therapeutic solutions

Health Needs Assessment of Detainees in Metropolitan Police Service Custody

Final Report September 2015

Contents

Acknowledgements

The authors take responsibility for the data analysis and interpretation of the content of this study. We wish to thank the operational team at the Metropolitan Police and NHS England, including Dr Meng Aw-Yong, Chris Bourlet, Danny Hewitt, Lorraine Lawrie, Veronica Morrell, Jacqui Nicholas, Andy Pierre, Michelle Sparks, Aly Valli, Annette Wightman and Dianne Newton from the Mayor's Office for Policing and Crime (MOPAC). Dr Ed Day from Kings College London reviewed the methodology and analysis.

We are also grateful to Mark Napier and Jenny Bier from the Centre for Public Innovation for providing support for the project during the study, and to Kieran Lynch from Public Health England for ongoing advice. Finally, the authors would like to thank all the clinicians who took time out to meet with us over three evening sessions and independently; the staff working in the custody suites, who took part in the study, for their co-operation and time; and the service users who agreed to participate in the survey, including all the Drug Interventions Programme teams that helped facilitate their contribution.

Arun Sondhi, Ian Knighton, Lisa Luger, Jenny Norman, Emma Williams, Therapeutic Solutions (Addictions) Ltd.

Executive Summary

This report provides an overview of the findings of a Health Needs Assessment (HNA) undertaken for NHS England and the Metropolitan Police Service (MPS) to assess the health needs of detainees within police custody across the MPS. The findings from this HNA have been extensively reviewed by MPS and NHS England leads. The methodology and analysis have also been subject to a peer-review process.

Methods

- Computerised police records held on the National Strategy for Police Information Services (NSPIS) (n=230,824) for 2012–13 were examined to understand the characteristics of the overall detainee population (e.g. in terms of age structure, gender, ethnicity) and the levels of footfall by time of arrival into police custody.

- There were three main approaches underpinning the epidemiological analyses. Two methods were undertaken to test the reported prevalence of conditions; the first used an audit of MPS custody data based on one month's data held on NSPIS (n=2,257 records relating to 1,592 individuals), including police notes and (limited) entries provided by healthcare professionals (HCPs). The second approach involved a survey by HCPs of detainees' health needs (n=1,657); it is representative at 95% confidence with a 5% margin of error.[1] A detailed exploration of the feasibility of surveying all detainees' health needs is provided in Appendix I, with further work recommended.

- The third epidemiological approach analysed one year's MPS risk assessment (RA) data between July 2013 and June 2014 (n=230,105), and was based on issues reported to custody staff by detainees. The RA is a series of questions posed to detainees undertaken by Custody Sergeants or Designated Detention Officers. A subset of the RA information includes a question of whether an HCP was called out in a 'yes' or 'no' dichotomy (n=65,004). Variations in RA by borough were also subject to enhanced geographical analysis using 'hot spot' analysis (see Method and Appendix I for more detail).

- The prevalence rates were contrasted with comparative sources from the published literature and from a pooled dataset derived from this research group (and partners) of 21,304 contacts with HCPs across nine other police force areas.[2] There are methodological differences within the datasets; this is discussed in more detail throughout the report, including cognizance of the different data types or computerised systems across different forces and HCPs, which could affect prevalence rates.

- All epidemiological data were modelled using logistic regression modelling to understand associations across conditions; RA data were used to predict the likelihood of an HCP call-out by the police.

[1] In other words, this suggests that the sample can be seen to be representative if all HCPs completed the survey.

[2] The study did not make direct comparisons with the general population, as it was deemed that these comparisons would be relatively meaningless because it has been well established that detainee populations will have higher levels of morbidities. The study did scope comparisons with prisoner and other offender health data but this was seen to be out of scope for this HNA.

- A patient survey was undertaken across the MPS custody sites and 194 responses were received. There were issues with completion of the patient survey as only one HCP provided any returns (n=66); therefore, the sample cannot be said to be representative. The survey was supplemented by survey responses from Drug Interventions Programme (DIP) clients and, therefore, should only be considered to be indicative.

- The epidemiological analysis was supplemented by case studies of five custody sites selected by (a) a mix of inner and outer London; (b) geographical spread; (c) mix of operating model; and (d) a mix of in-house and on-call mental health provision.

- Eighty-two semi-structured interviews were undertaken, including three bespoke focus groups with HCPs. Interviews were conducted with a range of stakeholders, including operational police custody staff, HCPs, mental health practitioners, drug workers and Appropriate Adults.

