis-C-treatment-for-PWID-A-qualitative-study-June-2012-rev-5.pdf. Accessed April 3, 2018. Slide courtesy of BRIDGE HCV

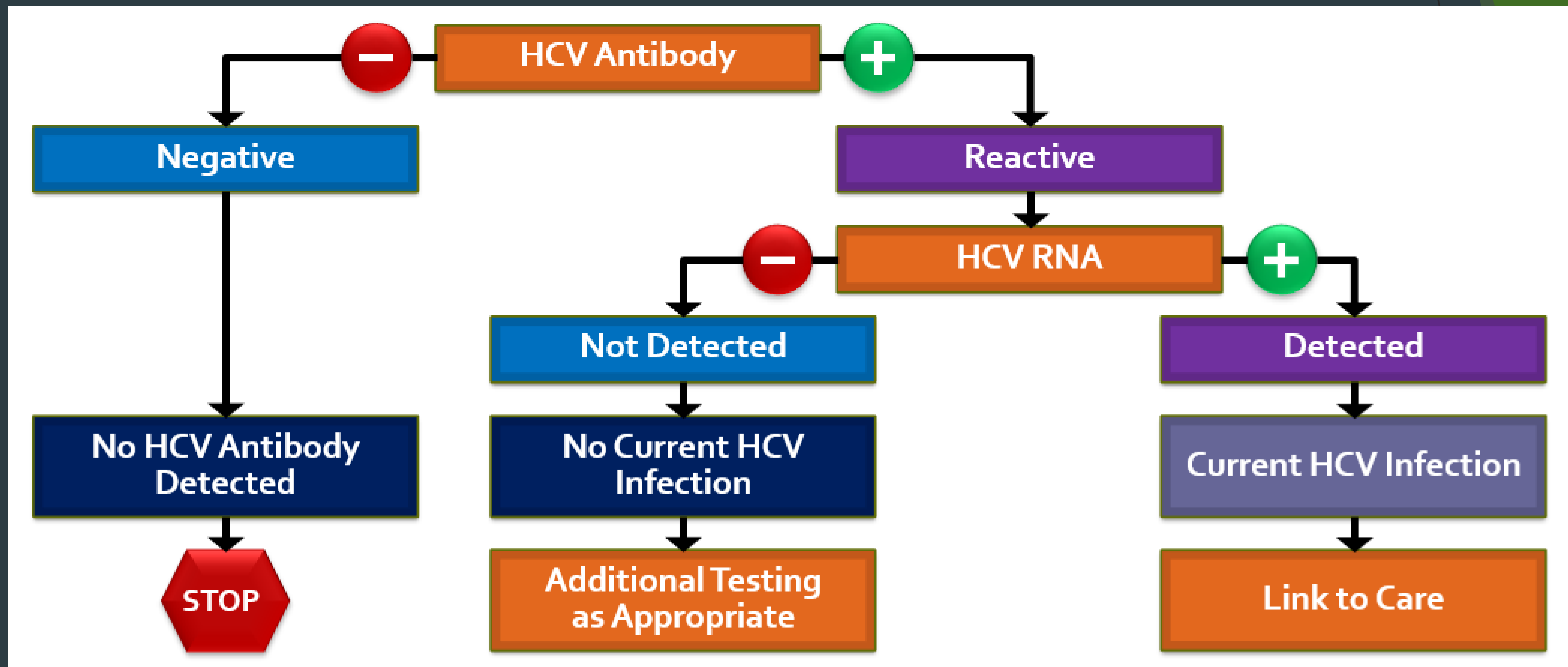
New Reports of Chronic Hepatitis C High in Multiple Generations



SOURCE: National Notifiable Diseases Surveillance System, 2018

Hepatitis C Treatment

Recommended Testing Sequence for Identifying HCV Infection



RNA, ribonucleic acid.

CDC. *MMWR Morb Mortal Wkly Rep*. 2013;62(18):362-365.
https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6218a5.htm. Accessed August 2, 2018.

AASLD/IDSA
Who Should Be Treated?

Treatment is recommended **for all patients with chronic HCV infection, except those with short life expectancies** that cannot be remediated by treating HCV, by transplantation,or by other directed therapy.

