

Supplementary information for:**Analysis of the potential for point-of-care test to enable individualised treatment of infections caused by antimicrobial-resistant and susceptible strains of *Neisseria gonorrhoeae***

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Table A1 Current prevalence of antimicrobial resistance to potential treatments for gonorrhoea

Drug	Class	Prevalence of resistance in GRASP 2014 isolates ¹			
		Heterosexual men	MSM	Women	Overall
Ceftriaxone	Cephalosporin (3 rd generation)	0	0	0	0
Penicillin	β -lactam	18%	26%	10%	23%
Ciprofloxacin	Fluoroquinolone	28%	44%	15%	37%
Azithromycin	Macrolide	0.0%	1.4%	0.5%	1.0%

Current first line (and last-line) therapy is intramuscular ceftriaxone with azithromycin 1g orally. MSM, men who have sex with men.
GRASP: Gonococcal Resistance to Antimicrobial Surveillance Programme

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Table A2 Model parameters

Baseline model parameters	Current			AMR POCT		
	Heterosexual men	MSM	Women	Heterosexual men	MSM	Women
Initial population size ²	515,094	145,863	779,085	515,094	145,863	779,085
Proportion entering same day management pathway	35%	33%	48%	100%	100%	100%
Proportion infected with gonorrhoea (of total tested) ²	1.5%	12.4%	1.1%	1.5%	12.4%	1.1%
Proportion of those in same day pathway infected with gonorrhoea	3.1%	26.0%	1.0%	1.5%	12.4%	1.1%
Proportion of delayed management infected with gonorrhoea	0.7%	5.6%	1.2%	-	-	-
Relative risk infection gonorrhoea in same day vs delayed pathway	4.52	4.63	0.82	-	-	-
Proportion in same day pathway who are infected & treated on same day	96%	90%	50%	100%	100%	100%
Proportion of same day pathway treated presumptively for gonorrhoea	5.0%	25.0%	2.0%	1.5%	12.4%	1.1%
Proportion who attend for treatment after lab test result (of those who wait for lab test results, i.e. asymptomatic group)	95%	95%	95%	100%	100%	100%
Proportion treated with last line therapy ³	100%	100%	100%	28% ^a	44% ^a	15% ^a
Cost of first attendance ^{4,5}	£135	£135	£135	£135	£135	£135
Cost of follow-up attendance ^{4,5}	£104	£104	£104	£104	£104	£104

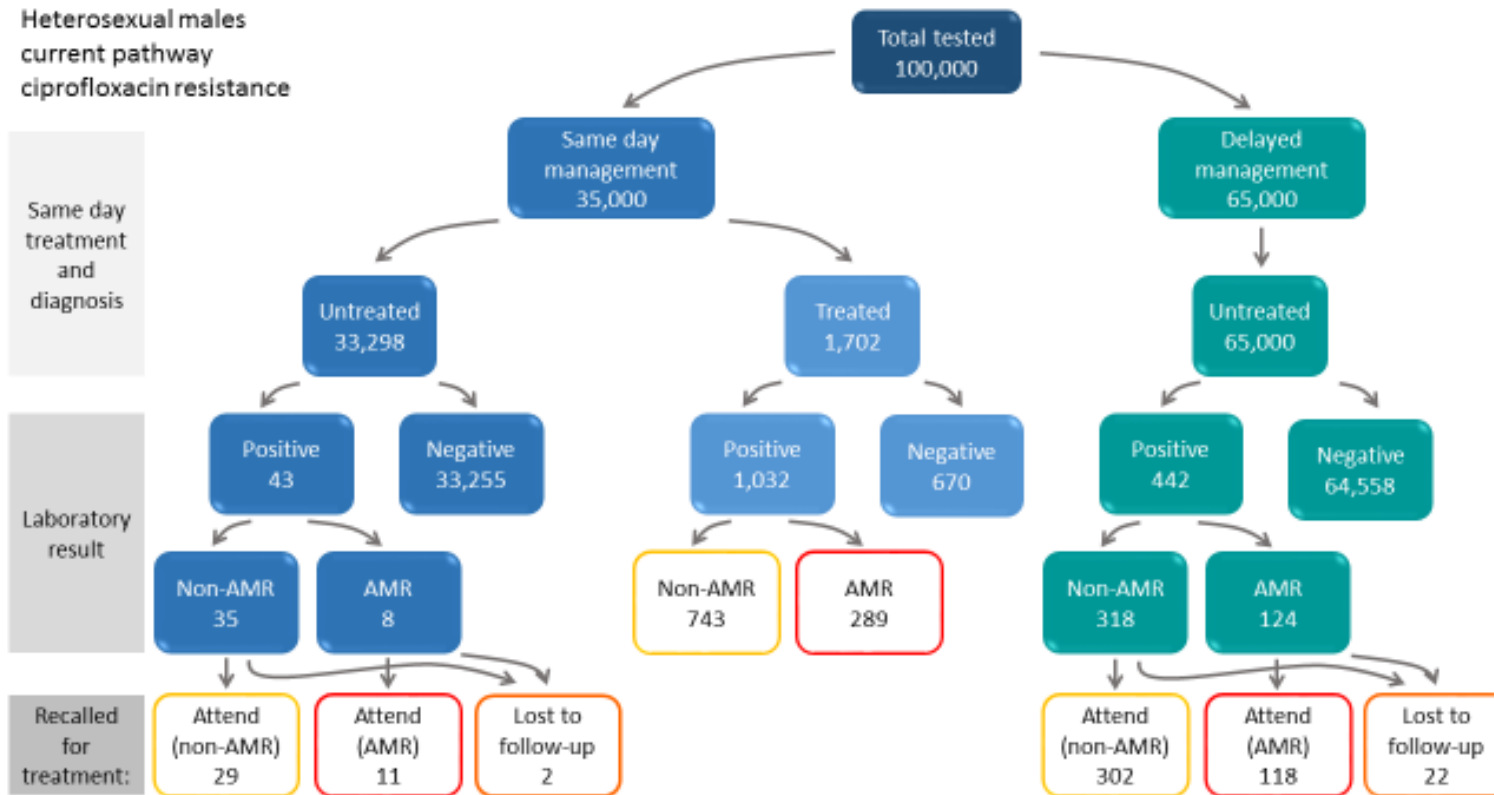
AMR POCT, antimicrobial resistance point of care test; MSM, men who have sex with men.

