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

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NHS Imperial College Healthcare NHS Trust
NHS Central and North West London NHS Foundation Trust
NHS Royal Free London NHS Foundation Trust

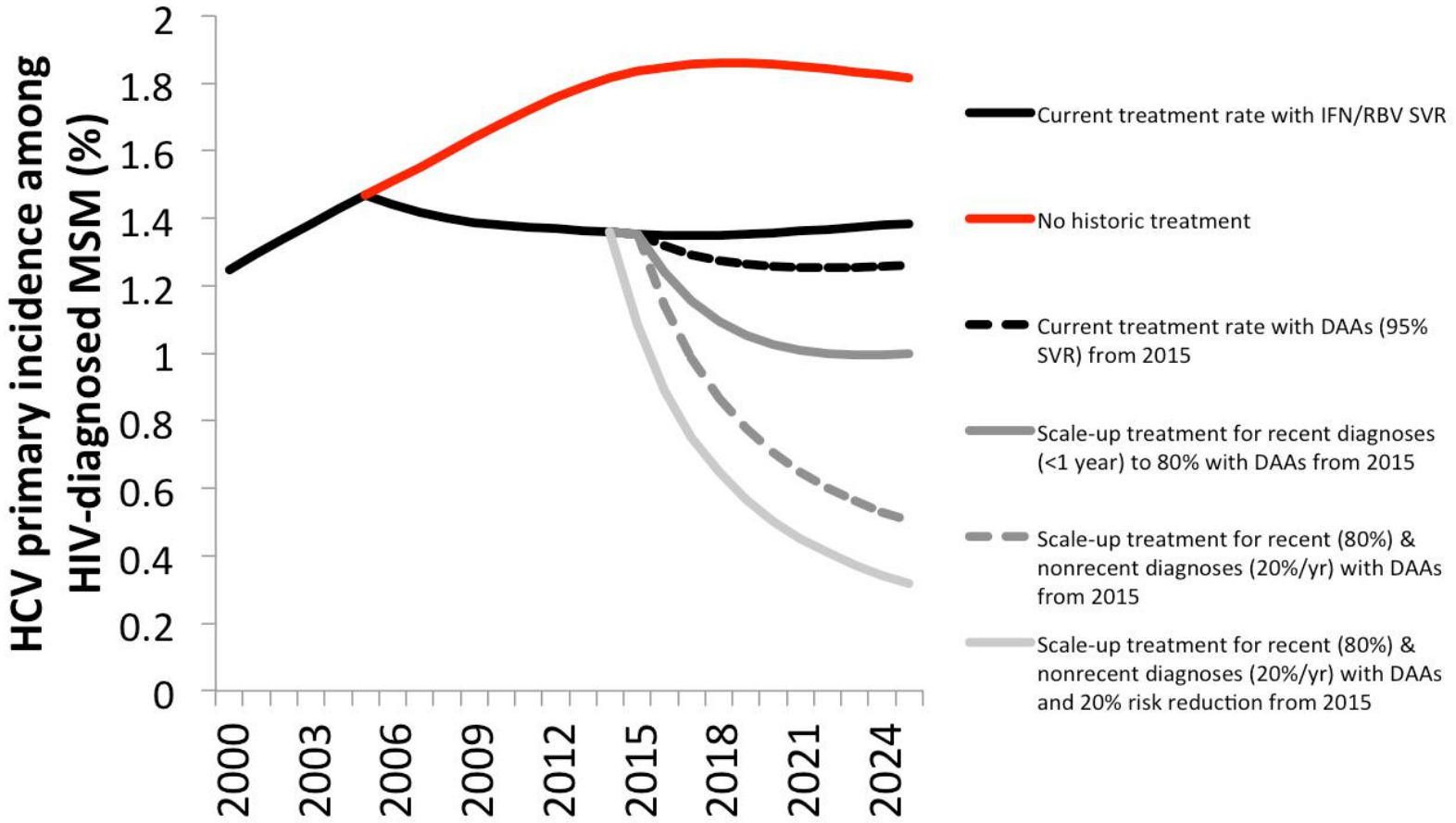
Background

- 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)
- 3 central London HIV clinics which provide care for over 6000 HIV+ MSM

Royal Free NHS Trust

Imperial College Healthcare NHS Trust

Mortimer Market Centre

HCV Treatment Access

2015: *NHS England (NHSE)* DAA treatment 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 3 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)