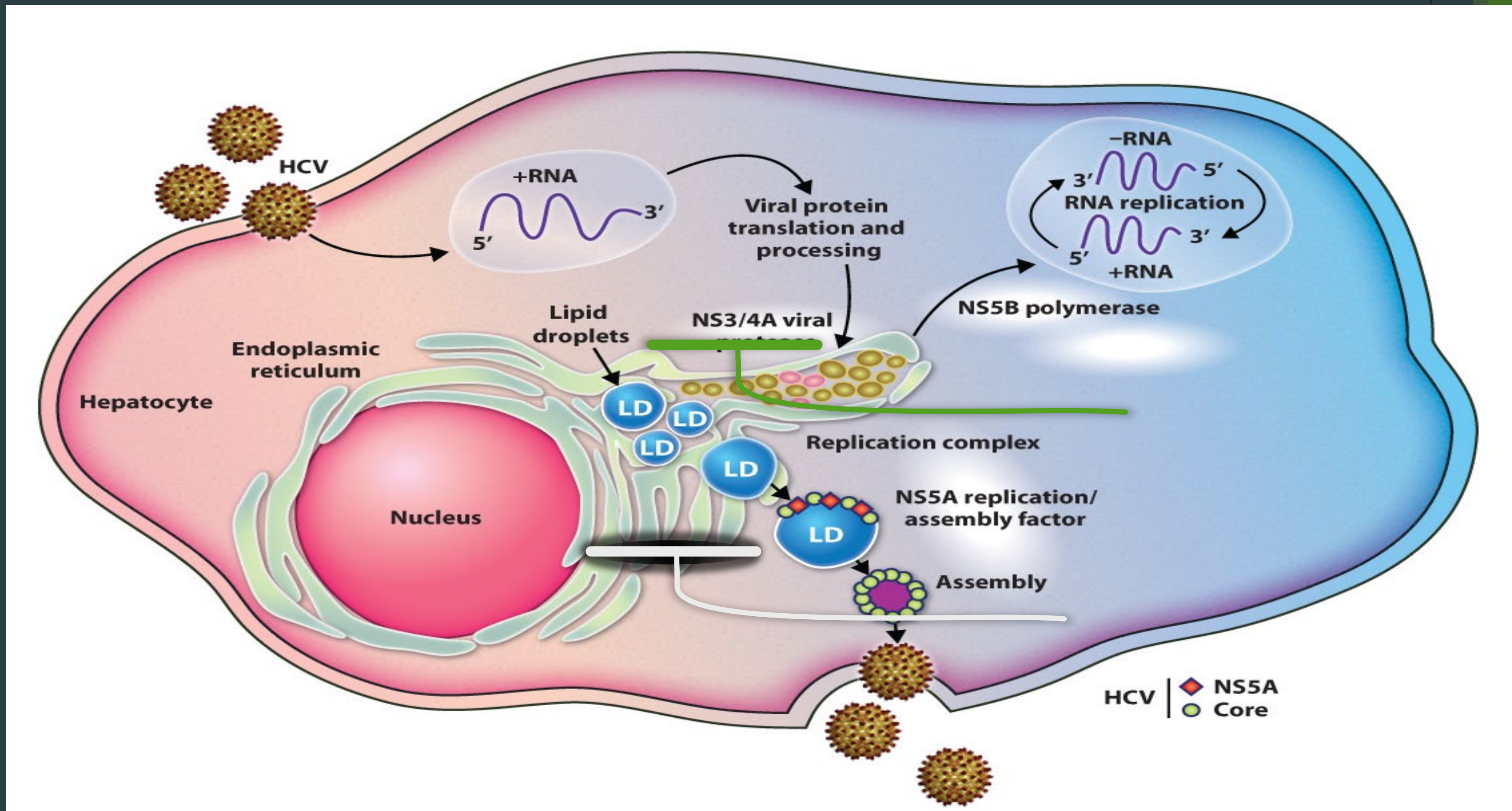
Rating: Class I, Level A

DAA therapy for PWID with HCV infection is NOT different just because they're PWID.

AASLD. HCV Guidance: Recommendations for Testing, Managing, and Treating Hepatitis C. Last updated September 2017. http://www.hcvguidelines.org/evaluate/when-whom. Accessed August 2, 2018.

Mechanism of Action

Direct-acting antiviral agents against HCV



Allam, N. (Ed.). (2017). Advances in Treatment of Hepatitis C and B. InTech. doi: 10.5772/62815

Treatment with Pangenotypic Regimens

Glecaprevir + Pibrentasvir (MAVYRET)

