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Health needs and co-morbidity among detainees in contact with healthcare professionals within police custody across the London Metropolitan Police Service area

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ABSTRACT

Aims: Detainees requiring access to healthcare services in police custody have been shown to suffer from poor physical and mental health, often exacerbated by substance misuse. This study examines the extent and nature of health needs in police custody across the Metropolitan Police Service (MPS), London.
Methods: A survey (n = 1657) was administered by Healthcare Professionals (HCP) for one month in 2015 across all MPS custody suites representing a 73% response rate. A logistic regression model was created using four binary outcomes (whether a detainee was a drug user, had mental health issues including self-harm and had an alcohol use disorder) with ten prognostics to test for co-morbid associations. A multiple imputation method using chained equations was used to manage missing cases.
Findings: High rates of physical health conditions, drug use, problematic alcohol use were noted but are within the upper range of existing studies. Mental health, self-harm and overall substance misuse levels (illicit drug user and a current drinker) were shown to be higher than other published studies. The logistic regression model found statistically significant associations between drug use, alcohol consumption and mental health including self-harm. Age was also found to be a key confounding factor. Physical health was broadly negatively associated with the four main outcomes.
Discussion: Levels of need for health interventions among the detainee population in London are broadly consistent with other European centres. There is a need for police custody staff to consider detainees' dual diagnosis needs. The development of integrated interventions alongside the enhanced clinical management of alcohol, drug use and mental health was considered.

1. Introduction

Detainees entering police custody and who engage with health services are widely perceived to be highly vulnerable, chaotic and with limited experience of accessing community-based specialist services.[1] The point of arrest is often a low point for detainees where a confluence of poor lifestyle and offending often acts as a predictor of poor self-management of ill-health, alongside a lack of compliance with prescribed medication.[2,3]

Greater levels of morbidity amongst detainees in police custody compared to the general population have been highlighted.[4] The point of arrest is a pivotal point to intervene due to the extent of complex co-morbidities present among the detainee population. Studies have shown the over-representation of substance misuse issues among detainees in police custody[5,6,7,9] that emphasises associations across alcohol intoxication, illicit drug use and mental health disorders.[10,11,12,13,14] The extent and nature of substance misuse varies considerably across detainee populations in part due to the definitions used by researchers, encompassing any intake; frequency of use; and the extent of abuse or dependence. Furthermore, a review of the literature examined twenty-eight studies to create an overall sample size of 12,000 detainees estimated mental health need (as a proportion of a clinician's caseload) was one-fifth, substance misuse around one-half with three-quarters (74%) of detainees requiring medication.[15]

Physical health problems are also noted among the detainee population with higher than expected levels after adjusting for age, of conditions such as asthma, diabetes and chronic infections such

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as hepatitis, HIV and tuberculosis[4,10,16] with worsening health problems reported among older detainees.[14,17] Moreover, these co-morbidities are further exacerbated by a range of "social problems" that encompass housing, finance, employment and interpersonal issues.[13] One study of 604 illicit drug users held in police custody in France highlighted the link between more problematic use of substances with increased age, unemployment, homelessness, a history of medical problems and worsening mental health.[14] Female detainees were also noted as over-represented in this problematic group.

In the UK, the risk assessment undertaken by a custody officer at initial reception into police custody is a key point in determining risk to a detainee in terms of self-harm and withdrawal from drugs and alcohol, although it has been shown that this process can miss key diagnoses and improvements can be made by enhancing the assessment's diagnostic sensitivity.[18,19] In a UK context, the Identification of acute health-related diagnoses are essential for referrals to either an embedded or on-call healthcare professional (HCP) for immediate attention and to a range of custody-based professionals offering liaison and diversion schemes addressing mental health, illicit drugs (such as the Drugs Intervention Programme) and alcohol arrest referral schemes.

This study presents an analysis derived from a survey of HCP activity which comprised an assessment of detainee health need undertaken across the Metropolitan Police Service (MPS) during 2014–2015 geographical area to include all London boroughs excluding the City of London (which has its own separate police force).

