INCIDENCE OF HEPATITIS C AMONG HIV-INFECTED MEN WHO HAVE SEX WITH MEN IN SAN DIEGO, 2000–2015

Reported by Jules Levin
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Conclusions/Limitations

Conclusions

- Largest of study of HCV incidence among HIV+ MSM in the U.S. (n=2,395)
- High (1.2/100py) and increasing HCV incidence among HIV+ MSM in San Diego
- MSM with a history of methamphetamine use and/or IDU at high risk
- Elevated HCV reinfection risk among HIV+ MSM

Limitations

- Lack of detailed behavioral history, potential misclassification
- Reinfection analysis from IFN-containing era, DAA era may be different

Future work

- Prevention: rapid diagnosis/treatment and behavioral risk reduction strategies
- Modeling: optimal/cost-effective testing and treatment strategies; determine what is required for elimination

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"HCV Reinfection remains a problem particularly amongst MSM… alarmingly high incidence of reinfection in Europe among HIV+ MSM about 5-10 fold that of primary infection, **but there is no data from US cohorts**… there was about a 3 fold higher incidence rate of primary infection among those who ever used methamphetamine - rates were high but numbers were small for IDUs and meth+IDU… alarmingly we say an increase in HCV incidence within our cohort from 0.36 per hundred years in 2003 to 1.52 per hundred years in 2015 and this was significant… there was a significant increase in HCV incidence among those who reported ever meth only and there was no significant increase for those who did not report ever use of meth or IDU… regarding reinfection there were 43 with SVR & 3 reinfections leading to rate of 2.89/100 patient years, average age was young at 33 compared to 50 for primary infection"

published in 2006: **Scientists Call For Hepatitis Treatment Of Young Injection Drug Users, Public Health Intervention…** http://www.natap.org/2006/HCV/020806_07.htm

Despite that HCV drug regimen prices were drastically reduced to $17k in VA & 35K to NYS medicaid in NYS and other Medicaids the States & their Medicaid Directors, in NY its Jason Helgerson & Gov Cuomo refuse to put money into HCV. At a recent so-called HCV Summit in NYS Jason Helgerson mischaracterized the costs for HCV drugs without anyone from the community or at the event challenging his statements. He stated HCV regimens cost NYS $68k per regimen & overall cost last year was $680 million. He did say actually this was the retail cost but no one at this event understood or recognized what he was doing or challenged him on this. NYS does not pay $68k for a regimen, it's more like around $35k, therefore the overall costs were similarly overstated. He does this to throw up a some screen to prevent people from challenging NYS on why they are not funding eradication & screening & linkage to care, because if he can pursued you how costly the drugs are then he & Gov Cuomo hope you will not get past that to ask about funding for screening % linkage to care, because he is telling you the drugs alone are so expensive that we can't even afford that hoping you will sympathize & understand - this prevents even getting to a discussion about funding eradication & screening & linkage. There is no money added to this year's budget for HCV. No progress is being made in NYS towards addressing these needs. Advocacy has gotten nowhere not just in NYS burt federally in Wash DC nor in most states medicaid programs with very lithe progress & very few exceptions. Wash DC, The White House & Congress reused to address HCV throughout the Obama administration despite holding a dog & pony show show every year at the White House, their annual HCV Awareness Day. They actually gave me an award for lifetime achievement in fighting HCV & I almost refused to go but caved in & went, but they do NOT permit public commentary at that meeting, of course on purpose, because they do not want people like me openly criticizing them. The only reason any progress has been made in NYS is because a small group of advocates including me met wit NYS AG Eric Schneiderman's NYC 2 years ago & that led to about 1 year hence Schneiderman's lawsuit which convinced NYS managed medicaid to reduce restrictions. It was only after that NYS DURB removed their restrictions but this act by NYS DURB was useless because it had no impact. Managed medicaid in NYS reduced restrictions only because of the lawsuit, and the DURB act did nothing but tried to look good to the public. Nothing much has happened since, no real attempt by NYS officials towards funding to address HCV in any serious way, only smokescreens like the statements by Helgerson. Public insurers continue to throw up every barrier they can get away with and NYS & other states refuse to fund screening & linkage to care. Two years ago NYS enacted Routine HCV Screenings, the 1st state to do tis, but they did not fund this to one cent. I have had HIV for 35 years & had HCV but was the1st PegInterferon cure back in 2001. Back then we had real load & vocal activists, who were themselves HIV infected, they changed HIV history back in the mid 1990s. Now we have uninfected careerists who have become "advocates" as a career in HIV & HCV, that is the trend now. They pushed PrEP, and work on HCV. Nothing has however changed in Wash DC regarding HCV, White & Congress have not moved one inch to support HCV eradication, screening & linkage. Unfortunately we do not have a real group of HCV-infected activists screaming at the federal or State governments. Instead in NYS we have quiet non confrontation attempts, but in actuality NYS has put no money to this day into HCV, they refuse to discuss an Eradication Plan, they refuse fund needed scale up of screening & linkage to care. All too often those who "speak" for patient needs are receiving grants or want to receive grants from State officials. HCV+ patients are being betrayed. In fact Aging with HIV is a very serious problem in the USA with 80% in NY, SF, Boston & Florida over 45 years old and 50%

