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Background

- ◆ In England, remand prisons typically have a short period of time in which to address the healthcare need of residents before they are released or sentenced. Around 90% of HCV cases in the UK can be attributed to illicit injecting drug use. There is a strong association between recent injecting drug use and acquisitive crime with 40% of people in prison believed to have injected drugs prior to arrest¹.
- ◆ Whilst uptake of HCV point-of-care antibody testing has been optimised with high resident acceptance in several remand prisons, HCV RNA testing can take 1-2 weeks, which slows a patient's linkage to treatment and increases risk of attrition.
- ◆ Historic data suggests that only one third of those who test HCV antibody positive were tested for HCV RNA².
- ◆ The uptake of national HCV testing in Practice Plus Group prison sites has significantly increased from 29.3% to 88.2% (January 2019 – July 2022).

Objective

- ◆ To utilise point-of-care HCV RNA testing using the GeneXpert[®] device (GeneXpert[®]) in three English male remand prison receptions, with the aim of enabling diagnosis and initiation on treatment within 7 days as part of an optimised MDT pathway.

Methods

- ◆ The HCV care pathway in the remand prison setting has several key steps. The aim is to reduce the time taken for each step to ensure that HCV RNA+ residents start on treatment before they are released or moved to another prison. Point-of-care HCV antibody testing with point-of-care HCV RNA testing using the GeneXpert[®] device (GeneXpert[®]) was introduced in three English male remand prison receptions as part of a locally agreed screening and linkage to care pathway.
- ◆ These three sites were based in different regions and had varying operational capacities and receptions/month. 12-20% of the standing population were prescribed OST.
- ◆ 8 patients from each site were randomly selected (4 before and 4 after implementation of the GeneXpert[®] pathway) to assess total time to treatment initiation.
- ◆ Data were collected over a 4 month period (April 2022-August 2022).

Site	Category	Average Reception Aug'21- July'22	Average Population Aug'21- July'22
HMP Doncaster	Cat B Local	304	1114
HMP Hewell	Cat B Local	303	871
HMP Lewes	Cat B Local	165	553

Effectiveness

- ◆ The average time for HCV RNA+ residents to start on appropriate treatment across these 3 sites was 54 days. The introduction of the GeneXpert[®] RNA testing device combined with an optimised review process reduced the treatment initiation pathway duration by 66% to an average of 18.2 days.
- ◆ Two of the sites averaged <10 days time to treatment
- ◆ Variation in pathway length from initial screening depended on treatment providers' clinical pathways, service delivery, medication delivery and staffing

Acknowledgements & Disclosures

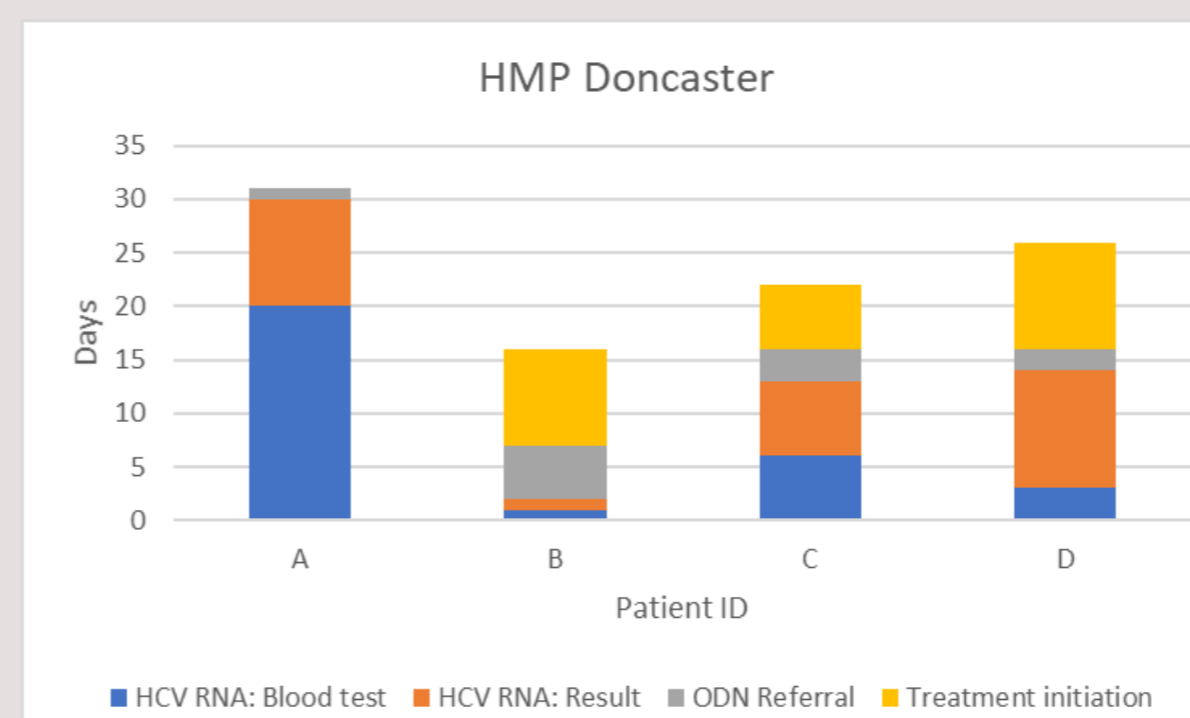
1. All patients involved in the testing and treatment pathway
2. The Hepatitis C Trust
3. GeneXpert[®]/MSD
4. Prison staff/healthcare staff
5. University Hospitals Sussex NHS Foundation Trust, Brighton
6. Worcestershire Acute Hospitals NHST Trust, Worcester
7. Sheffield Teaching Hospitals NHS Foundation Trust
8. Rotherham Doncaster and South Humber NHS Foundation Trust
9. Any stakeholders not covered by authorship

