

1 **Increases in gonorrhoea incidence and GUM clinic waiting times: are we in a vicious circle like**  
2 **the late 1990s and early 2000s, but now exacerbated by drug resistance?**

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4 I read the paper of Foley et al. (*Inequalities in access to genitourinary medicine clinics in the UK:*  
5 *results from a mystery shopper survey.* Sex Trans Infect Sex Online First: 04 April 2017) with  
6 concern.

7 Delays in treating symptomatic patients typically indicate insufficient service capacity, creating a  
8 vicious circle where delayed (or lack of) treatment causes onward transmission, increased incidence,  
9 and continuing unmet treatment need.[1] Increased treatment capacity (complemented by condom  
10 promotion and other prevention activity) is required to break the vicious circle and enter a virtuous  
11 circle where prompt treatment averts transmission and reduces future treatment need – improving  
12 health and ultimately saving money. This situation occurred from the late 1990s, when diagnoses and  
13 treatment delays increased markedly until investment was made to regain control.

14 Foley et al.'s findings, combined with increasing gonorrhoea diagnoses, suggest that we are in a  
15 vicious circle once again. However, this time it is much more serious, due to the growing problem of  
16 drug resistance, with gonorrhoea being on WHO's list of priority pathogens requiring new antibiotics  
17 (<http://www.who.int/mediacentre/news/releases/2017/bacteria-antibiotics-needed/en/>). Increased  
18 transmission means greater numbers of infections of already-resistant, hard-to-treat gonorrhoea,  
19 which are at risk of further transmission due to failure of initial treatment. Furthermore, greater  
20 numbers of infections result in more treatment events, each being an opportunity for selection for  
21 resistance, including multidrug resistance in already monoresistant strains.[2]

22 It is more important than ever to diagnose and treat cases promptly, and for contact tracing to identify  
23 asymptomatic infections, which can be an important infection reservoir leading to onward  
24 transmission, and whose role in the dynamics of drug resistance is not understood.[2] Faster action to  
25 regain control means a smaller cost and greater net benefit.[1]

26 Finally, further research into gonorrhoea's natural history, epidemiology, and evolution is urgently  
27 required.[2]

28

29 Yours faithfully

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36 References

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38 dynamics of infectious disease and the provision of health care: gonorrhoea in Britain as an example. *J*  
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40 2. Grad YH, Goldstein E, Lipsitch M, White PJ. Improving control of antibiotic resistant gonorrhoea  
41 by integrating research agendas across disciplines: key questions arising from mathematical modeling.  
42 *J Infect Dis* 2016; 213(6): 883–890.

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