- Interviews were recorded, where possible, and transcribed using MAXDA qualitative data analysis software to organise and manage the data.

Findings

1. Analysis of police arrest data for 2012–13 shows that two-thirds (66%) of all detainees entering police custody were aged between 17 and 35 years. This compares to the 49% of the general London population that are aged between 17 and 35 years. This would indicate that the health needs are likely to reflect a much younger age cohort compared to the general population.

2. The footfall of detainees (Figure 1) is consistently spread across an 8am to 8pm time period (declining thereafter) with a 4–5pm spike in arrivals, suggesting that coverage of healthcare services should meet this likely demand. It must be noted that it may take several hours from arrival time before a detainee needs to be seen by an HCP due to the booking-in process; issues of withdrawal, for instance, may continue and worsen after this introduction into custody. Therefore, the workflow configuration of healthcare service delivery must take this into account.

3. The HCP survey identified a high proportion of detainees who had registered with a General Practitioner (GP) at the time of the fieldwork (82%) and this broadly concurs with the patient survey registration rate of 87% also described within this study.[3]

4. Over half (54%) of the HCP survey sample stated that detainees were on prescribed medications at the time of the consultation, although compliance was not assessed as part of the survey.

5. The HCP survey indicated much higher prevalence rates for most conditions compared to the NSPIS audit, the Therapeutic Solutions' pooled dataset of 21,304 records, and the published literature. It is a contention of this report that, while this may be a more accurate reflection of overall prevalence, the differences are also a function of methodological issues (see page 15 for more detail on the methodologies and data sources).

[3] There are issues with determining an exact GP registration rate for London – see page 55 for more detail.

6. Using the HCP survey as the comparator dataset to the pooled estimate of 21,304 records, the prevalence of conditions based on data held in the comparator dataset for asthma/COPD, diabetes, hypertension, musculoskeletal problems, and HIV were all reported at higher levels that were statistically significant (at $p<0.05$).

7. The prevalence of reported hepatitis was as expected and the rate of reported epilepsy was significantly less than expected (at $p<0.05$) compared to the pooled dataset. The reporting of epilepsy was seen as problematic for comparative purposes as clinical staff suggested that epilepsy is sometimes reported by detainees in order to access benzodiazepines, and seizures related to alcohol have been recorded as an epileptic fit. Therefore, caution is advised with the epilepsy figures.

8. The level of injuries reported by both the NSPIS audit and the HCP survey (22–24%) was much higher than any other comparator dataset (the pooled dataset and published literature) – further work will contrast this rate with levels reported across London Emergency Departments.

9. The prevalence of any mental health condition using the HCP survey (38%) was also much higher than previous estimates (between 17–23%), and the difference is also statistically significant (at $p<0.0001$).[4]

10. The prevalence of current illicit drug use was shown to be 36% according to the HCP survey and use[5] of alcohol was also shown to be 67%. Both differences were statistically significant at $p<0.0001$, although there are some methodological issues that need to be considered (e.g. the framing of the question is different in the HCP survey compared with other studies).[5]

11. Class A drug use, according to the HCP survey, was reported at 21%. Potentially risky drinking patterns, as identified by the three-question Alcohol Use Disorder Identification Test (AUDIT-C), suggested that 37% of detainees seen by an HCP drink at higher-risk levels. It was not possible to gauge alcohol-dependency levels using AUDIT-C screening.

12. Overall, 77% of the detainees surveyed as part of the HCP survey were illicit drug users and/or current drinkers. This total is much higher than previous estimates across the pooled dataset and wider published literature; however, this is, in part, a function of methodological concerns (such as the questions used to determine prevalence).

13. Logistic regression modelling of HCP survey data shows close correlations between the risk of an alcohol use disorder and illicit drug use and mental health issues (including self-harm), suggesting that an integrated response is required for these conditions. The models did indicate some nuance – for instance, the use of Class A drugs is positively associated with self-harm but not with wider mental health issues.

[4] Further work will compare prevalence rates for mental health and substance misuse among the wider offender population. An initial scoping for this HNA suggests methodological issues with this comparison, including definitional problems and differential sampling.

[5] As defined by the AUDIT-C as being a non-abstainer. The screening tool asks whether an individual drinks to a certain level or has 'never used'. Therefore, anyone responding with anything other than 'never used' can be assumed to be a drinker.