^aAssuming POCT for ciprofloxacin susceptibility (can be adjusted for penicillin according to parameters in Table A1 or updated to reflect local trends)

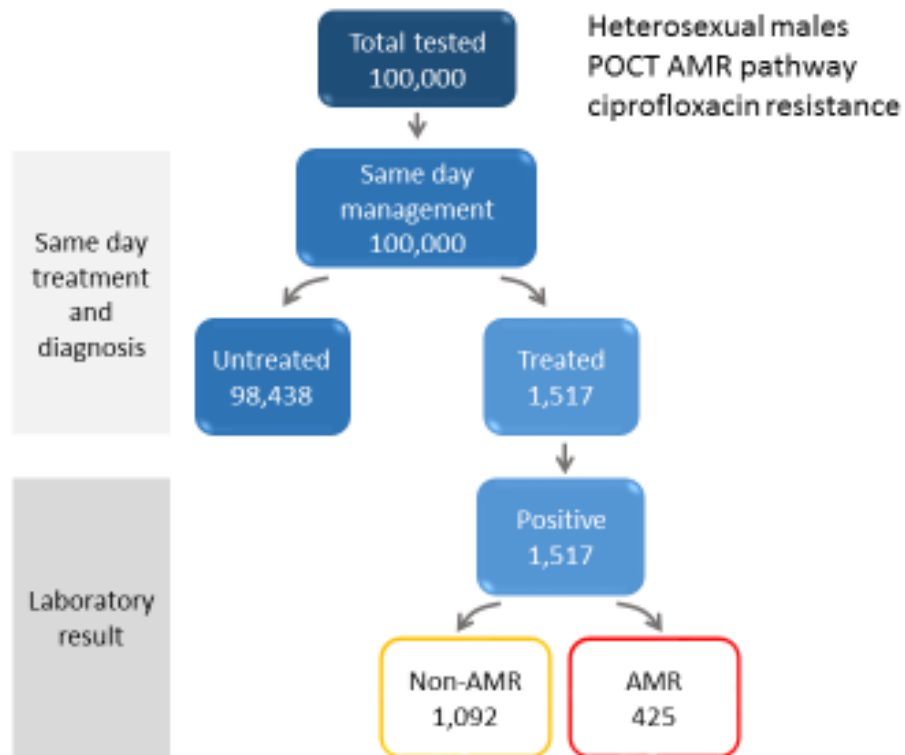
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1 **Figure A1**
 2 **A – Heterosexual men current pathway**

