Hepatitis B screening in an integrated sexual health service: an analysis of the cost-effectiveness of using a set hepatitis B serology panel for screening

Hepatitis B is a bloodborne virus that is routinely screened for within integrated sexual health services. Many guidelines, including those from the British Association for Sexual Health and HIV (BASHH), have identified certain 'at risk groups' that should be offered hepatitis B screening (2017 interim update of the 2015 BASHH National Guidelines for the Management of the Viral Hepatitides). Our integrated sexual health service has developed outreach services targeting some of these groups, namely sauna users, commercial sex workers and prisoners. With the damaging cuts to the public health budget, our service has endeavoured to look for innovative ways to provide a screening service in a cost-effective manner. The outreach service is led by nurses and healthcare assistants working to an agreed protocol to offer the same panel of hepatitis B serology tests (HBsAg, anti-HBc, anti-HBs) to all patients belonging to the above-mentioned groups. In a 10-month period, the outreach service caters to approximately 720 patients. We aimed to assess the cost-effectiveness of screening for hepatitis B in this manner.

Sixty patients (20 commercial sex workers, 20 sauna users and 20 prisoners) were randomly chosen using Lilie codes during the time period of April 2015–August 2017. Data collected included current and past hepatitis B serology and history or evidence of hepatitis B vaccination. Fifty-six of 60 (93%) were offered hepatitis B screening. All patients who were offered hepatitis B screening were tested using the same panel of hepatitis B serological tests (HBsAg, anti-HBc, anti-HBs) as per service protocol. This was regardless of history of vaccination and/or immunity. On further analysis of these patients, 10 of 60 did not require any testing as previous tests had already established them as immune, 14 of 60 only required anti-HBs to establish immunity post hepatitis B vaccination, and 27 of 30 only required HBsAg as an initial screening test. The total excess expenditure among these 60 patients was calculated to amount to £574.40. These observations suggest that the use of hepatitis B serology panels within a service can ensure that a wide range of healthcare professionals, from doctors to healthcare assistants, can participate in screening at-risk individuals for hepatitis B regardless of understanding of the different hepatitis B serological tests. As a result, this ensures that auditable targets for hepatitis B are easily

met. However, protocols involving test panels, such as the one described in this case, can inadvertently remove the skill of clinical reasoning in the patient care pathway, resulting in unnecessary over-investigating and overexpenditure.

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