Methods

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

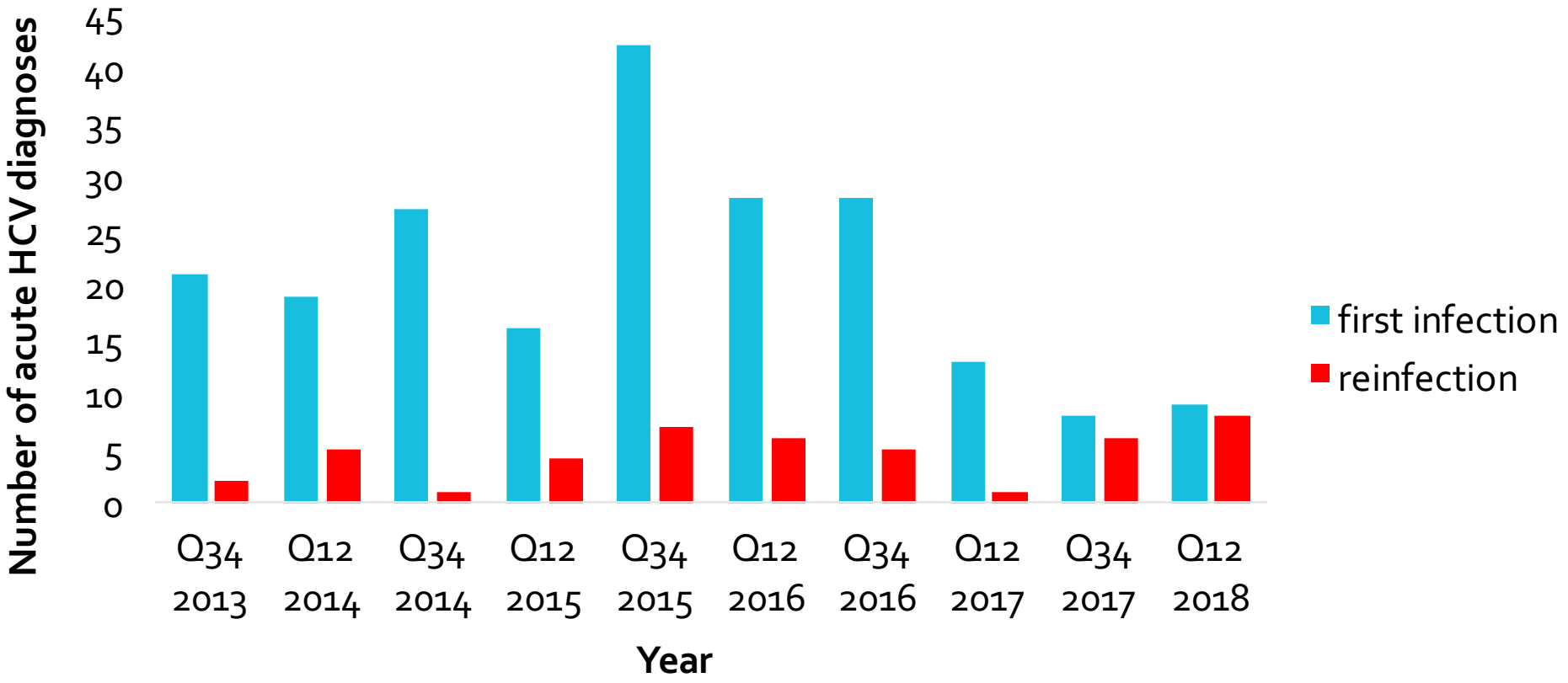
Definitions[1,2]:

- **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

- 256 acute HCV diagnoses
- 211 first infections and 45 reinfections



Results: Parameters at time of acute HCV diagnosis

Number (n)	256	
Age, median [IQR]	43 years	[35,48]
On ART at time of acute HCV episode, n (%)	230 (90%)	83% (2013) to 100% (2018)
HIV RNA <50 c/mL at time of acute HCV	217 (85%)	83% (2013) to 94% (2018)