over 50 & 20% over 60, with many older patients suffering the ravages of aging too soon & too quickly with "accelerated aging" & multicomorbidities & polypharmacy & actual disabilities. But there is no attention or recognition given to this problem. I have devoted myself to this but today's HIV "advocate" prefer to focus only on cure & PrEP. NY City as well puts none of its own money into a needed large scale screening & linkage program. I gave them $2 mill to fund Check Hep C which I designed. Last year they submitted an RFP & received a large grant from the federal govt they now use to fund INSPIRE, an Hcv program in NYC, but NYC itself does not fund ant money towards HCV.

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1

Epidemic of HCV among HIV+ MSM

- Untreated infection with hepatitis C virus (HCV) can cause liver disease and death
- A leading cause of death among HIV-infected individuals[1]
- Increasing reports of acute HCV among HIV-infected men who have sex with men (HIV+ MSM)[2]
- Limited epidemiological data from U.S. cohorts

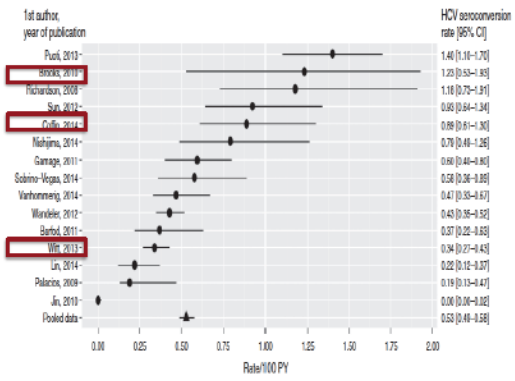

Fig. 2. Forest plot of hepatitis C virus seroconversion in HIV-positive MSM in 15 studies. (Hagan et al.)

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2

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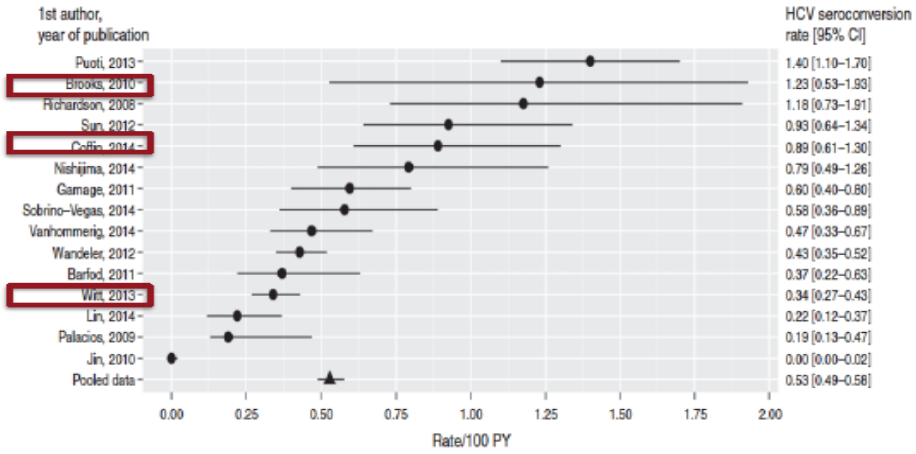

