Fall in HCV incidence in HIV+ MSM in London following expansion of access to DAA therapy

Lucy Garvey, Colette Smith, Christof Stingone, Indrajit Ghosh, Alison Rodger, Lakshmi Jain, Chandni Sood, Tabitha Mahungu, Carolyn Freeman, Rageshri Dhairyawan, Sadna Ullah, Subathira Dakshina, Filippo Ferro, Laura Waters, Ashley Brown, Chloe Orkin, Graham Cooke, Sanjay Bhagani

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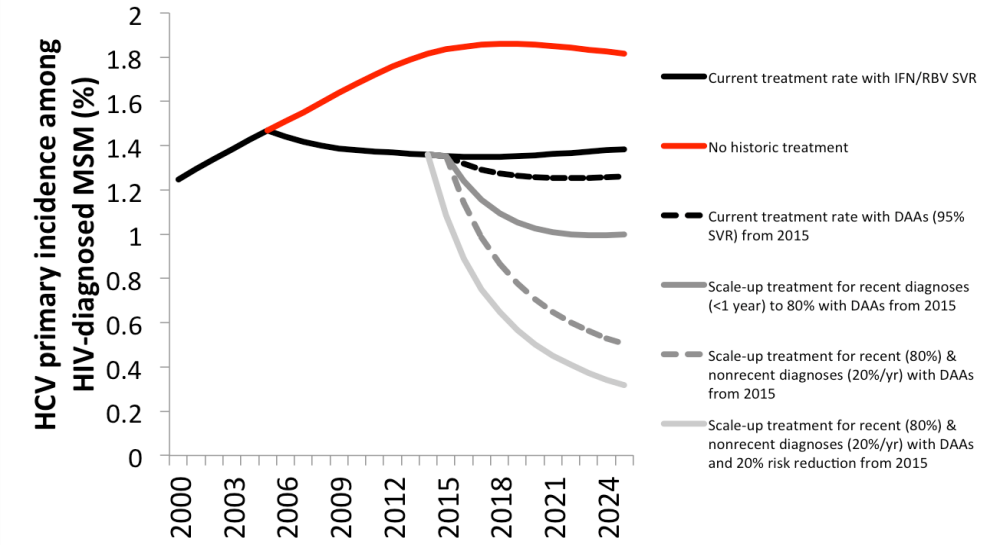
Background

- Transformation of hepatitis C (HCV) care with directly acting antivirals (DAAs), making effective and tolerable treatment possible
- WHO targets for elimination of HCV as a public health threat by 2030, including a 90% reduction in new HCV infections[1]
- BHIVA - aims to cure HCV in 100% of HIV/HCV patients by 2021[2]

[1] *https://www.who.int/hepatitis/publications/global-hepatitis-report2017/en [accessed Feb 2018]*
[2] *https://www.bhiva.org/BHIVA-calls-for-accelerated-efforts-to-prevent-and-cure-hepatitis-C-infection, BHIVA HCV Micro-elimination statement, 10 October 2018*

Predicted impact of scaling up treatment in HIV+MSM



Martin N *et al* CID 2016

Aims and Setting

- Use real world experience to examine trends in incidence of acute HCV in HIV+ MSM between 2013-2018 (pre and post DAAs)
- 4 central London HIV clinics which provide care for over 7000 HIV+ MSM

Royal Free NHS Trust

Imperial College Healthcare NHS Trust

Mortimer Market Centre

Barts Health NHS Trust

HCV Treatment Access

2015: *NHS England (NHSE)* DAA programme; decompensated cirrhotics priority

2016-date: access for all HCV disease stages; priority if significant fibrosis; monthly allocations per region; long waiting lists in some areas

Exceptions to NHSE treatment remain:

- Acute HCV infection not permitted until >6-months viraemia
- 2nd course of DAAs not permitted for HCV reinfection

All 4 centres also research active during the study period:

2016-2018: acute HCV/HIV (including TARGET 3D, REACT) and chronic non-cirrhotic HCV/HIV clinical trials (including STOP HCV)

Aims and Setting

Period of study: July 2013- June 2018; data reported by 6-month interval

Data collected:

- Number of acute HCV episodes: first and subsequent (reinfections)
- Number of HIV+MSM under active FU (denominator)
- Type of HCV treatment selected
- Timing of treatment initiation relative to acute HCV diagnosis

Definitions[1,2]:

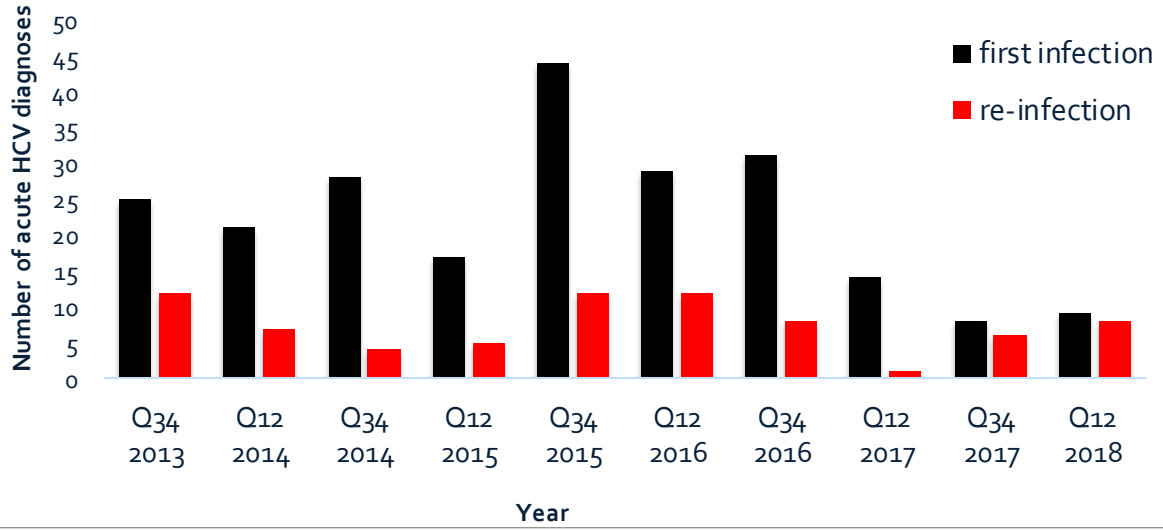
- **Acute HCV:** positive HCV RNA test plus a negative anti-HCV test within 12 months; or positive HCV RNA test with an acute ALT rise and no other identifiable cause
- **Acute HCV reinfection:** positive HCV RNA test with prior confirmed spontaneous clearance, SVR following HCV treatment or with evidence of genotype switch

[1] *European AIDS Treatment Network (NEAT) Acute Hepatitis C Infection Consensus Panel AIDS. 2011 Feb 20;25(4):399-409.*
[2] *EASL Recommendations on Treatment of Hepatitis C 2018. J Hepatol. 2018 Aug;69(2):461-511*

Results: July 2013- June 2018

301 acute HCV infections

226 first infections and 75 re-infections



Results: Parameters at time of HCV diagnosis

Number (n)	301	
Age, median [IQR]	41 years	[34,48]
On ART at time of acute HCV episode, n (%)	271 (90%)	81% (2013) to 100% (2018)
HIV RNA <50 c/mL at time of acute HCV	262 (87%)	73% (2013) to 94% (2018)

HCV genotype:

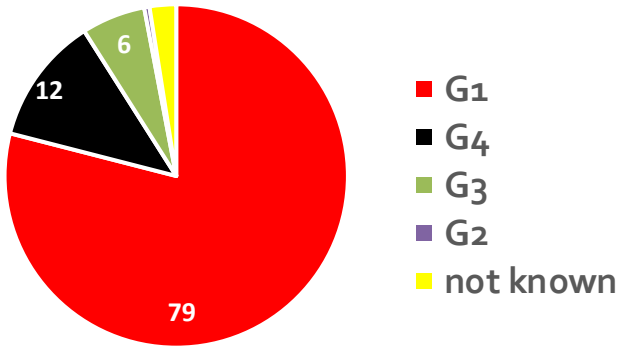
G1: 79%

G4: 12%

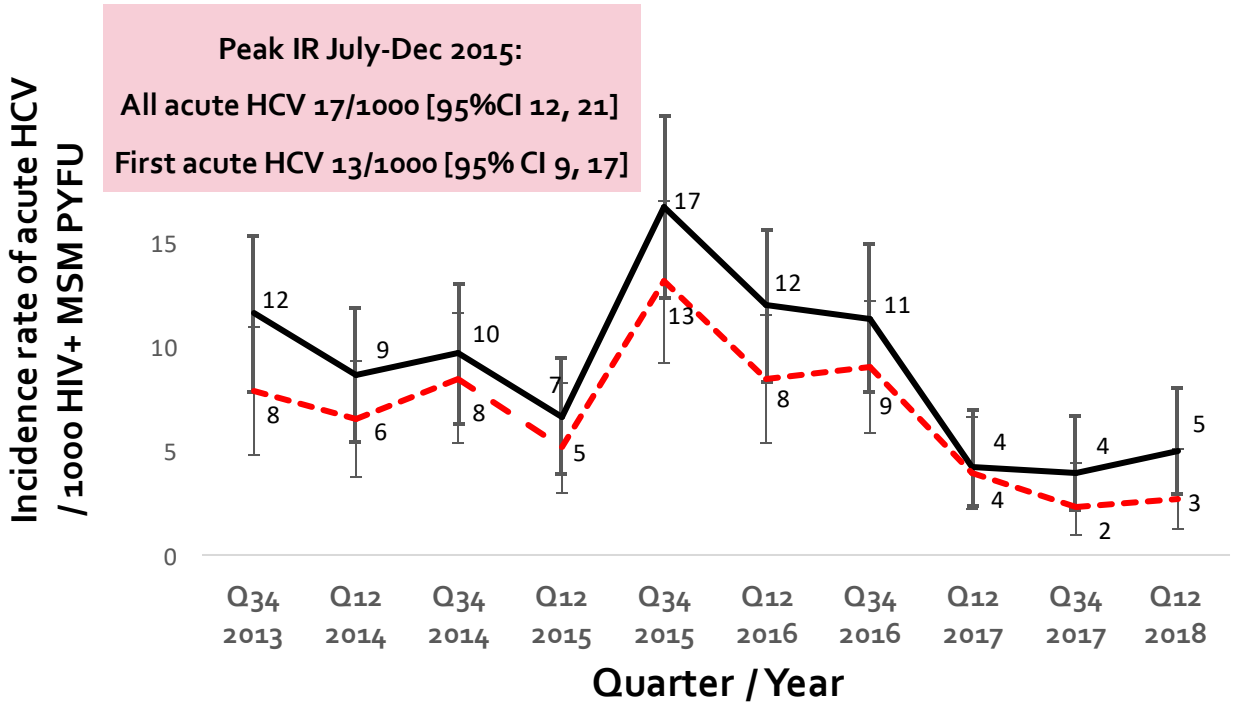
G3: 6%

G2: 0.5%

Not known (n=8) includes spontaneous clearers (n=6) LTFU (n=2)