<u>HCV genotype:</u>

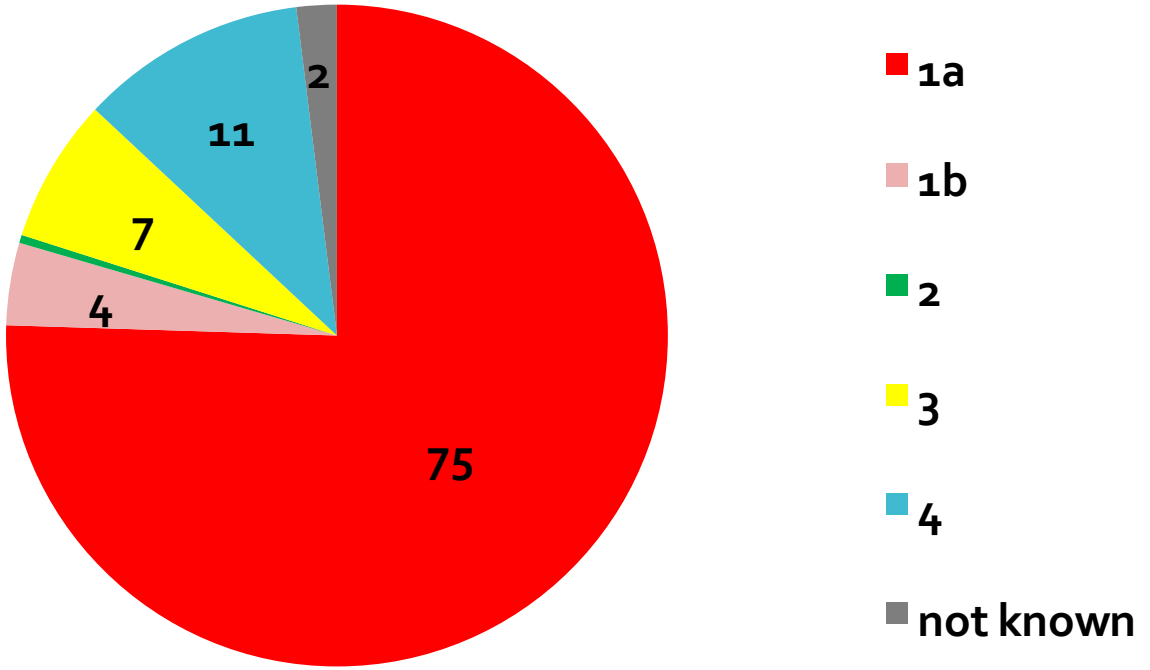
G1a: 75%

G4: 11%

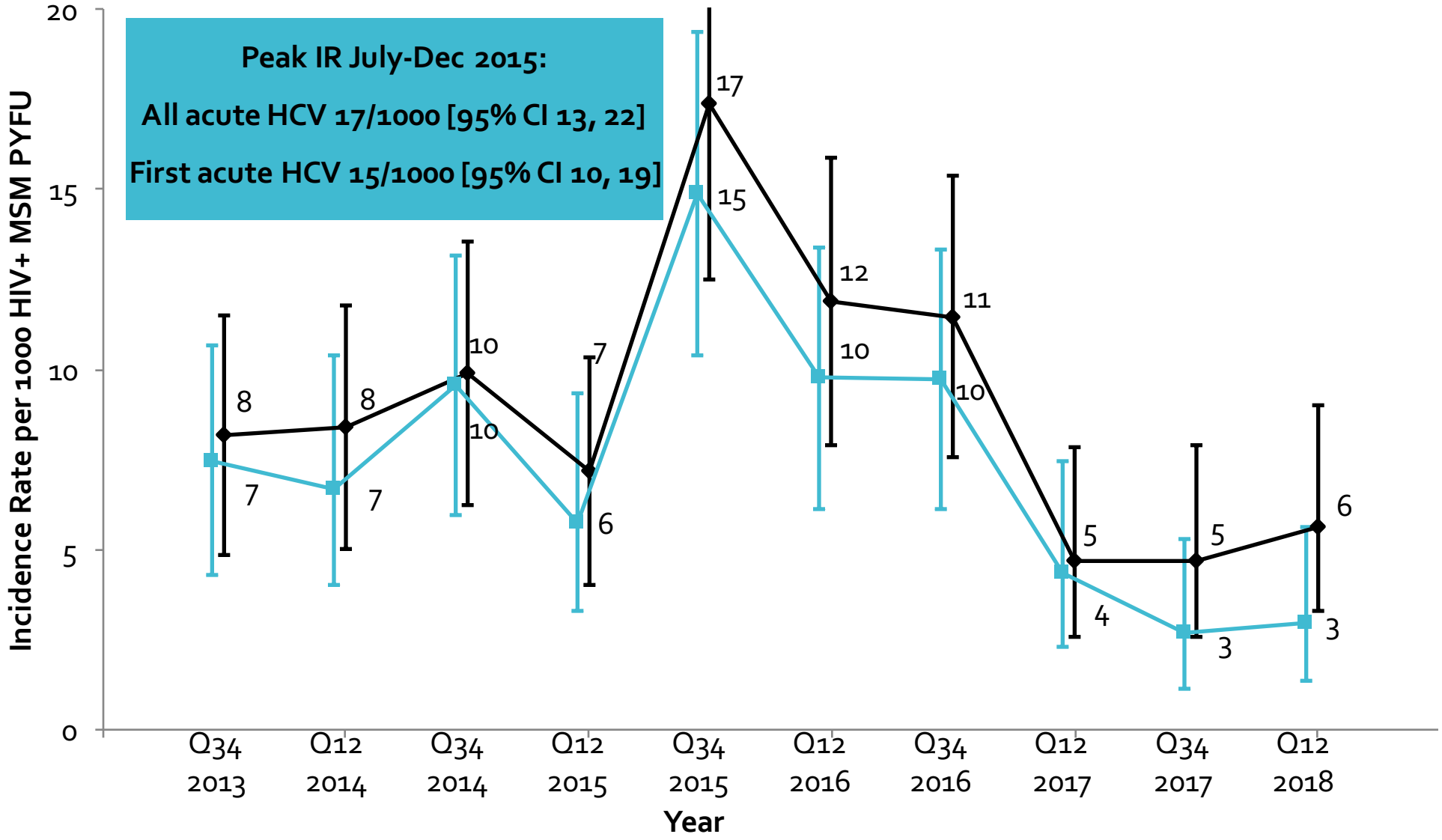