Gilead plays an active role in the design and execution of the activities with Practice Plus Group as part of the NHS England HCV Elimination Program. The decision of which DAAs were used was made by the Operational Delivery Networks following NHSE treatment guidance. The GeneXpert[®] device in 1 site is funded by MSD.

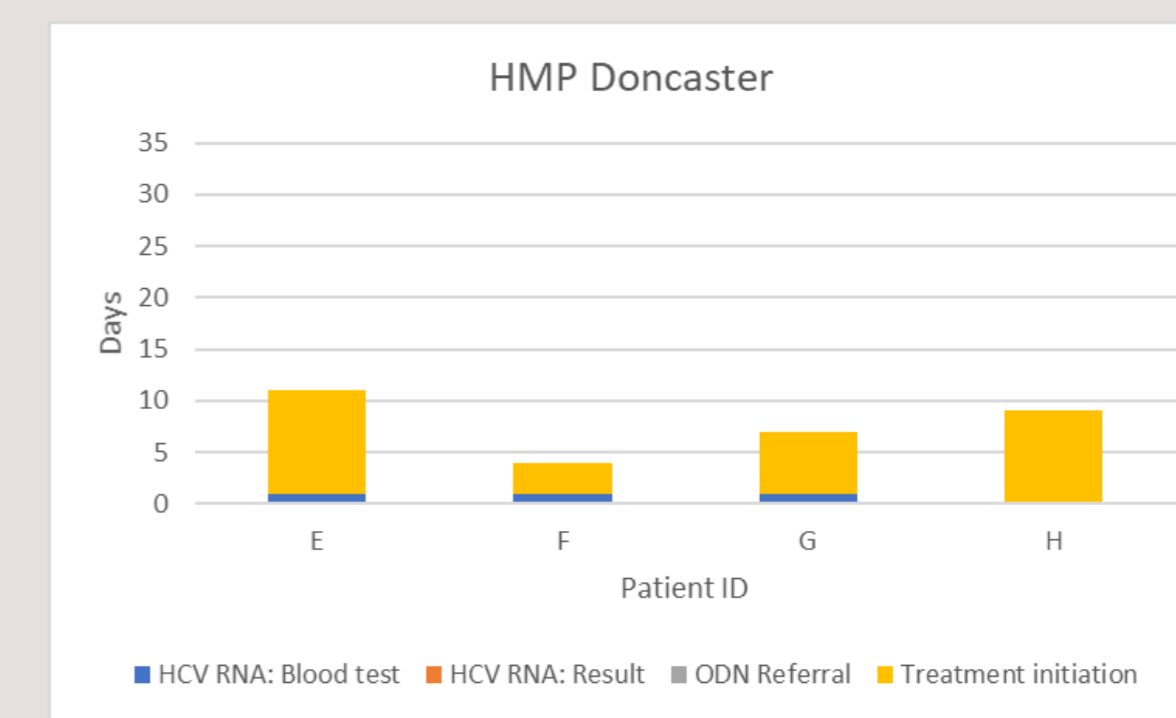
Results

Impact of PoC HCV a/b and HCV RNA testing in reception for 8 individual residents at HMP Doncaster