Results: Incidence Rate/1000 HIV+MSM PYFU



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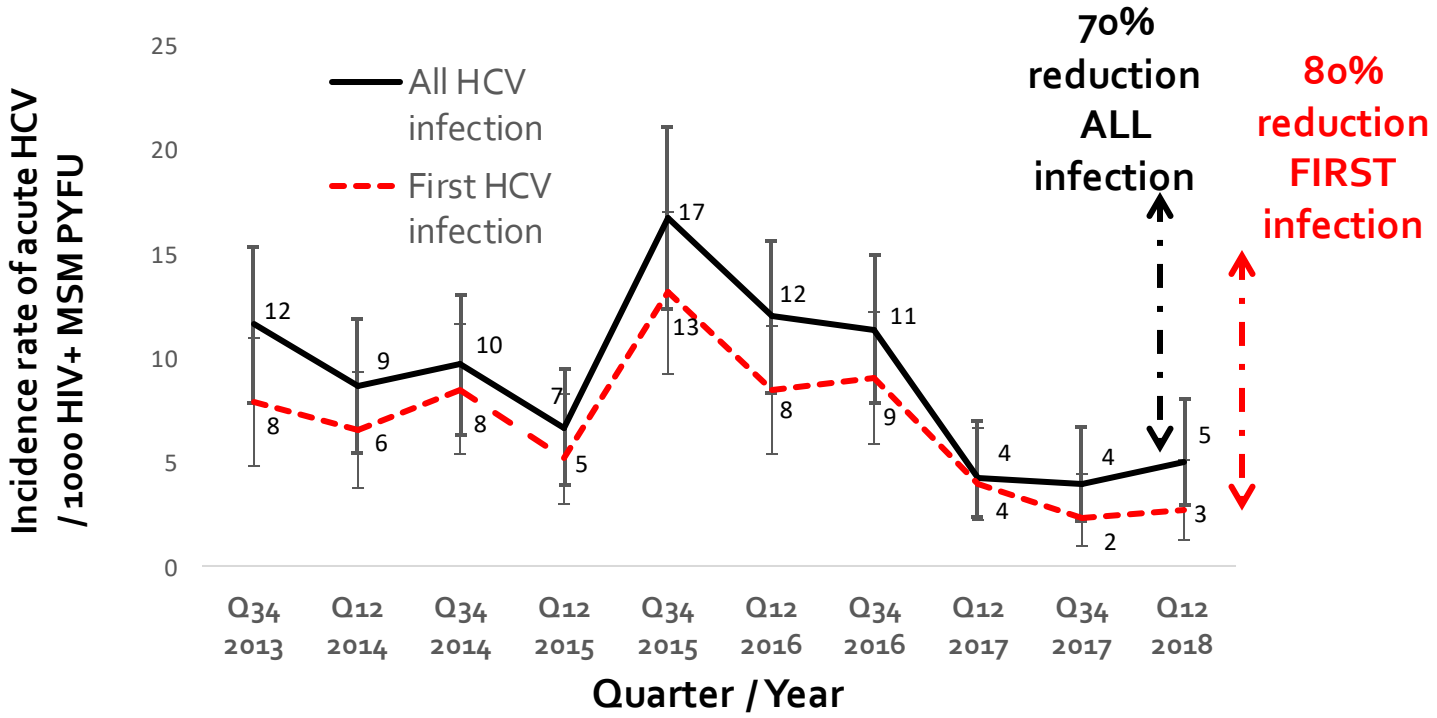
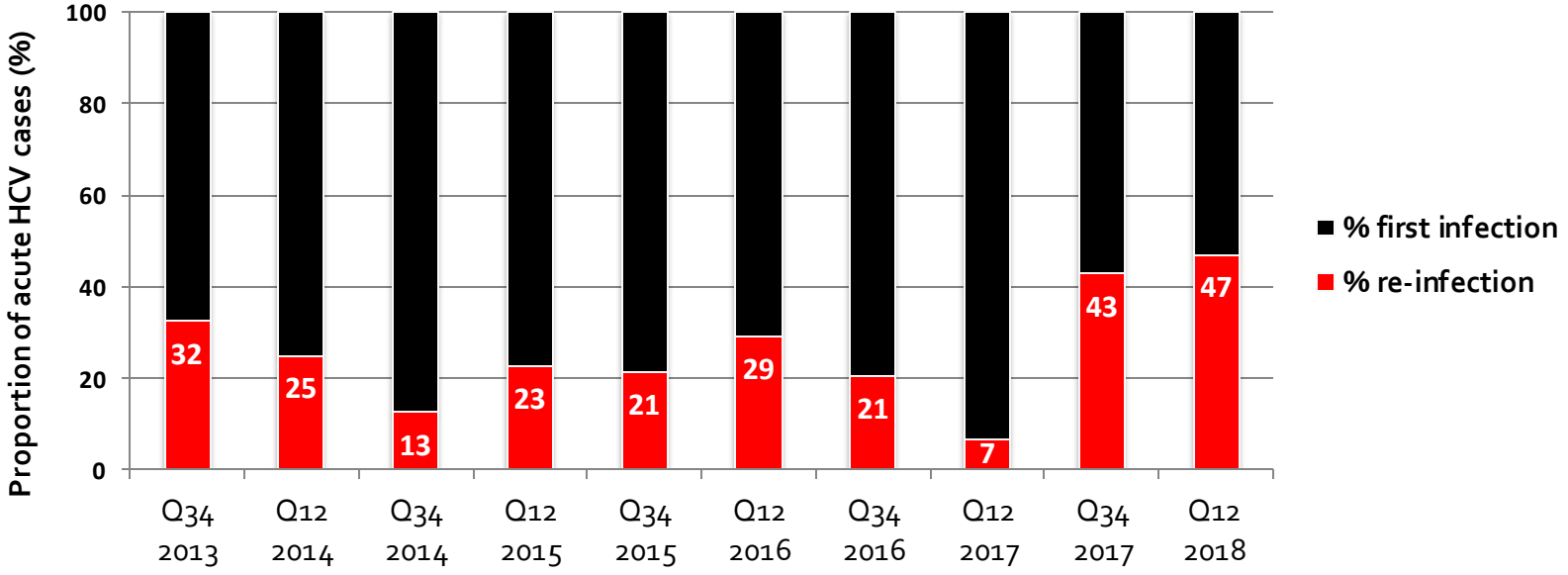
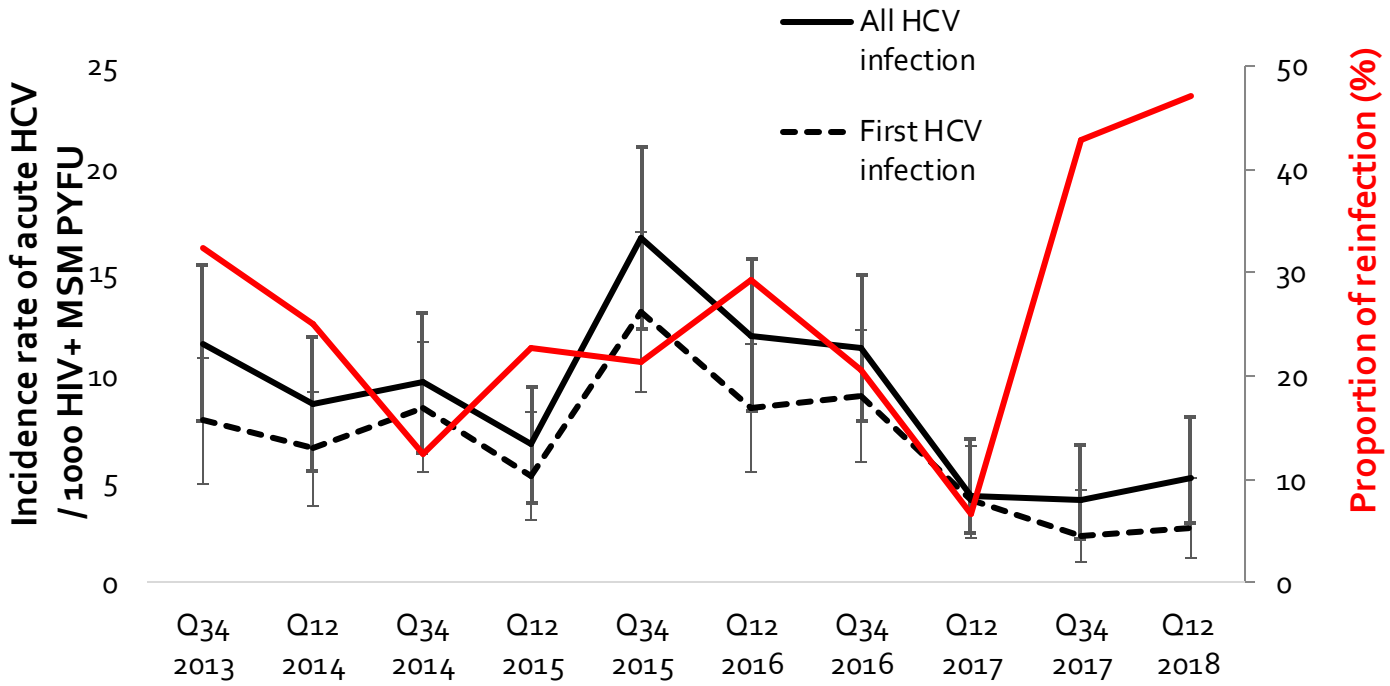