Heterosexual males
 current pathway
 ciprofloxacin resistance



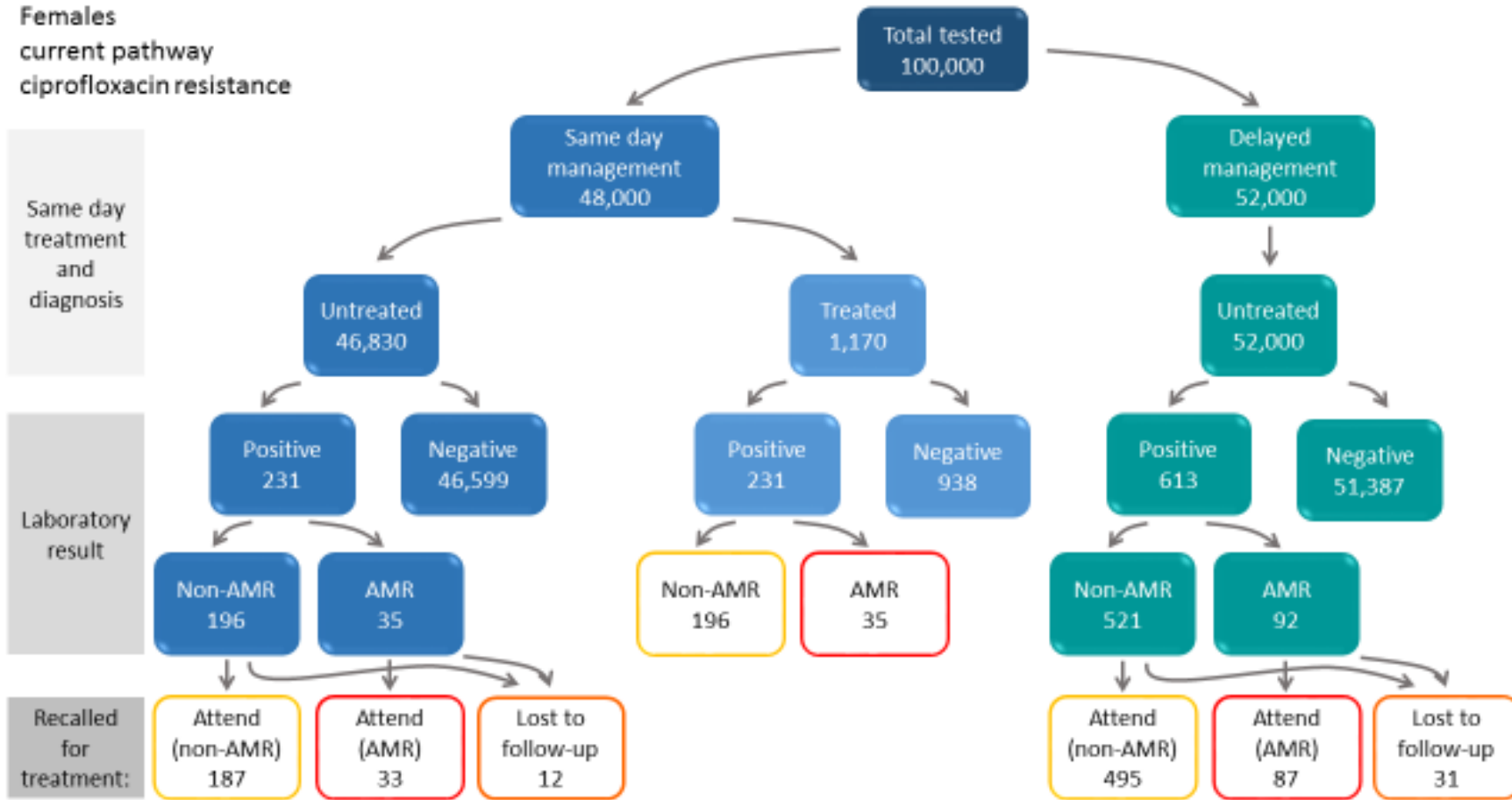
1 **B – Heterosexual men POCT pathway**



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1 **C – Women current pathway**

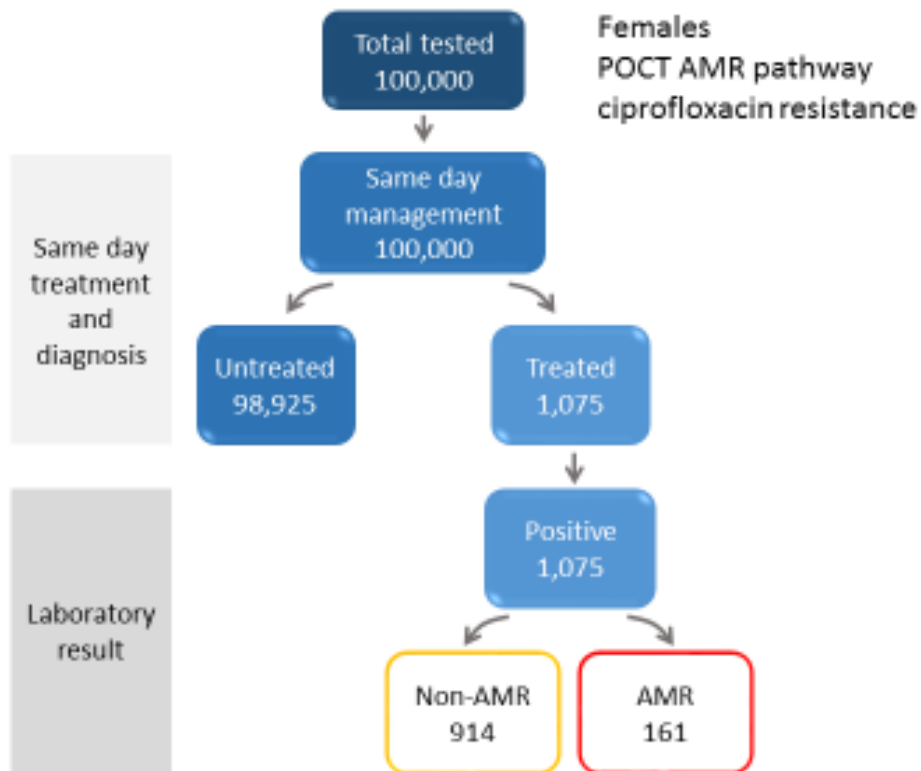
**Females
current pathway
ciprofloxacin resistance**



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1 **D – Women new pathway**



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1 **References**

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