2. Methods

2.1. Consent and ethics

The study formed part of a Health Needs Assessment commissioned by NHS (England) in partnership with the MPS. An application was made to the NHS Health Research Authority in July 2014 that stated that this study fell within the 'service evaluation' definition.[20] Patients were not directly interviewed and this paper is based on secondary interrogation of data collected by HCPs. Ethical oversight and governance was provided by the NHS England Project Board.

2.2. Settings

The study surveyed detainees assessed by HCPs across the MPS area during one-month in 2015. At the time of the study, 72 police custody suites with 992 police cells were operationally available (10 suites were non-operational) across 33 London boroughs covering a population of 8,664,953.[21] At the time of the study, 19,235 individuals had been processed in one month across these sites. The City of London within the financial district of London has its own police force and operates independently from the MPS.

2.3. Schedule

A questionnaire was designed following consultation with HCPs, NHSE and MPS leads to create a short and simple schedule that could be completed quickly, at no more than two pages length, as any greater length was considered onerous within a busy custody setting. Practitioners were instructed to complete the questionnaire for all detainees that they came in contact with during one month in 2015. If the patient required subsequent care within the same treatment episode (e.g. within the same arrest event) then a new questionnaire was not to be completed. If however, the same detainee returned for a subsequent and different arrest event (if the same person returned after being seen previously by a HCP) then a new questionnaire was to be completed as the study was keen to determine the extent and nature of need at each treatment point or episode. It was not possible to calculate the extent of multiple contacts for the same individual (or double-counting) with HCPs as the data collected was anonymised. No personally identifiable information was collected as part of the survey that also removed the possibility of cross-reference with police management information systems. Information collected included the initial need identified for call-out; basic patient demographics; identified clinical need; medical history and engagement with other services including general practitioner (GP) registration; prescribed medication and a brief outcome from the consultation. For this one month period, 1657 questionnaires were returned and entered onto a bespoke database for secondary analysis. Based on information held on the MPS management information system (the National Strategy for Police Information System), there were 2257 episodes where a HCP has been called out for treatment which represents a 73% participation rate. There was an even split of returned questionnaires by inner-London (52%) compared to outer London (48%) with Inner South-East London slightly over-represented in the survey and Inner West London marginally under-represented.

2.4. Procedures

An initial analysis[22] was undertaken for the Health Needs Assessment. This analysis was enhanced by dealing with non-response through use of three probability models using a chained equations method and by recalibrating variables that exhibited multicollinearity. Preliminary tests on the explanatory variables were undertaken and a revised set of fourteen indictors (compared to nineteen used previously) were created based on initial chi-squared tests. Fourteen explanatory variables with four binary outcomes were used including whether a detainee was a drug user (a new composite variable); had mental health issues; being at risk of an alcohol use disorder (AUD) defined as being a problematic drinker via the Alcohol Use Disorder Identification Test (AUDIT); and whether the detainee had self-harmed. Ten predictor variables were included: detainee age; history of allergies; history of previous medical operations; GP registration and physical health diagnoses of asthma, diabetes mellitus, epilepsy, hypertension, musculoskeletal problems or whether they suffered from an injury. The conditions used to form the model were chosen to reflect the likelihood of reported presentation to a HCP.

2.5. Sample characteristics

The sample seen by HCPs were overwhelmingly male (81%, n = 1342) with a modal age of 25–34 years (29%, n = 481). More than half of the sample were white (54%, n = 895) and around one-fifth (22%, n = 365) were recorded as Black with 11% (n = 182) reported as Asian.

3. Analysis

3.1. Levels of need

The reason for a HCP intervention is shown below in Table 1. Fitness to be detained or fitness to be interviewed comprised 70% (n = 1159) of all call-outs. Substance misuse including drink or drug driving formed one-third (33%, n = 550) of call-outs, with mental health issues one-fifth (20%, n = 334). Injuries (22%, n = 369) and issues with a detainee's medication (21%, n = 347) were also noted.

HCPs were asked about the nature of a detainee's presenting need (Table 2). The findings suggest that the levels of physical

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