G3: 7%

G1b: 4%

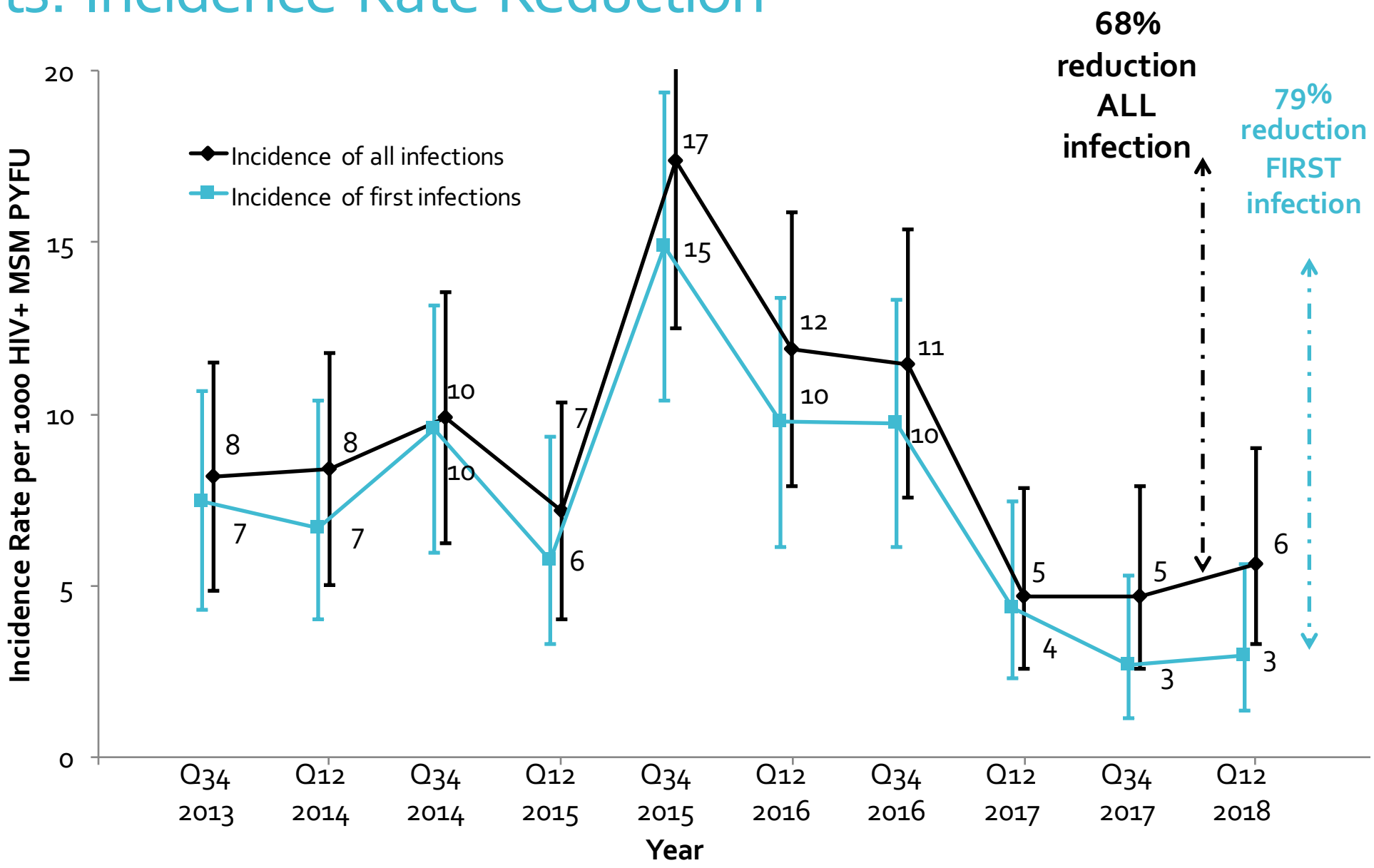
Not known (n=5) includes spontaneous clearers (n=4) LTFU (n=1)