14. The regression models have suggested that the alcohol use disorder–illicit drug use–mental health issue triad rarely correlates with other physical health conditions, with the exceptions of asthma and epilepsy, being associated with self-harm (see models on pages 40–46 for more detail). It is possible that this may reflect the main presenting problem being treated, with less pressing medical issues not being recorded (Hannan et al., 2010).

15. The models also show that diabetes and hypertension are negatively associated with problematic use of alcohol, illicit drug use and mental health issues (see models on pages 40–46 for more detail). This may suggest that detainees may be more aware of their health needs prior to contact with an HCP.

16. There is an interaction with age: (a) detainees aged 25–34 years were shown to be significantly more likely to use illicit drugs; (b) respondents aged 35–44 were significantly more likely to report risky drinking; (c) detainees aged under 24 years and over 55 years were less likely to be users of Class A drugs; (d) there was a negative association between mental health issues and being aged under 24 years – this implies that younger people are less likely to be associated with having a mental health issue when in contact with an HCP in police custody; and (e) there was a similar negative association with detainees who self-harmed and detainees aged 45–54, suggesting that detainees aged 45–54 years were not as likely to see an HCP for a self-harm issue compared to other age groups.

17. Analysis of the RA data found little variation across London boroughs when examining responses to the screening questions and the levels of HCP call-out. A geospatial 'hot spot' analysis (Appendix I) found no significant variations across boroughs. Overall, this suggests that the RA cannot solely identify physical health conditions, mental health issues, alcohol use disorders, or illicit drug use at booking-in without cognizance of other operational inputs (including use of PNC checks, police officer experience, liaison with health professionals, and enhanced dialogue with patients).

18. The variations in borough-level demand for an HCP call-out were not predicted by any other external epidemiological indicator (tests at the level of borough were undertaken for associations with demographic factors [age/ethnic distribution], mental health issues, or substance misuse markers).

19. RA data (n=65,004) were modelled using logistic regression techniques to predict correlations with calling out an HCP. Out of 15 RA questions that were included in the model, 12 predicted an HCP call-out.

20. The model suggested that HCPs were significantly less likely to be called out by police if the RA was undertaken in the morning hours (between 12–7am and 8am–12pm). The statistical model adjusts if other factors, such as alcohol or drug consumption suggesting other procedural factors, may be at work. Further work is required to understand these differential call-out rates.

21. The model also suggested that HCPs were less likely to be called out during February and March 2014, which may suggest seasonal variations in call-outs and arrest patterns.

22. The patient survey (n=194) suggested broad satisfaction with current healthcare provision: 78% of respondents stated that they were treated with respect and dignity by an HCP and 73% responded in a similar vein in relation to their treatment by police.

23. Just under one-quarter (24%) of respondents were seen by an HCP within an hour; 43% were seen in between one and four hours; and 18% were seen by an HCP after more than four hours.

24. 72% of respondents believed that the HCP gave them enough time to address their health concerns while in police custody; 73% believed that the HCP listened to them adequately during the consultation.

25. 63% of respondents stated that the HCP was able to treat their immediate needs.

26. Overall, two-thirds (66%) of the sample stated that their experience with an HCP was "good" (with 50% stating "very good"), compared to 12% reporting a "poor" service.

27. The main areas that detainees raised were: (a) the importance of a good relationship with the HCP to identify and treat health needs; (b) being able to access their own medication; and (c) reducing waiting times to see an HCP. Other areas identified by detainees included better sharing of information and services with partner agencies and wishing for HCPs to have a better understanding of the nature of addiction.

28. The qualitative case studies with staff identified four main themes. The first focused on the need for healthcare services to meet the high volume and complex case-mix demand of detainees. Here, the major concern was the impact of delays in a detainee seeing an HCP and also a mental health professional. Staffing issues were raised as a major concern.

29. The second theme identified mental health needs as a major gap, including: ensuring coverage to access the volume of potential demand; the fragmented nature of the pathways, dependent on whether a Liaison and Diversion nurse was situated on-site; and the tension between PACE requirements and delays in seeing a mental health professional.

30. The third theme identified variability in how patients may access their prescribed medication from community-based services when detained in police custody; a hypothesis of this study is that this variability is not well understood by detainees.

31. The fourth theme suggested that the police RA process is multi-layered. This study has supported other research that conditions may not always be identified by the RA process (note: the questions had been recently enhanced for the MPS by Newcastle University, and these additional items were utilised at the time of the fieldwork). Interviewees identified the range of stakeholder views on the levels of detainee honesty, levels of self-diagnosis, and the impact of the custody environment (which is not conducive to confidential disclosure of medical or health conditions).