Results: Reinfection proportion

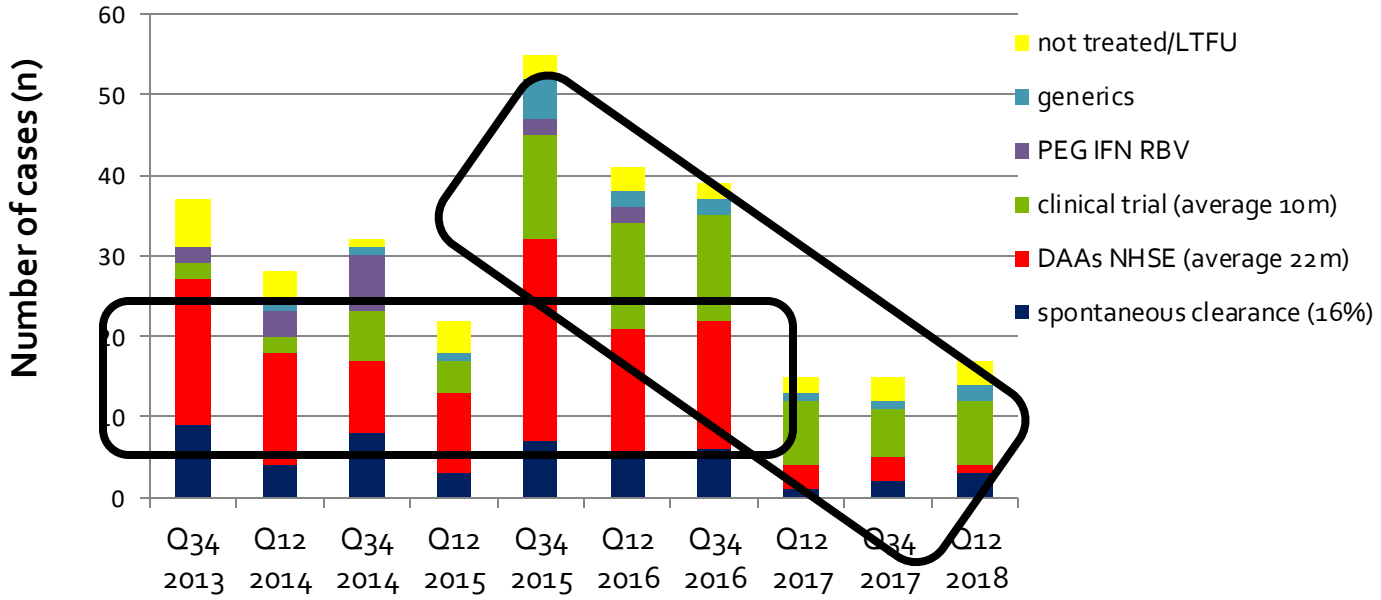


Reinfection (n)	12	7	4	5	12	12	8	1	6	8
First infection (n)	25	21	28	17	44	29	31	14	8	9