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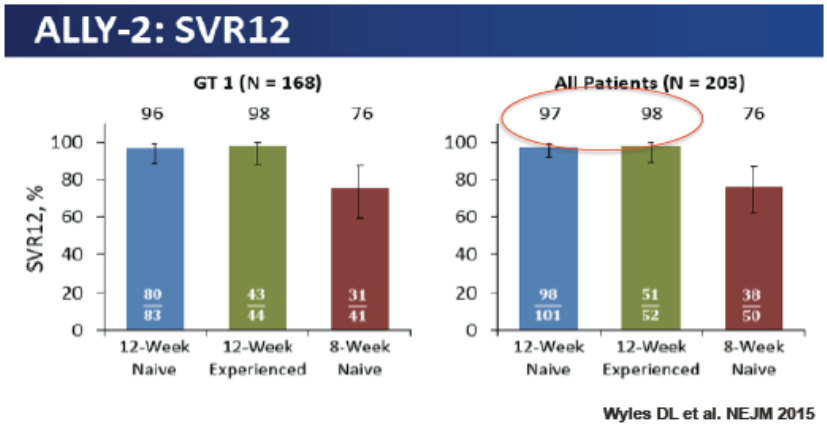
Highly effective HCV treatment among HIV+ individuals



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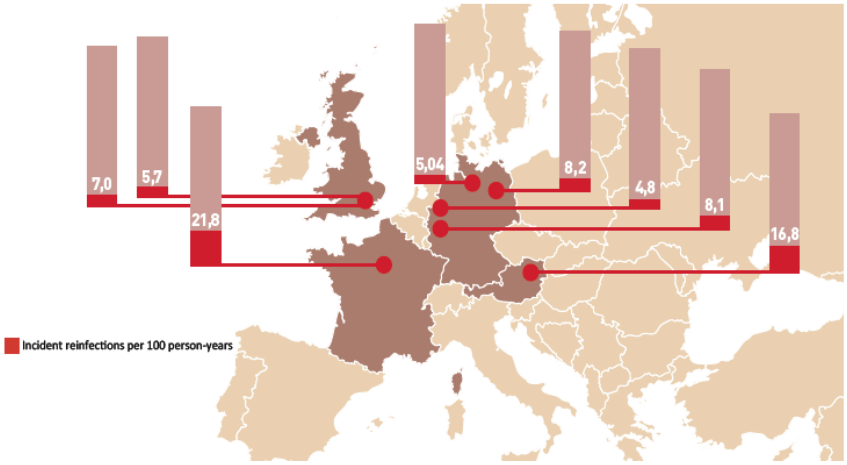
HCV reinfection incidence among HIV+ MSM

Western Europe overall (n=606): 7.3/100py (95% CI 6.2-8.6)
No data from U.S. cohorts



AIMS

- Determine **HCV primary incidence** (seroconversion) among HIV+ MSM in San Diego

- Determine **HCV reinfection incidence** following successful HCV treatment among HIV+ MSM

HCV primary incidence among HIV+ MSM

Study

- Retrospective cohort

Population

- HIV+ MSM who attended Owen clinic (largest HIV clinic in San Diego)
- Baseline negative anti-HCV test between 2000-2015
- At least one more anti-HCV or HCV-RNA test until end 2015

Analysis

- Incident infection definition: any positive anti-HCV or HCV-RNA test
- Individuals followed until a positive HCV test, or last negative test
- Incidence rate: number of incident infections/person-years of follow-up
- Also examined incidence by time period and by substance use history

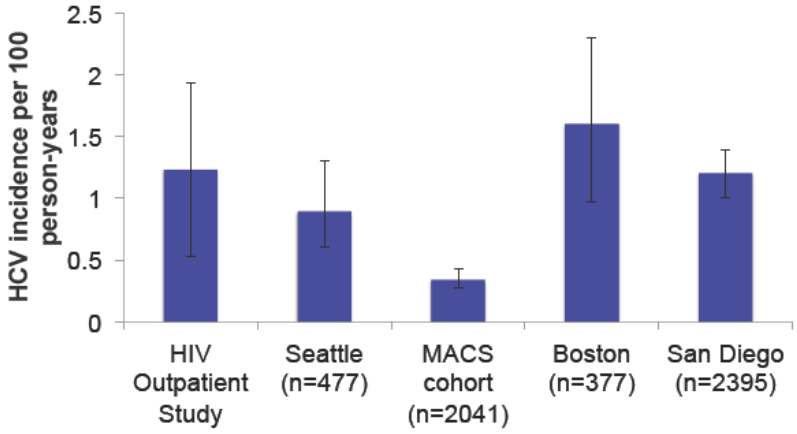
Baseline characteristics

	Total Population, N (%)
N	2,395
Age (median, IQR)	38 (31-45)
Race:	
-White	1,593 (68%)
-Black	234 (10%)
-Other	512 (22%)
Hispanic:	
-Yes	622 (26%)
-No	1,773 (74%)
IDU/Methamphetamine use (ever):	
-None	770 (32.2%)
-Meth only	1,012 (42.3%)
-IDU only	7 (0.3%)
-Meth+IDU	127 (5.3%)
-Unknown	479 (20%)