HCV a/b PoC; Virology Lab HCV RNA



HCV a/b PoC; GeneXpert[®] HCV RNA



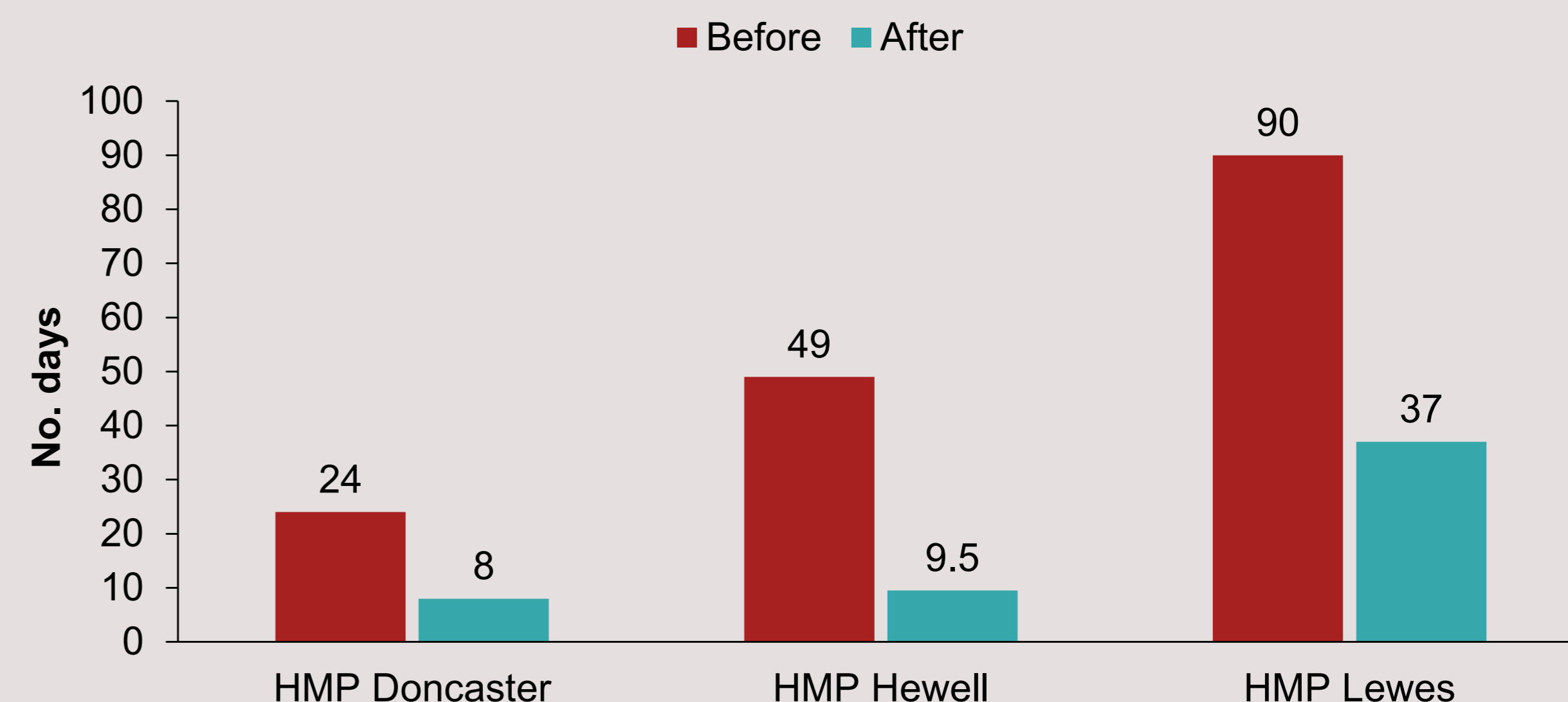
Day 0 = day of HCV a/b PoC test

24 days **8 days**

Virology Labs

GeneXpert[®]

Average time from HCV Ab PoC test to treatment before and after GeneXpert[®] implementation



% reduction in time from HCV Ab PoC test to treatment for each site

Site	Average time pre-GeneXpert [®] (days)	Average time post-GeneXpert [®] (days)	% reduction
HMP Doncaster	24	8	66.7
HMP Hewell	49	9.5	80.1
HMP Lewes	90	37	58.9

Conclusions

- ◆ The optimisation of prison HCV pathways and the introduction point-of-care HCV RNA testing has resulted in HCV RNA+ residents being initiated on treatment in an average of 18.2 days, down from 54.3 days prior to implementation of the GeneXpert[®]. Across all sites the average reduction in time to treatment was 66.5%.
- ◆ This has enabled patients staying on sites for a short period of time to commence medication where this would not have been possible through previous pathways.
- ◆ Local variation in time to treat has been seen due to diverse clinical requirements for treatment initiation and work is ongoing to streamline all aspects of the pathway.
- ◆ Regular multi-agency meetings are held at each site to review pathways, identify barriers and overcome challenges in order to drive towards a total time to treatment of 7 days or less.

References:

1. Steward D. 'The Problems and needs of newly sentenced prisoner: results from a national survey' 2008 Ministry of Justice Research Series 16/08 2008 (viewed on 7 February 2022).
2. Harris HE, Costella A, Mandal S, Desai M, and contributors. Hepatitis C in England, 2022: Working to eliminate hepatitis C as a public health problem. Full report. March, 2022. UK Health Security Agency, London.