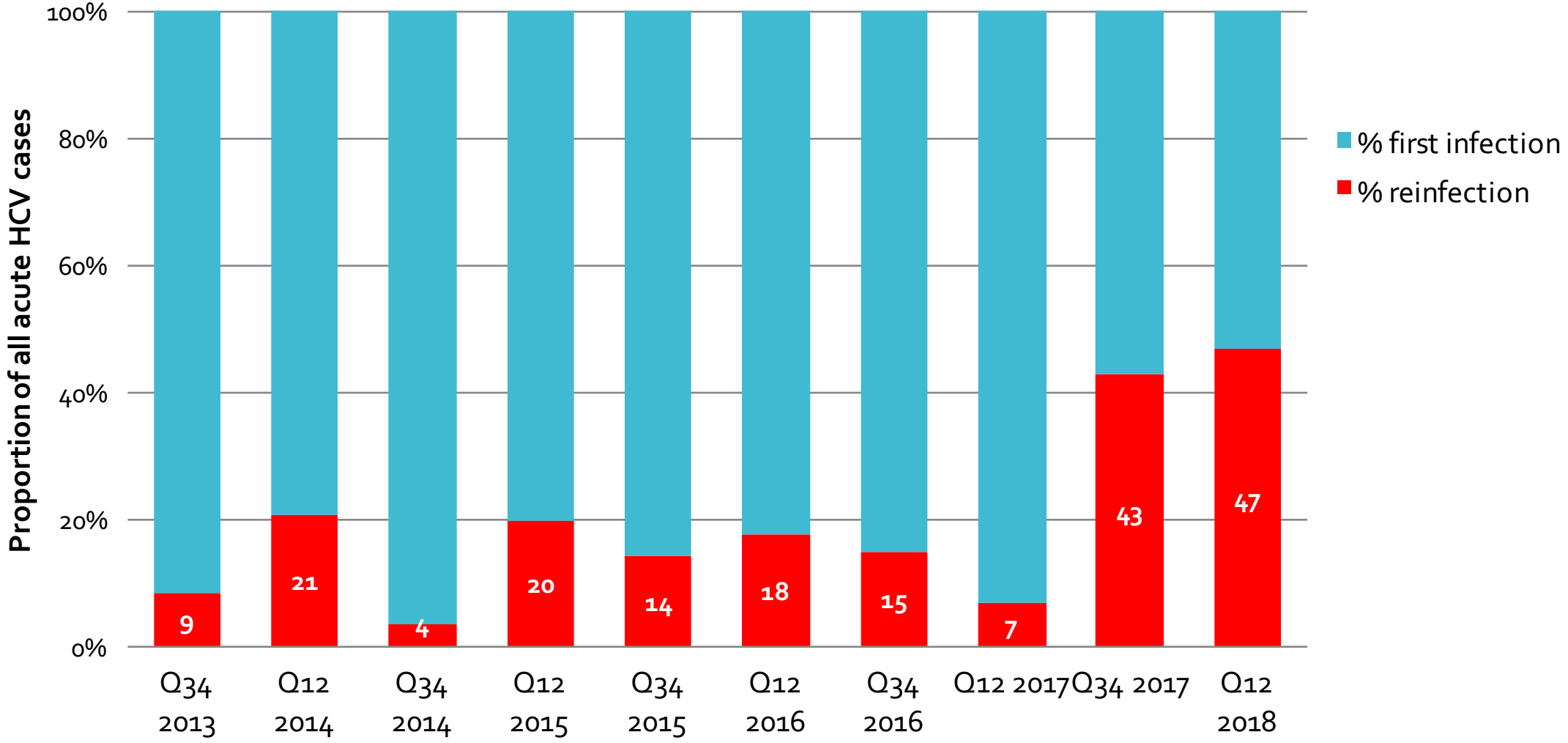
Results: Incidence Rate/1000 HIV+MSM PYFU