32. The observation of practice identified that use of Police National Computer (PNC) 'markers' (e.g. previous contact with police that has been subsequently recorded); local intelligence on detainees; formal and informal communications by police with partners to 'build a picture' of potential risk and need; the importance of the hand-over and observation/'rouse-checking' (police description of when an intoxicated detainee is woken up to check they are in a satisfactory state) process in raising awareness and identifying potential issues in real time; and the importance of the police custody experience all add to increasing the sensitivity of the RA to identify health needs.

Next Steps and Recommendations

This section makes suggestions for the development of healthcare services within police custody. The scope of the recommendations is limited to the findings derived from this study. There is no discussion about any proposed model of service delivery (in-house, on-call, or mixed provision), as this would be out-of-scope and requires a different type of analysis. There are two sub-sections presented below: the first looks at immediate needs that can be addressed by meeting detainee need as identified in this report; the second section looks at developing the service in the longer term as based on the findings of this report.

Addressing Immediate Health Needs

The study has highlighted a number of themes emerging from the mix of quantitative and qualitative research:

Recommendation 1: Ensure that there is adequate healthcare to cover demand, including the 4–5pm 'spike' in footfall, while ensuring a 24/7 level of coverage.

Analysis of MPS arrest data from NSPIS shows that between 8am and 8pm is the key period in which the majority of detainees arrive into police custody, with a 'spike' observed between 4 and 5pm.

This is multifactorial with the time required to complete the booking-in process (incorporating completing the custody RA, searching and recording of property, identification, shift patterns of both custody and HCP staff, variation in models from embedded to peripatetic (with potential multiple station call out simultaneously). Furthermore, detainees may not need to be examined at the booking-in period, with drug and/or alcohol withdrawals taking place several hours later. Custody staff are aware that detainees who are ill require urgent medical attention, including the option of taking the detainee straight to hospital, or calling 999 for referral to a hospital. The MPS is about to begin trialling an objective risk-based triage system.

Recommendation 2: As part of workforce development, all HCPs need to be adequately trained to a minimum standard to meet the higher-than-expected case-mix complexity of detainees.

The HCP survey suggested that, in comparison with previous estimates of prevalence, detainees in the MPS area will have a higher rate of asthma, diabetes, hypertension, musculoskeletal problems, and HIV. We suggest that HCPs should be able to work competently with these complex cases.

Recommendation 3: Further work is required to review the impact of differential waiting times in police custody; these need to be assessed against negative outcomes, including levels of compliance in the use of the NSPIS.

The study has shown that across the range of methods deployed in this study, the time taken to access an HCP was a major theme. It is therefore recommended that further work is required to model how to specifically address the variability in time-to-treat levels.

Recommendation 4: Enhance the awareness and investigation of epilepsy among detainees.

The comparative analysis suggests that the prevalence of epilepsy was significantly (statistically) less than expected compared to the comparators, and therefore there is a need to enhance the awareness and identification of epilepsy.

Recommendation 5: Raise awareness among HCPs and develop pathways for dual-diagnosis needs (alcohol use–illicit drug use–mental health issues).

A key feature of this study has been the identification of a cluster of conditions that are associated with each other across mental health issues (including self-harm), higher-risk alcohol use, and illicit drug use. Healthcare services should be aware of this clustering of conditions, and pathways should be developed that are integrated along dual-diagnosis lines.

Recommendation 6: Further work is required to test whether there is a real gap in provision of mental health services for detainees reported to self-harm aged under 24 years and for those aged 45–54 years.

These two groups of detainees were shown to be significantly less likely to be reported as self-harming. Understanding the needs of, and enhanced liaison with, these two specific age groups is recommended.

Recommendation 7: Improve access for HCPs to health-related information, including mental health and substance misuse services.

This study has shown the links across mental health, alcohol, and illicit drugs. The service response would be enhanced if there were wider sharing of this information held within partner agencies.

Recommendation 8: Enhance provision of support for alcohol misuse, including testing and reviewing the use of brief interventions in police custody.

This study has shown that detainees from outer London were more likely to report problematic levels of drinking as identified by the AUDIT-C screen. There is a paucity of evidence of the efficacy of brief alcohol interventions in police custody (Newbury-Birch et al., 2015), although there may be scope to test, develop and review bespoke support/pathways that address this need.

Recommendation 9: Providers need to consider training and enhanced support to ensure a positive patient–clinician relationship as a key competency in line with the Care Quality Commission's guidance.