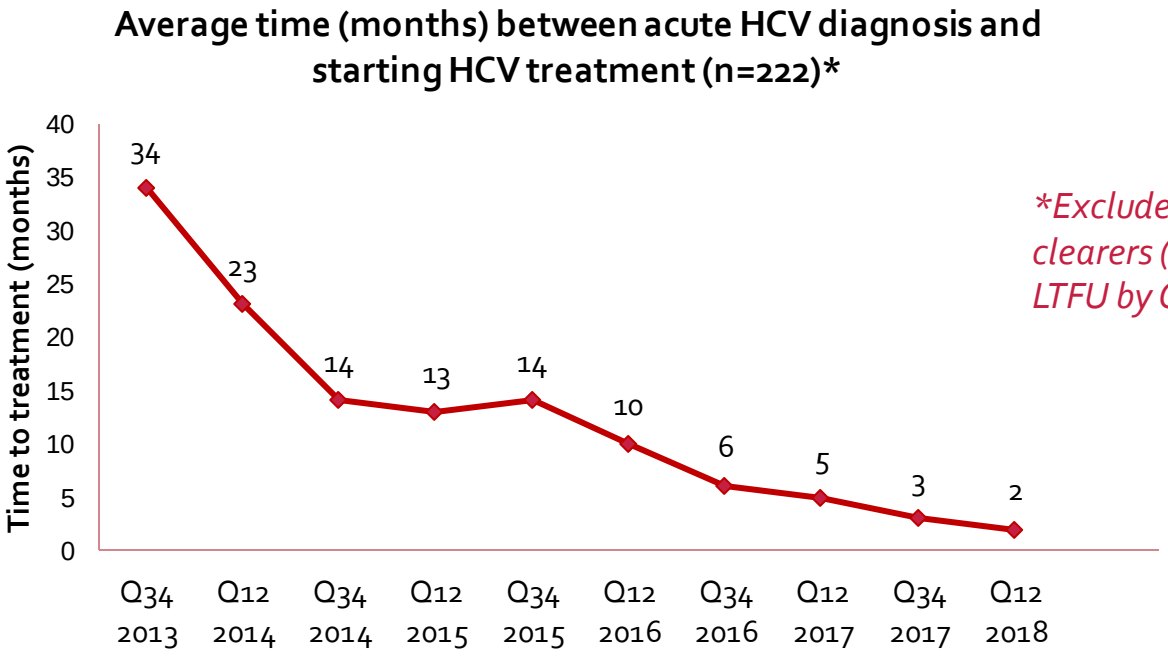
Results: Incidence and reinfection



Results: HCV Treatment pathway



Results: HCV time to start treatment



**Excluded spontaneous clearers (n=48), non-treated or LTFU by Q3 2018 (n=31)*

Limitations

- Data collected retrospective and not part of a formal study process
- HIV+MSM in one city therefore findings may not be replicated in other settings

  - HCV clinical trials available in all centres which may not be representative
- HCV transmission dynamics in national/international networks and HCV in HIV-neg MSM on PreP in London not evaluated

Conclusions

- In this large London cohort of HIV+MSM, we have observed a sharp decline in new acute HCV diagnoses since peak in late 2015 with no change to screening practices

- Peak in 2015 likely to represent a fall-off in rates of IFN-based treatments as DAAs awaited; 'warehousing effect' which may have increased HCV transmission by longer duration of viraemia

- **After this peak, observed fall in incidence of 70% overall and 80% first acute HCV infection**

Conclusions

Decline in incidence coincides with:

- Wider prescribing of HCV therapies via NHSE DAA programme
- Reduction in time to treatment of acute HCV cases

  -largely driven by clinical trial availability

- Possible improvements in risk-reduction strategies (not captured)?

  -rates of syphilis, gonorrhoea and chlamydia increased over same time period

Conclusions

- **Reduction in incidence falls short of WHO target to reduce by 90%**

  This would require IR to fall to 1.7/1000 HIV+MSM PYFU

- **Reinfection remains high and may be increasing:**

  Highlighting ongoing need to promote and improve risk reduction strategy and design appropriate screening policies in HIV+ and HIV - MSM

Without expanding access of DAAs via NHSE (to include early months of infection and reinfection), progress in reducing incidence may plateau and the opportunity for HCV micro-elimination in HIV+ MSM may be lost

Contributors:

Patients and staff from HIV Clinics of Royal Free Hospital NHS Trust, Mortimer Market Clinic, Barts Health NHS Trust and Imperial College Healthcare NHS Trust in London

Sanjay Bhagani

Graham Cooke

Colette Smith

Chloe Orkin

Alison Rodger

Christof Stingone

Indrajit Ghosh

Sadna Ullah

Lakshmi Jain

Chandni Sood

Tabitha Mahungu

Carolyn Freeman

Subathira Dakshina

Filippo Ferro

Laura Waters

Ashley Brown

Rageshri Dhairyawan

BHIVA British HIV Association

Imperial College London

NIHR | National Institute for Health Research

NHS Imperial College Healthcare NHS Trust

NHS Central and North West London NHS Foundation Trust

NHS Royal Free London NHS Foundation Trust

NHS Barts Health NHS Trust