Results: Incidence Rate Reduction

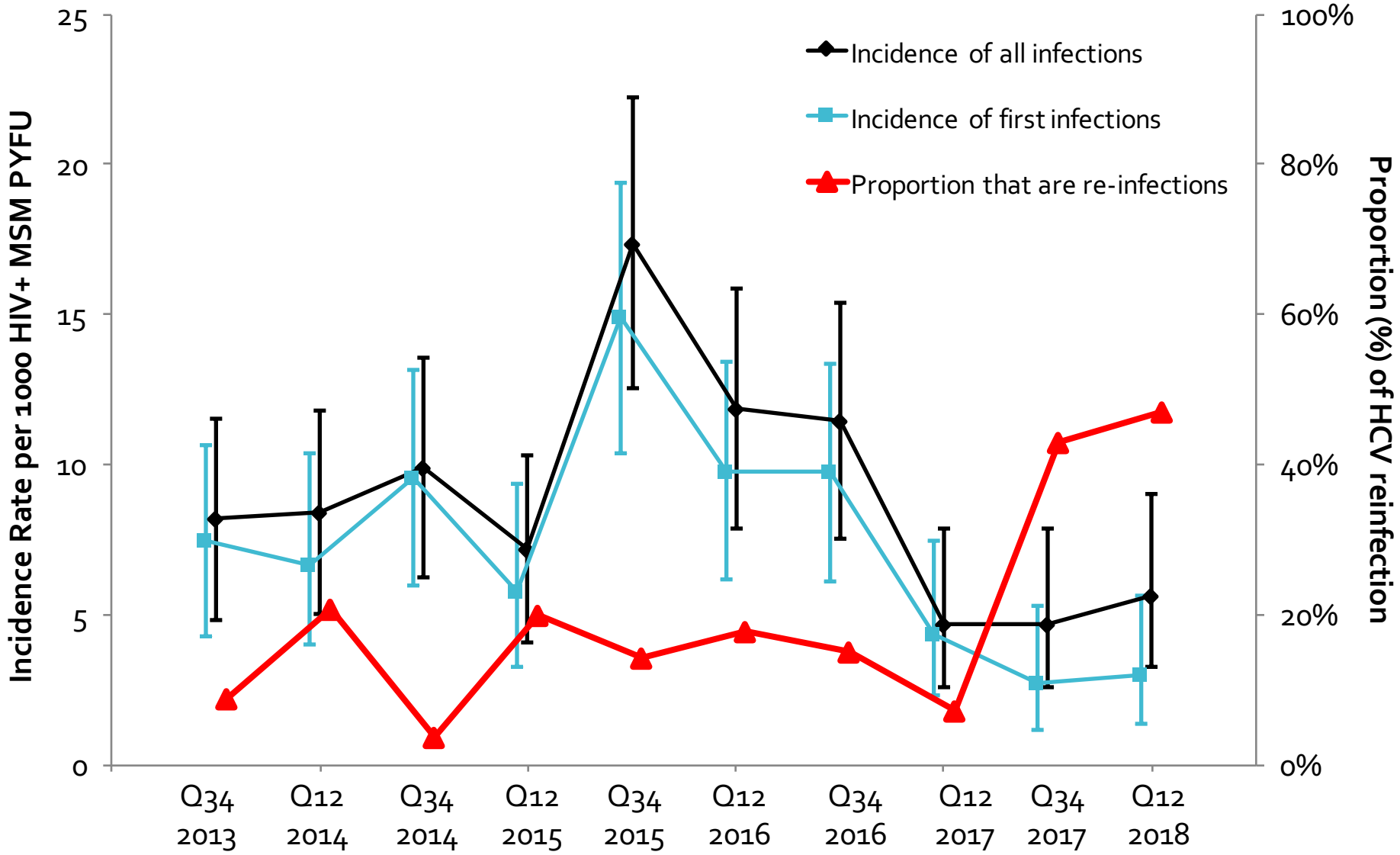


Results: Reinfection proportion of acute HCV diagnoses