The patient survey suggested that the main driver for patient satisfaction was the perceived relationship with the HCP. HCPs need to consider how best to measure, develop and enhance (given the already high levels of patient satisfaction) patient–clinician relationships.

Recommendation 10: Police custody staff require support and training to develop awareness of the dual-diagnosis needs of detainees.

The observation of practice suggests that other multi-layered factors support the identification of health needs rather than a sole reliance on the RA process. Police custody staff should be trained in the identification and implications of dual-diagnosis needs in police custody.

Addressing Longer-Term Health Needs

This component looks at the potential development of an integrated service based on the findings from this study.

Recommendation 11: Develop integrated communications for the management of medication with community-based services.

The case studies suggested that there was variability in response with community services as to how and when information on a patient's medication could be made available to HCPs working in police custody. Variations were noted at practice and individual GP level. In the longer term, it is recommended that a coherent approach to the management of medications is developed to allow for more consistent sharing of information across the full range of HCPs. This work would link into ongoing work with the N3 network (a secure NHS national broadband network) through provision of the summary care record.

Recommendation 12: Develop access to medical records using electronic information-sharing to facilitate pathways into other services.

The desire for integrated communications is linked to the need to share and refer a detainee's records across partner agencies in a robust, confidential and timely fashion. Key services to develop information-sharing arrangements include the prison service, drug and alcohol services, and mental health teams.

Recommendation 13: Develop co-morbidities such as dual-diagnosis as integrated pathways/service provision.

The modelling of data has suggested the close association between the triad of conditions across alcohol use, mental health issues, and illicit drug use. Illicit drugs and mental health currently have specific pathways to access their own range of clinical and psychosocial services (with dependent drinkers likely to access substance misuse services via a DIP). Future provision may wish to consider integrated services to avoid duplication and the possibility of one individual accessing more than one service.

Recommendation 14: Ensure there is a safeguarding audit against existing practice.

The audit should consider reviewing existing practices including services for vulnerable adults and children.

Recommendation 15: NHS England and the MPS should consider a pilot scheme examining the feasibility of screening all detainees (as discussed in Appendix I).

The methodology for undertaking this study is predicated in pragmatic analyses of contacts with HCPs and reviewing the non-clinical records of police. This study has highlighted the lack of sensitivity of the RA questionnaire (although health needs were determined by 'softer' and less tangible awareness of detainees' needs). To understand the health needs of all detainees, it is recommended that a study determining the feasibility of screening all detainees for key health-related problems should be commissioned.

Acronyms

ADHD	Attention deficit hyperactivity disorder
AUDIT	Alcohol Use Disorder Identification Test
CCTV	Closed-circuit television
COPD	Chronic obstructive pulmonary disease
CNP	Custody Nurse Practitioner
DIP	Drug Interventions Programme
FME	Forensic Medical Examiner
FTBD	Fitness-to-be-detained
FTBI	Fitness-to-be-interviewed
GP	General Practitioner
HCP	Healthcare Professional
HNA	Health and Social Care Needs Assessment
IAPT	Improving Access to Psychological Therapies
IPP	Indeterminate sentences for Public Protection
IDU/IVDU	Injecting or intravenous drug use
MPS	Metropolitan Police Service
NSPIS	National Strategy for Police Information Services
NPS	New or Novel Psychoactive Substances
OR	Odds ratio
PACE	Police and Criminal Evidence Act
PNC	Police National Computer
RA	Risk assessment

Introduction

This report provides an overview of the findings of a Health Needs Assessment (HNA) undertaken for NHS England within the Metropolitan Police Service (MPS) suites to assess the health needs of detainees within police custody. This report does not include the City of London and British Transport Police custody suites. The underlying principle of healthcare within this setting is to ensure that users of a service access interventions of the same quality and breadth of services as the general public would receive in the community. This HNA will examine the extent and nature of gaps or barriers preventing the delivery of an effective healthcare service.

Aims of a Health Needs Assessment

The HNA model has been described in a series of papers originally published in the British Medical Journal in 1998. Wright et al. (1998) defined a standard HNA as:

> *"[A] systematic method of identifying unmet health and healthcare needs of a population and making changes to meet these unmet needs. It involves an epidemiological and qualitative approach to determining priorities which incorporates clinical and cost-effectiveness and patients' perspectives. This approach must balance clinical, ethical and economic considerations of need – that is, what should be done, and what can be afforded."*

The series of papers (published in 1998) also described the pressure to develop a means of allocating resources appropriately in the light of increasing costs and wider patient 'consumerism'. Greater attention from patients and the media has focused on the quality of service provided, ranging from equity of access (e.g. ensuring that all patients in need of a service will have access regardless of the access point) to appropriateness and effectiveness. The papers argue that the needs assessment process must more effectively distinguish between patients' "needs" and "demands". Patients may "want" or "desire" a service, but there may be no or limited clinical need for that intervention.