Incident HCV infection by baseline demographics

	N of event	Person Years	Incidence/100PY	CI.lower	CI.upper	IRR	p value
Overall	149	12573	1.185	1.002	1.391	-	-
Age							
≤30	37	2796	1.323	0.932	1.824	1	-
31-40	57	4755	1.199	0.908	1.553	0.906 (0.589-1.409)	p=0.642
41-50	46	3826	1.202	0.88	1.604	0.909 (0.577-1.441)	p=0.666
>50	9	1196	0.753	0.344	1.429	0.569 (0.241-1.2)	p=0.126
Race							
White	105	8202	1.28	1.047	1.55	1	-
Black	15	1254	1.197	0.67	1.974	0.934 (0.505-1.613)	p=0.807
Other	28	2918	0.96	0.638	1.387	0.75 (0.475-1.146)	p=0.176
Hispanic							
No	110	8978	1.225	1.007	1.477	1	-
Yes	39	3595	1.085	0.771	1.483	0.885 (0.598-1.287)	p=0.516
Meth/IDU use (ever)							
None	21	4424	0.475	0.294	0.726	1	-
Meth only	86	5991	1.436	1.148	1.773	**3.024 (1.860-5.132)**	**p<0.001**
IDU only	2	32	6.296	0.762	22.743	**13.167 (1.497-53.965)**	**p<0.001**
Meth+IDU	17	739	2.301	1.341	3.684	**4.896 (2.401-9.644)**	**p<0.001**

HCV primary incidence among HIV+ MSM in US cohorts



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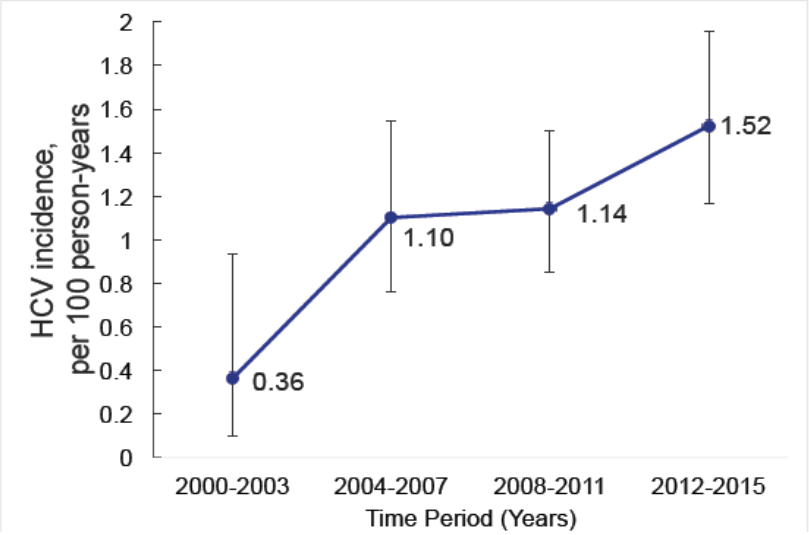
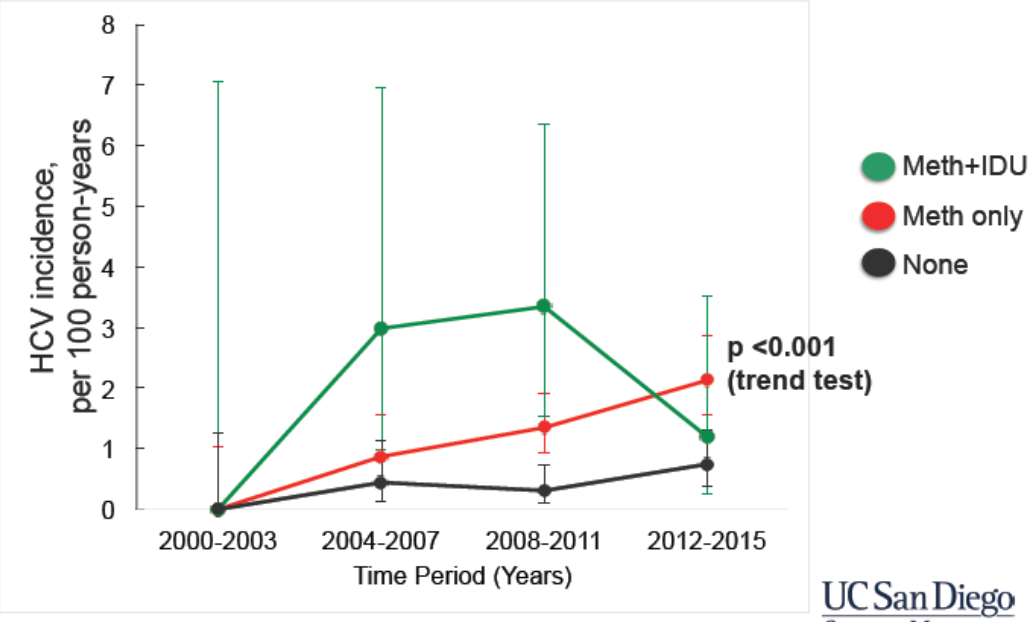
Increasing HCV primary incidence among HIV+ MSM in San Diego



