

Hepatitis C Reinfection Post Scale-Up of DAAs Among People Who Inject Drugs in Scotland

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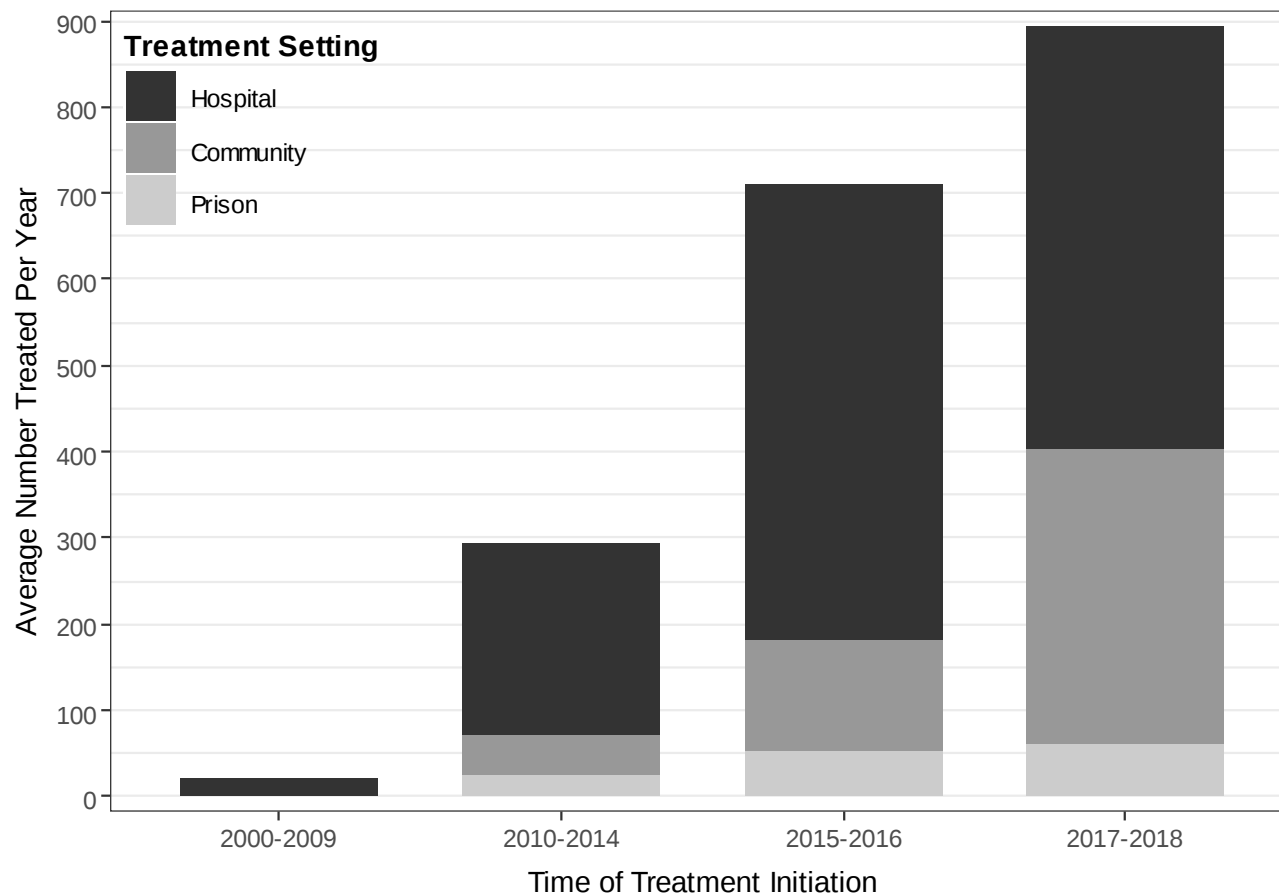
Background

- **HCV elimination:** WHO set a target of reducing HCV incidence by 80% by 2030
 - Scotland aims to achieve targets by 2024
- PWID are a priority group
 - Scaling up DAA treatment to PWID is viewed as a key strategy
- Uncertainty around reinfection post-DAAs