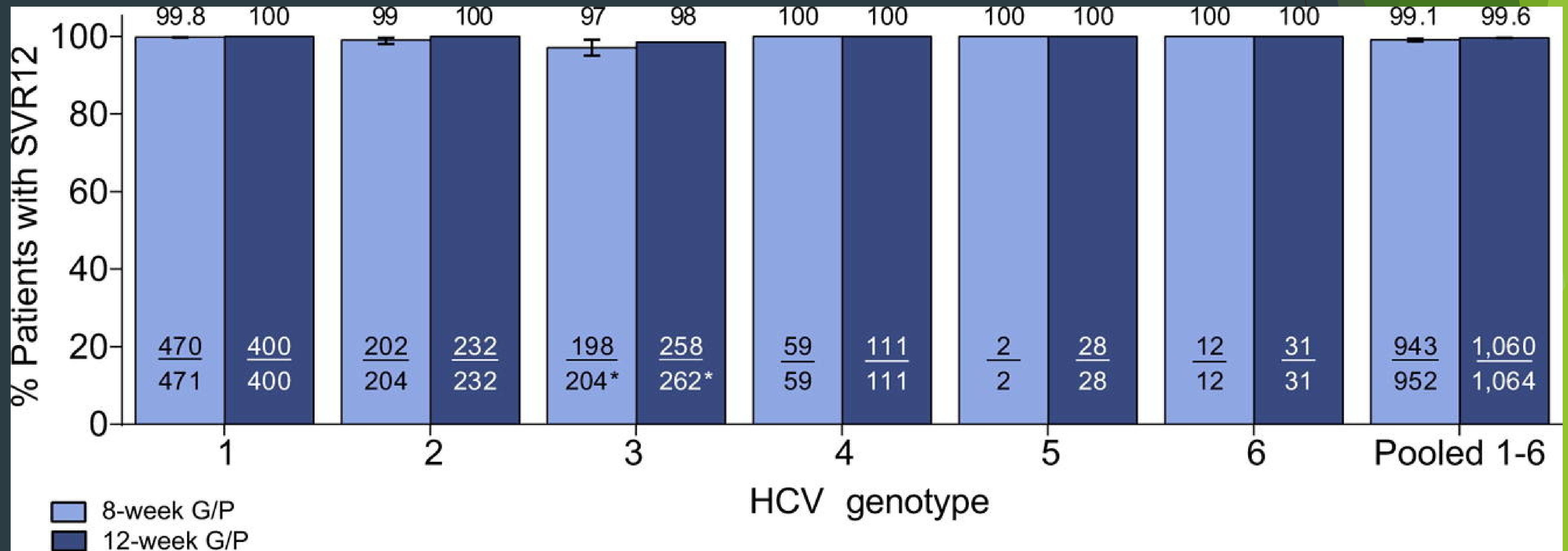
- 3 pills one time a day with food x 8 weeks

Sofosbuvir + Velpatasvir (EPCLUSA)

- 1 pill once a day with or without food x 12 weeks

Pangenotypic Regimens

Persons with HCV genotype 1, 2, 3, 4, 5, or 6 infection can be effectively treated with 3 tablets daily for 8 weeks
Glecaprevir/Pibrentasivir



Puoti M et al. Journal of Hepatology (2018); Brown RS et al. Journal of Hepatology (2019)

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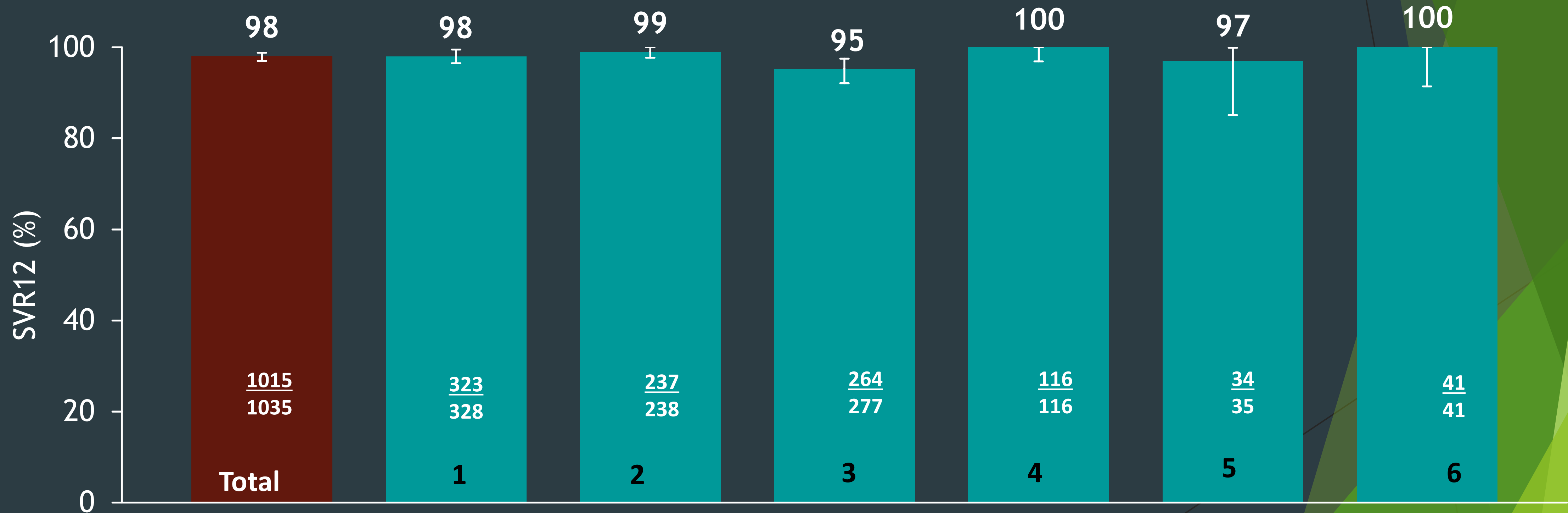