test for trend p=0.003

HCV incidence among HIV+ MSM over time by substance use history



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11 Chaillon A, et al. In preparation

HCV reinfection incidence among HIV+ MSM

Population:

- HIV+ MSM attending Owen Clinic
- Sustained viral response (SVR) with HCV therapy between 2006 and 2014
- At least one subsequent HCV-RNA test before 2016

Analysis:

- SVR definition: negative HCV-RNA 24 weeks following end of treatment
- Start of follow up: end of treatment
- Reinfection definition: positive HCV-RNA following SVR or within 24 weeks of end of treatment with a genotype switch
- Date of reinfection: first newly positive HCV-RNA

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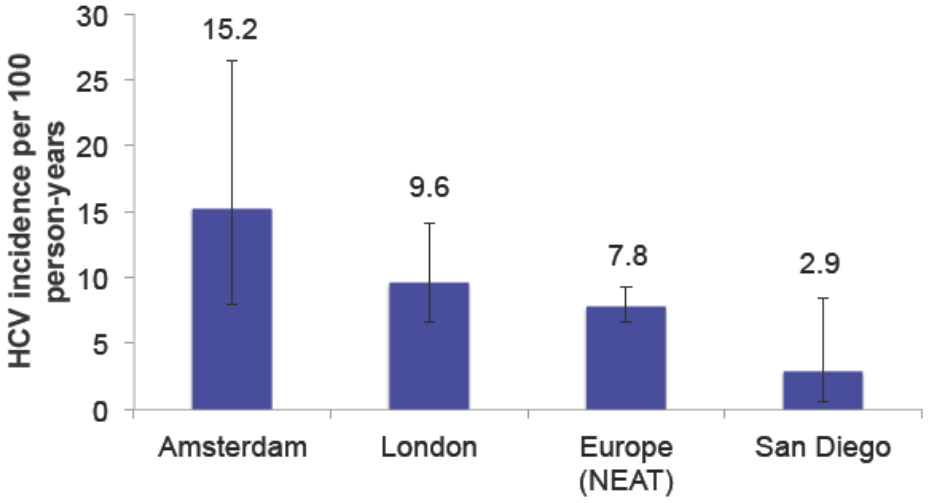
12

HCV reinfection among HIV+ MSM in San Diego

	All Individuals with SVR	Individuals with HCV Reinfection
N	43	3
Age, median (IQR)	50 (42-54)	33 (32-51)
Follow-up duration in years, median (IQR)	1.8 (1.1-3.5)	2.7 (2.5-5.9)
HCV Genotype, n (%):		
-1	34/43 (79.0%)	3/3 (100%)
-2	4/43 (9.3%)	0
-3	4/43 (9.3%)	0
-4	1/43 (2.3%)	0
Liver Fibrosis, n (%):		
-F0	3/43 (7.0%)	0
-F1	17/43 (39.5%)	3/3 (100%)
-F2	8/43 (18.6%)	0
-F3	6/43 (14.0%)	0
-F4	9/43 (20.9%)	0

Reinfection incidence: 2.89/100 py (95%CI 0.6-8.44)

HCV reinfection incidence after SVR among HIV+ MSM



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