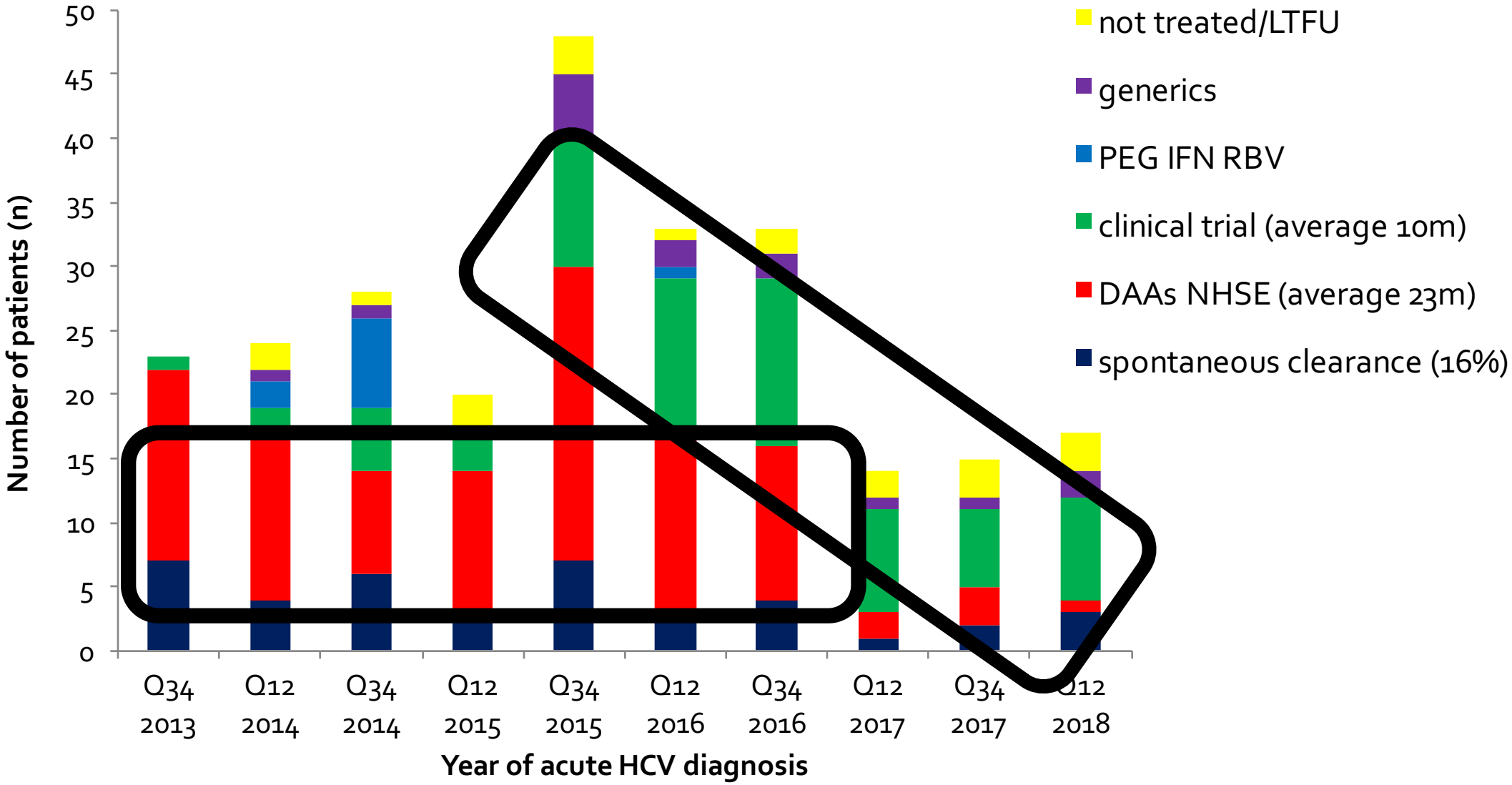


Reinfection (n)	2	5	1	4	7	6	5	1	6	8
First infection (n)	21	19	27	16	42	28	28	13	8	9