Feld JJ et al. NEJM 2016; Foster G et al NEJM 2016

Case Presentations

Case Presentation: CT

- 34 yo male living unsheltered,in Kensington since 2016
- Presents to PPP for syringe access
- Agrees to POC testing: +HCV Ab, HIV-
- OUD many years→ 10 bags of fentanyl per day, IV cocaine, benzo’s
- Injects 3-4X per day
- Unsheltered during hep C treatment
- Brother also with OUD and unsheltered, chronic xylazine wounds
- 2 to 4 ED visits per month since 2016(trauma, wound infections, right knee pain)

Strengths/Protective Factors

Resilient

Connected

Receptive

Lucky

Emotional development stunted, early twenties

Has no self-defined goals for the future

Case Presentation: CT

PMH:

- Chronic hepatitis C infection
- Opioid dependence
- Osteomyelitis right-knee joint
- Chronic wounds/cellulitis on extremities from injecting, complicated by xylazine in the drug supply
- Depression
- Scabies and head lice
- Malnourished(140 lbs)

Case Presentation: CT

Medications:

- Descovy→ switched to Apretude 6/21/24(Cabotegravir)
- Mavyret(Glecaprevir/Pibrentasvir)
- Ivermectin

Interpreting HCV labs:

Viral Hepatitis serologies: needs hep A vaccine

Check hep B sAB, sAG, cAB, hep A total AB

HCV RNA quant 17,900 copies

Low viral burden (quant) not related to liver damage

Naïve to treatment

Meets criteria for Simplified Treatment Guidelines

Fibrosis staging F0

No liver scarring to indicate cirrhosis (APRI, FIB-4)

Genotype 3

Most common among PWID

Adherence Tools: What will work?

Lanyard with DOT Winning Combo but Stable Housing is the REAL KEY

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Future Concerns	Future Action
OUD	In-pt treatment and induction facility, consider methadone, offer 12 Step groups to build relationships with people in recovery
Mental health assessment	Needs full psychiatric and neuro work-up assessment
HCV treatment adherence	DOT, lanyard, pillbox pre-fill
Housing	Project Home
Employment	Disabled-SSI
HCV reinfection	Harm reduction education
Fatal overdose	Narcan

Case Presentation: CT

Outcome of HCV treatment:

- CURED with 8 weeks of Mavyret

How did we help this patient succeed?

- Cigarettes, coffee, food, temporary shelter, monetary incentives and love!

Case presentation: LS

- 41 yo male living unsheltered in Kensington since 3/2020
- Grew up in Reading, 1 brother, 1 daughter (11 yo), parents deceased
- Presents to PPP for syringe access
- OUD: 1-2 bags fentanyl per day, occas use of benzos
- Agrees to POC testing: +HCV antibody, -HIV
- Confirmatory testing reveals chronic HCV
- Obtains initial lab work→COVID-19 hits, lose contact until 7/2020

Case Presentation: LS

PMH:

- Anxiety
- Depression
- Skull fx, epidural hematoma with craniotomy, spinal abscess requiring surgery and 6 wks antibiotics
- Extremity wounds
- Malnourished

Case Presentation: LS

Medications:

- Buprenorphine SL films
- Apretude(6/21/24)
- Mavyret(7/3/24)
- Antibiotics

Case Presentation: LS

- Expresses desire to enter detox/rehab
- 3 to 8 ED visits per month over 2 years
- Social hx: 11 yo daughter, ceramics/potter in past