Treatment Scale-Up

Two pre-DAA periods: 2000-2009, 2010-2014

Two DAA periods: 2015-2016, 2017-2018

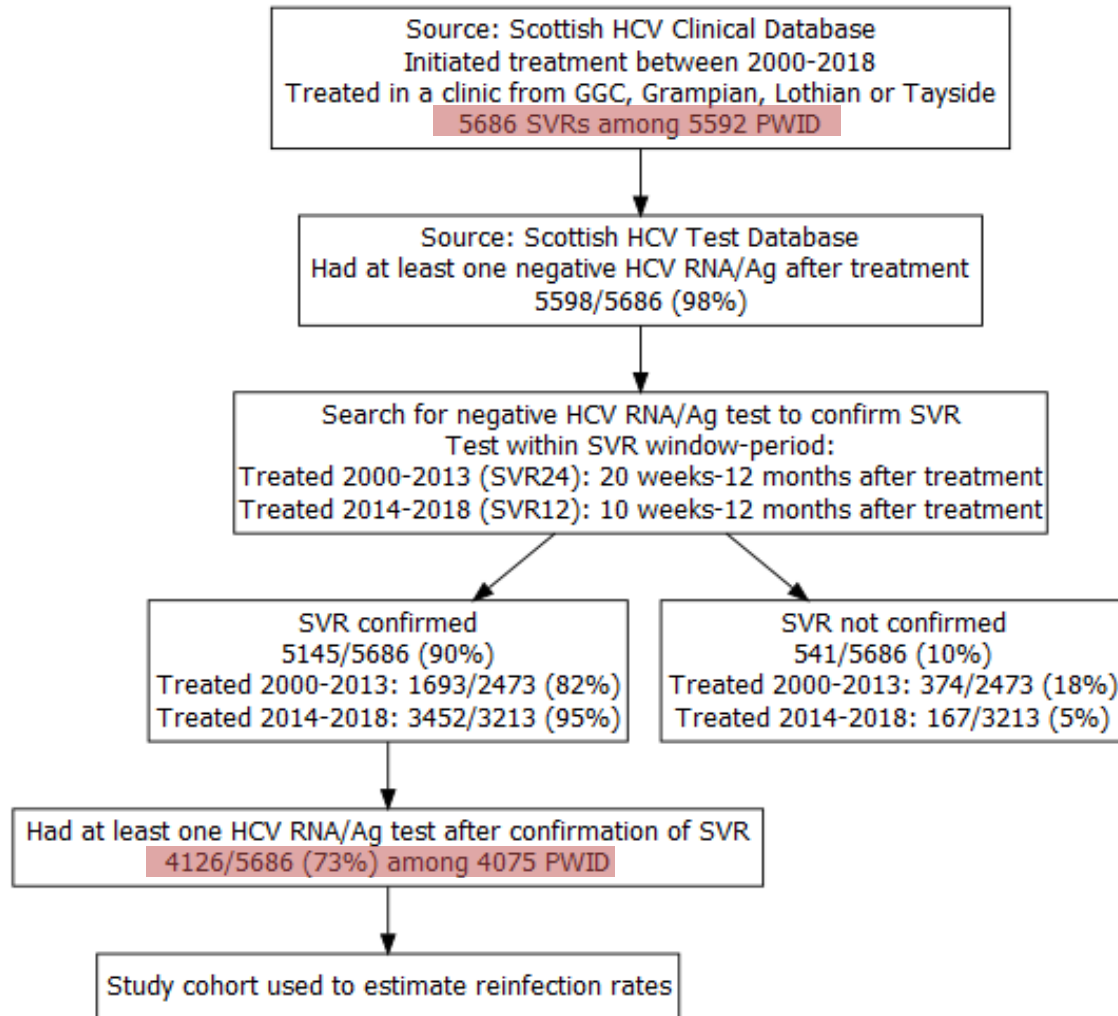


Aims

1. Compare reinfection rates pre and post DAAs and by setting of treatment
2. Estimate the extent of undiagnosed reinfection in the DAA period

Definition: positive HCV RNA/Ag test during follow-up post-SVR

Study Cohort



Reinfection Rates

	Reinfections (col %)	Person-Years (PY)	Reinfection rate per 100 PY (95% CI)
Total	361	9196	3.9 (3.5–4.4)
Time of Treatment Initiation			
2000-2009	48 (13.3)	3127	1.5 (1.1–2.1)
2010-2014	144 (39.9)	3424	4.2 (3.5–5.0)
2015-2016	95 (26.3)	1803	5.3 (4.3–6.5)
2017-2018	74 (20.5)	843	8.8 (6.9–11.1)
Treatment Setting			
Hospital	197 (54.6)	7695	2.6 (2.2–3.0)
Community	101 (28.0)	1061	9.5 (7.8–11.7)
Prison	63 (17.5)	440	14.3 (11.1–18.5)

Undiagnosed Reinfection: Retesting

Time of treatment initiation	No. tested 0-11 months post-SVR / No. with SVR	No. tested 12-23 months post-SVR / No. with ≥ 12 months follow-up possible	No. tested ≥ 24 months post-SVR / No. with ≥ 24 months follow-up possible	No. tested any time post-SVR / No. with SVR
2015-2016	1067/1426 (75%)	468/1389 (34%)	484/1342 (36%)	1242/1426 (87%)
2017-2018	1133/1787 (63%)	349/1372 (25%)	37/331 (11%)	1252/1787 (70%)
2015-2018	2200/3213 (68%)	817/2761 (30%)	521/1673 (31%)	2494/3213 (78%)

Undiagnosed Reinfection: Estimates

Assumption: risk of reinfection in unobserved periods is the same as in observed periods

	Observed Data			Estimated from Simulation		
	SVR events	Diagnosed reinfections	PY	Undiagnosed reinfections (Median, 95% CI)	Total reinfections (Median, 95% CI)	PY (Median)
Total	2401	169	2646	200 (174-225)	369 (343-394)	6416
Time of Treatment Initiation						
2015-2016	1185	95	1803	98 (80-114)	193 (175-209)	4057
2017-2018	1216	74	843	102 (84-120)	176 (158-194)	2359
Treatment Setting						
Hospital	1633	68	1871	82 (66-99)	150 (134-167)	4533
Community	610	66	608	82 (66-98)	148 (132-164)	1507
Prison	158	35	167	35 (26-45)	70 (61-80)	376

Conclusions

- Reinfection increased in the early phase of treatment scale-up with DAAs among PWID
- Community-based treatment pathways are reaching high risk groups
- Levels of retesting were low beyond the first year
- Considerable numbers of reinfections may have gone undetected
- Efforts to ensure prompt diagnosis of reinfection and retreatment are crucial

Thanks for Listening
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