

**Supplementary material S1**

**Total antibiotic use in DDD and excess DDD for each infection group**

Infection		Number of patients (%)	Median course days (range)	Local guidance	NICE / TG course length recommendation	Total DOT	Excess DOT (%)	DDD	Excess DDD (%)
CAP	Met inclusion criteria	58 (73)	7 (5-13)	5-7 days dependant on severity	5 days if appropriate response	491	154 (31)	716	313 (44)
CAP	Met exclusion criteria*	21	7 (5-13)			117		259	NA
<b>Total CAP</b>		<b>79</b>	<b>7 (5-13)</b>			<b>608</b>	<b>154 (25)</b>	<b>975</b>	<b>313 (32)</b>
HAP	Met inclusion criteria	20 (71)	7 (5-10)	5-7 days dependant on severity	5 if appropriate response	117	42 (36)	224	70 (31)
HAP	Met exclusion criteria*	8	11 (7-12)			88		131	NA
<b>Total HAP</b>		<b>28</b>	<b>7 (5-12)</b>			<b>223</b>	<b>42 (19)</b>	<b>355</b>	<b>70 (20)</b>
IECOPD	Met inclusion criteria	33 (100)	7 (5-9)	5 days	5 days	162	37 (23)	326	45 (14)
IECOPD	Met exclusion criteria*	0				0			
<b>Total IECOPD</b>		<b>33</b>	<b>7 (5-9)</b>			<b>162</b>	<b>37 (23)</b>	<b>326</b>	<b>45 (14)</b>
Cellulitis	Met inclusion criteria	7 (58)	8.5 (5-11)	7-10 days	5-7 days (audit standard 5 days)	51	25 (49)	111.5	26 (23)
Cellulitis	Met exclusion criteria*	5	11.5 (7-22)			77		118.5	NA
<b>Total cellulitis</b>		<b>12</b>	<b>9 (5-22)</b>			<b>128</b>	<b>25 (20)</b>	<b>230</b>	<b>26 (11)</b>
Pyelonephritis	Met inclusion criteria	14 (88)	7 (5-13)	7-10 days	7 days if quinolones and 7-10 days if beta-lactam	107	20 (19)	249	29 (12)

Pyelonephritis	Met exclusion criteria*	2	12 (12-14)			32		34	NA
<b>Total pyelonephritis</b>		<b>16</b>	<b>7 (5-14)</b>			<b>139</b>	<b>20 (14)</b>	<b>283</b>	<b>29 (10)</b>
Cholangitis	Met inclusion criteria	5 (100)	4 (3-10)	None given	4–7 days after source control (audit standard 4 days)	26	0	80	0 (0)
Cholangitis	Met exclusion criteria*	0				0		NA	NA
<b>Total cholangitis</b>		<b>5</b>	<b>4 (3-10)</b>			<b>26</b>	<b>0 (0)</b>	<b>80</b>	<b>0 (0)</b>
<b>Total number of patients meeting case definition.</b>		<b>173</b>				<b>1286</b>	<b>278 (22)</b>	<b>2249</b>	<b>483 (21)</b>
Total for study cohort		<b>307</b>	<b>Data not collected</b>					<b>3884</b>	<b>483 (12)</b>

\*either due to co-morbidities or short course length criteria not met. "Local Guidance" is study hospital's antibiotic course length recommendation at time of study.

TG = Tokyo guidelines; DOT = duration of therapy.

Where NICE guidance offered a course length range we selected the shortest option; cellulitis 5 days because it is possible to monitor response to therapy in hospital; pyelonephritis 7 days because local guideline choice was ciprofloxacin at time of audit and because if a beta-lactam was prescribed 7 days is still in line with NICE