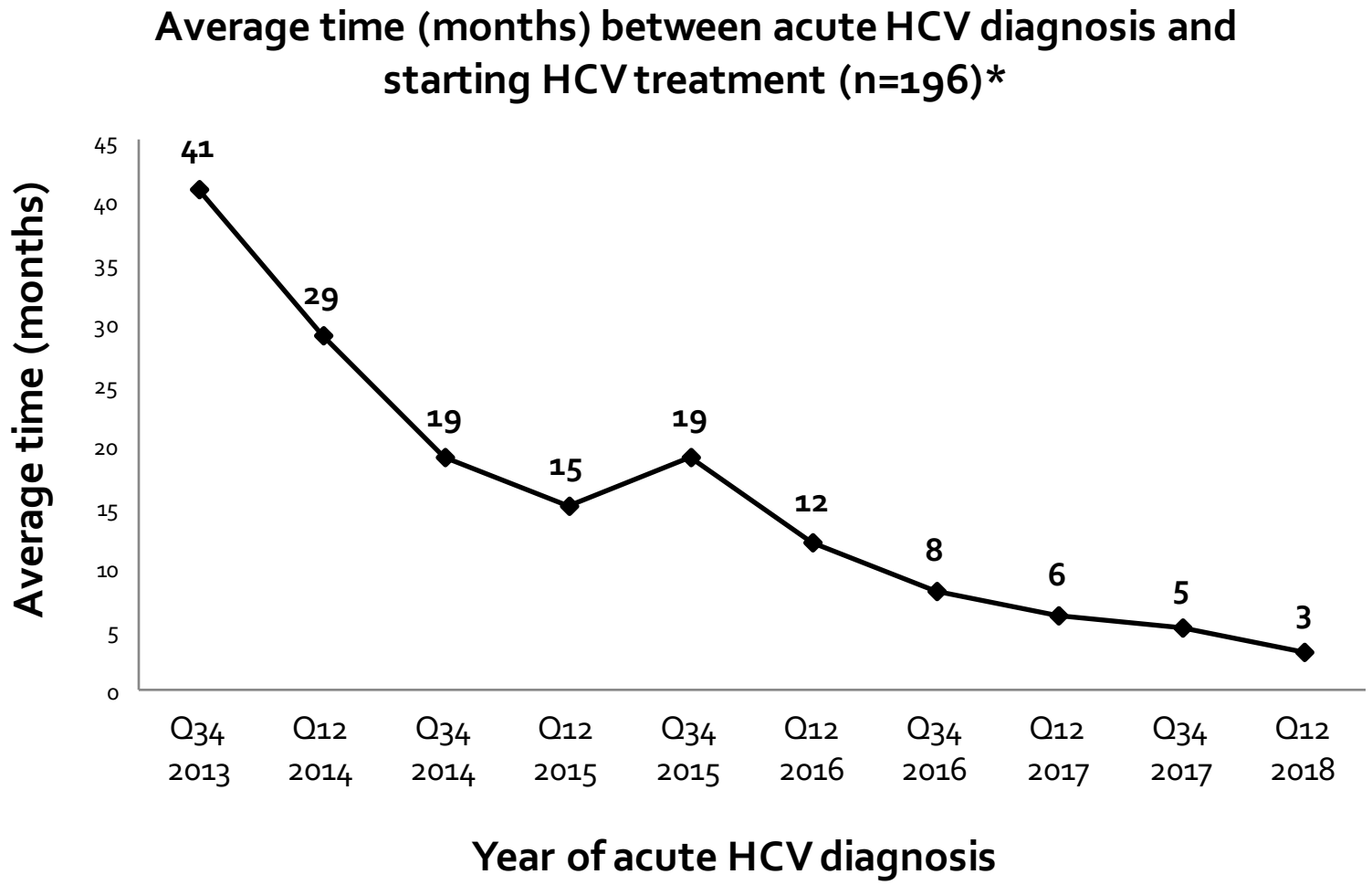
Results: Incidence and reinfection proportion



Results: HCV treatment pathway



Results: HCV treatment timing



**Excluded spontaneous clearers (n=40), non-treated or LTFU by Q3 2018 (n=20)*

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

- **Reduction in acute HCV in HIV+MSM since 2015 peak:**
  - Peak likely to represent fall off in IFN-based therapies, 'warehousing effect'
  - Reduction coincides with wider access to DAAs and shorter time to treatment

- **Reduction in incidence falls short of WHO target to reduce new infections by 90%**
  - This would require IR to fall to 1.7/1000 HIV+MSM PYFU

- **Reinfection remains high and maybe increasing:**
  - Highlighting ongoing need to promote and improve risk reduction strategy and design appropriate screening policies in HIV+ and HIV- MSM

Conclusions

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 and Imperial College Healthcare NHS Trust in London

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If clinics wish to collaborate to extend national dataset of incident HCV infection and monitor progress towards elimination in HIV+ population,

please contact:

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on behalf of BHIVA Microelimination Group

BHIVA
British HIV Association