


# The London Initiative for Glandular Fever HIV Testing (LIGHT) initiative: integration of opt-out HIV tests in primary care glandular fever serology order-sets – simple, effective and sustainable increase in HIV testing in line with UK and European guidelines

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Sir,

Despite guideline recommendations [1,2], concomitant HIV testing in patients who receive glandular fever (mononucleosis) screens (GFSs) in primary care has traditionally been poor in our area. A local study in 2010 demonstrated a concomitant HIV testing rate of only 11.4% [3]. Historically, local GFS laboratory panels included cytomegalovirus, Epstein–Barr virus and toxoplasmosis. The London Initiative for Glandular Fever HIV Testing (LIGHT) phase 1, initiated in July 2014, aims to increase opt-out testing in primary care through order-set modification of electronic laboratory requesting in a high HIV prevalence area in London.

All virology samples from 53 local general practitioner (GP) practices are processed at a centralized laboratory at Guy's and St. Thomas' NHS Trust. Primary care physicians request GFS either through traditional paper-based requesting or electronically (tQuest, Emis Health, Leeds, UK). We modified the electronic GFS order-set to include a default HIV test on an opt-out basis for patients over 16 years old (GFS+). Clinicians were advised of the change and the need to obtain patient consent via tQuest pop-up. Paper-based requesting remained unchanged. The original electronic GFS (without HIV) was archived but remained accessible. We compared all GFS requests for patients over 16 years old in a 12-month baseline period prior to LIGHT implementation (2013) and a 21-month period post implementation (2015–2017). Duplicate

requests were excluded from the initial analysis, but HIV results for these patients (if available) were included in overall positivity rate calculations.

The ordering behaviour and HIV detection rate in the pre- and post-LIGHT periods are summarized in Table 1.

While there was no statistically significant change in the rate of concomitant HIV test ordering for paper request compared to baseline, we observed concomitant HIV test ordering increased to 78% of all GFS tests ordered via the modified electronic ordering platform. The overall HIV diagnosis rate was similar in the two study periods (1.0% and 0.7%, respectively). Sixty-four per cent of the positive diagnoses in the LIGHT period were first-time diagnoses (no previous clinical or laboratory history of HIV infection). Of these, forty-three per cent had clinical and/or laboratory evidence of recently acquired (within the last 12 months) HIV infection.

As this was a real-world service development project, there are some limitations to the study methodology. We were unable to record reasons for primary care testing or to differentiate whether reasons for opting out were patient- or clinician-driven. However, the results clearly demonstrate significant improvement in concomitant HIV testing compared to both baseline and paper-based requests.

This intervention was independently implemented at King's College Hospital in 2016 (Mark Zuckerman, personal communication, 2020). It is also being used as a model for including HIV within the standard glandular fever screen orderset in Barts Health NHS Trust in 2020 (Mark Hopkins, personal communication, 2020).

Our simple modification of laboratory requesting software significantly increased the rate of concomitantly

[Correction added on 15 November 2020, after first online publication: The copyright line was changed.]

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**Table 1** Concomitant HIV test ordering pre and post intervention by paper and electronic methods

	Order type	Total number of GFS tests ordered for patients > 16 years old	Number (%; 95% CI) of concomitant HIV tests	Number (%) of positive HIV tests	Number (%) of male patients
Pre-LIGHT (January–December 2013)	All	880	295 (33; 30–36)	3 (1.0)	-
LIGHT (December 2015 to August 2017)	Original paper	485	136 (28; 24–32)	1 (0.7)	1
	Modified electronic (GFS+)	1857	1442 (78; 76–80)	10 (0.7)	9 (90)

CI, confidence interval; GFS, glandular fever (mononucleosis) screen; LIGHT, London Initiative for Glandular Fever HIV Testing.

ordered HIV tests for this indicator condition in line with guideline recommendations. This replicable, sustainable and low-cost intervention targets patients presenting with an indicator condition and provides an opportunity for adaptation throughout the UK.

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## Author contributions

All authors contributed significantly to this manuscript and project.

## References

- 1 Public Health Guidance on HIV, Hepatitis B and C Testing in the EU/EEA. European Centre for Disease Prevention and Control (ECDC). 2018. Available at: [https://ecdc.europa.eu/sites/portal/files/documents/hiv-hep-testing-guidance\\_0.pdf](https://ecdc.europa.eu/sites/portal/files/documents/hiv-hep-testing-guidance_0.pdf) (accessed 8 August 2019).
- 2 HIV Testing: Increasing Uptake Among People Who May Have Undiagnosed HIV. National Institute for Health and Care Excellence Guidelines (NICE). 2016. Available at: [www.nice.org.uk/guidance/ng60](http://www.nice.org.uk/guidance/ng60) (accessed 21 August 2019).
- 3 Hsu DTS, Ruf M, O'Shea S, Costelloe S, Peck J, Tong CYW. Diagnosing HIV infection in patients presenting with glandular fever-like illness in primary care: are we missing primary HIV infection? *HIV Med* 2013; 14: 60–63.