# Prioritization of HCV treatment in the direct-acting antiviral era: An economic evaluation <br> Natasha K Martin, Peter Vickerman, Gregory J Dore, Jason Grebely, Alec Miners, John Cairns, Graham R Foster, Sharon J Hutchinson, David J Goldberg, Thomas C.S. Martin, Mary Ramsay, the STOP-HCV Consortium, Matthew Hickman 

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(A)

New

(B)


## Supplementary Fig 1. (A) Model schematic of PWID and ex-PWID populations and (B) HCV

 disease progression. The model is also stratified by genotype. Background mortality occurs from all stages and we incorporate elevated drug related mortality among PWID. Gray lines denote transitions for PWID only. Dashed lines denote treatment scenarios compared in the analysis.Supplementary Table 1. Mean incremental cost-effectiveness ratios (ICERs) for the basecase scenario.

|  | Mean ICER* |
| :--- | :--- |
| Ex/non-PWID, mild | $£ 22,932$ |
| Ex/non PWID, moderate | $£ 13,081$ |
| PWID, mild 20\% chronic prevalence | $£ 4,656$ |
| PWID, moderate 20\% chronic prevalence | $£ 2,855$ |
| PWID, mild 40\% chronic prevalence | $£ 11,080$ |
| PWID, moderate 40\% chronic prevalence | $£ 8,242$ |
| PWID, mild 60\% chronic prevalence | $£ 26,382$ |
| PWID, moderate 60\% chronic prevalence | $£ 21,284$ |

*ICERs are calculated by dividing the mean incremental costs by the mean incremental QALYs for each scenario compared to a baseline of treatment at the compensated cirrhosis stage.

## Supplementary Table 2. Sensitivity analysis of net monetary benefit per early treatment with a £20,000 WTP.

|  | Base- <br> case <br> scenario <br> NMB <br> (Rank) | 50\% <br> reduction <br> in risk <br> after <br> treatment | PWID <br> SVR <br> reduced <br> by 10\% <br> compared <br> to ex/non- <br> PWID | SVR <br> reduced <br> to $85 \%$ <br> for <br> cirrhosis | Average <br> injecting <br> duration <br> 5 years | Average injecting duration 20 years | 20 year <br> time <br> horizon | 100 year <br> time <br> horizon | 0\% <br> discount ing <br> costs/he <br> alth <br> benefits | 6\% <br> discount ing <br> costs/he <br> alth <br> benefits | Quarter DAA | Halved <br> DAA <br> costs | Double <br> DAA <br> costs | DAA <br> costs <br> reduce <br> by 75\% <br> in 10 <br> years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ex/nonPWID, mild | -3,650 | -3,650 | -3,650 | -3,248 | -3,650 | -3,650 | -21,211 | 3,540 | 36,400 | -12,549 | 18,421 | 11,064 | -18,364 | -5,983 |
| Ex/non PWID, moderate | 9,404 | 9,404 | 9,404 | 11,127 | 9,404 | 9,404 | -10,470 | 16,193 | 57,950 | -2,953 | 25,032 | 19,823 | -1,015 | 3,303 |
| PWID, <br> mild 20\% <br> prev | 59,258 | 58,753 | 49,198 | 59,041 | 78,777 | 27,470 | -5,640 | 94,558 | 223,078 | 19,830 | 78,480 | 72,072 | 46,443 | 54,269 |
| PWID, moderate 20\% prev | 60,640 | 60,809 | 50,817 | 62,186 | 81,691 | 30,003 | 2,138 | 90,363 | 210,216 | 23,390 | 74,636 | 69,971 | 51,309 | 52,939 |
| PWID, | 19,421 | 20,939 | 13,711 | 19,337 | 22,378 | 6,371 | -12,941 | 31,890 | 97,556 | 322 | 40,315 | 33,351 | 5,492 | 16,157 |


| mild 40\% prev |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PWID, moderate 40\% prev | 23,868 | 26,449 | 18,023 | 24,942 | 27,955 | 10,821 | -5,662 | 34,468 | 97,326 | 4,973 | 39,984 | 34,612 | 13,123 | 18,216 |
| PWID, <br> mild 60\% prev | -6,879 | -3,329 | -9,732 | -6,930 | -7,264 | -11,497 | -20,768 | -2,102 | 23,979 | -13,766 | 15,355 | 7,944 | -21,701 | -8,780 |
| PWID, <br> moderate <br> 60\% prev | -1,326 | 3,530 | -4,440 | -770 | -1,583 | -6,012 | -14,293 | 2,791 | 29,452 | -8,928 | 16,757 | 10,730 | -13,381 | $-5,187$ |