Strengths/Protective Factors

Resilient

Intelligent

Humble

Kind

Emotional development stunted in late teens, early twenties

Has some self-defined goals for the future but not realistic

Case Presentation: LS
OUD and Detox/Rehab History

- Used cannabis and alcohol in late teens, progressed to oxycodone at age 30, IV heroin
- Consuming 1 bundle of heroin/fentanyl (IV) per day
- Expresses desire to enter treatment
- 9/2020: Enters Malvern Rehab facility, completes 21 days
- T/C to brother: learns of fathers' death few months prior
- 9/2020: Transitions to Self-Help in Northeast Phila.
- 10/2020: Leaves Self-Help, feelings of isolation, returns to Kensington
- 10/2020: Wants to get back in treatment, accepted back into Malvern
- Stayed 1 week, left AMA, returned to Kensington

Case Presentation: LS
OUD and Detox/Rehab History

- 11/2020: Enters rehab in Altoona, stays 14 days, initiates Suboxone,
  agrees to transition to Sublocade
- 11/2020: Enters rehab in DelCo, stays 4 days, back in Kensington,
  misses Sublocade appt., resumes heroin/fentanyl use
- 12/2020: obtains housing in PPP shelter, accepts OUD care at PPP
- 1/2021: Initiates suboxone in shelter, with partial adherence to
  suboxone(8-2 mg BID)
- Not interested in pursuing Sublocade again
- No mental health assessment done by PPP

Interpreting HCV labs:

Viral Hepatitis serologies: needs hep A vaccine Check hep B sAB, sAG, cAB, hep A total AB

HCV RNA quant 221,000 copies Average, viral burden (quant) not related to liver damage

Naïve to treatment Meets criteria for Simplified Treatment Guidelines

Fibrosis staging F0 No liver scarring to indicate cirrhosis (APRI, FIB-4)

Genotype 3 Most common among PWID

Case Presentaion: LS

- Present day: agrees to pursue HCV treatment
- Initiates Mavyret 7/3/2024
- Initiates Apretude for PrEP 6/21/2024
- Receives MOUD from mobile unit in Kensington
- UDS shows no bupe in urine over months, discharged from mobile unit
- Drug registry shows several different sites where pt receives buprenorphine
- Should complete HCV treatment 8/28/2024
- Obtain labs to test for cure 9/25/2024
- Fingers crossed!

Lanyard with DOT Winning Combo but Stable Housing is the REAL KEY

+

Future Concerns	Future Action
OUD	In-pt treatment and induction facility, consider methadone, offer 12 Step groups to build relationships with people in recovery
Mental health assessment	Mental health Needs full psychiatric work-up assessment
HCV treatment adherence	DOT, lanyard, pillbox pre-fill
Housing	Shelters but…
Employment	Employment training
HCV reinfection	Harm reduction education
Fatal overdose	Narcan

A Look at Harm Reduction

Harm reduction is any positive change, as defined by the person at risk for harm. It is meeting people where they are and providing the tools and information they need to keep themselves and those around them healthy[1]

Harm reduction . . . [2,3]

- Provides nonjudgmental care
- Fights discrimination
- Does not require abstinence
- Is not against abstinence
- Does not attempt to minimize or ignore the real and tragic harm and danger associated with licit and illicit drug use

Adapted from the Chicago Recovery Alliance: Dan Bigg, Director and Cofounder
National Harm Reduction Coalition. http://www.harmreduction.org. Accessed August 22, 2021
Harm Reduction International. https://www.hri.global/what-is-harm-reduction. Accessed August 22, 2021

Overdose Prevention

- Test before you fly (Fentanyl test strips)
- Go low, go slow
- Use a familiar/comfortable place
- Use with familiar people; DO NOT USE ALONE
- Never Use Alone: English 800-484-3731, Spanish 800-928-5330
- Try not to mix drugs
- Some chronic conditions reduce ability to metabolize drugs
- Tolerance is low after institutionalization, incarceration, detox/treatment, abstinence even after only a few days

Reinfection Considerations in PWID

- After cure, HCV antibodies do not provide protection against reinfection
- Modeling studies indicate that MAT and treatment-as-prevention (TasP) strategies are important for slowing the rates of new infections and reinfections
  - HCV cure ➔ decreased prevalence
  - Harm-reduction measures ➔ decreased incidence
- Harm-reduction strategies such as DAA treatment of injecting partners (ie, bring a friend treatment strategy) may also be useful in reducing reinfection
- Access to treatment for HCV reinfection—without stigma and discrimination—is crucial: reinfection is not unique to PWID

Grebely J, Dore GJ. *Clin Liv Dis*. 2017;9(4):77-80.

Thank You!

Questions?