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GENOTYPIC ANTIRETROVIRAL DRUG RESISTANCE TESTING AT LOW PLASMA HIV-1 RNA LOADS IN THE UK

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BACKGROUND: Antiretroviral drug resistance testing is recommended in HIV-1 patients failing therapy in order to inform treatment selection. Although guidelines and test manufacturers recommend a plasma HIV-1 RNA load of at least 500–1000 copies/mL for genotypic resistance testing to be performed, prompt management of virological failure could benefit from testing at lower viral load levels.

METHODS: Laboratories undertaking genotypic resistance testing were asked to provide figures for the number of resistance tests undertaken at HIV RNA loads <2000 copies/mL, the success rates of such tests and the extent of resistance detected, all stratified for RNA load levels.

RESULTS: Of the replies received, most laboratories were attempting resistance testing at viral RNA levels below the recommended guidelines, with variable success (*e.g.* 0–67% of samples for HIV-1 RNA loads of 50–100 copies/mL) and with variable levels of resistance detected.

CONCLUSIONS: This audit of current practice in the UK for undertaking genotypic resistance tests at viral loads <1000 copies/mL highlights the widespread use of such testing outside the BHIVA guidelines. The limitations of results obtained from such testing will be discussed.

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