Similarly, demand is often a function of supply – place a service in an area and it is likely that the levels of demand will rise as there is now an available service. Wright et al. (ibid.) demonstrated that the geographical variation in hospital admission rates is explained by the availability of hospital beds in addition to other morbidity or mortality indicators.

The series of papers also provides a broad template for preparing an HNA. Stevens and Gillam (1998) suggested a three-point plan for developing an HNA. First, the HNA should map service provision in some detail – which interventions are provided, to whom, and when. A 'corporate' approach is encouraged, whereby stakeholder views are encouraged, including those of professionals and patients (but not necessarily limited to these groups). In addition, there are 'comparative' approaches that rely on comparisons with other population groups. Wilkinson and Murray (1998) took this approach a step further and advocated an enhanced five-stage approach that included:

- Analysis of routine practice (or service) data
- Comparisons with other populations
- Patient/service user and other 'public' involvement
- Use of survey methodologies
- Adequate collation of information

The authors within the series also discussed some of the methodological concerns inherent within the HNA process. For Williams et al. (1998), there needs to be sufficient consideration of the analytical methods used – for instance, the need to consider "confounders", which are the factors potentially influencing the underlying prevalence rates (e.g. age, gender, and ethnicity). For example, Williams and colleagues (ibid.) described the variable prevalence of diabetes among different ethnic groups and by age; writing in relation to general practice, the authors argued that with that knowledge, it is important to understand the ethnic composition of each clinical practice. For some, consultation with the 'public' (usually patients or users of a service) requires greater thought and planning. Jordan et al. (1998) argued that engagement with the public, and with patients in particular, is problematic as it is hard for individuals to make a fully informed judgement of their clinical needs. The authors highlighted the problem of reconciling conflicting needs (which may arise from a patient's perspective, such as perceptions of the need to access medication) and the need to balance resources. The authors argued that there are "no easy answers" and each HNA is subject to these empirical and often ethical tensions. Petrou (1998) did cast some doubt over the HNA methodology by arguing that the process ignores the benefits that an individual gains from treatment (or an intervention) and the cost of implementing that treatment. From an economist's perspective, it is far better to focus on measurable health benefits (such as quality-adjusted life years [QALYs]). The use of an HNA method has also been developed for wider offender health (e.g. for patients or service users in custodial settings), and some guidance has been developed for offender health that looked specifically at a prison environment (Marshall et al., 1999). At the time of writing, there was no specific guidance for police custody, although some supporting documentation was due to be provided by Public Health England in April 2015, including the development of Health in Justice Indicators of Performance.

Methods

The selected approach utilised methods advocated by the above authors (ibid.) and incorporated three main components:

- A **comparative** approach that compares and contrasts the demand for services (in this instance with other police custody populations).

- **Epidemiological** methods that underpin the need to determine the extent of a health problem (prevalence) and the level of new cases (incidence). These approaches help determine the cost-effectiveness and gaps in current service provision.

- A **corporate** approach that seeks the views of stakeholders.

Analysis of Police Arrest Data

The study examined the pattern of police arrests (including the times of arrest events) to look at the footfall of detainees as they enter police custody. This information will allow for the benchmarking of the characteristics of detainees who subsequently see a healthcare professional (HCP). In total, 230,824 arrest 'events' were analysed based on 2012–13 management information held by the MPS; it should be noted, however, that the number of arrests has been in decline due to different methods of processing detainees (MPS, personal communication).

Epidemiological Estimates of Prevalence

The study utilised a mixed-methods approach that aimed to conform to the principles of undertaking an HNA as originally detailed in a series of papers for the British Medical Journal (cf. Jordan et al., 1998; Stevens and Gillam, 1998; Wilkinson and Murray, 1998; Williams et al., 1998; Wright et al., 1998). The epidemiological methods underpinning these papers emphasised the need for comparisons with a relevant population. These papers were written examining primary care health needs and, therefore, comparisons were made with the population at large (for example, at General Practice level). This study has been able to develop a range of comparators for this unique population group.

The epidemiological methods underpinning this study include three main components:

- A representative sample of clinicians undertaking a survey of practice for one month (n=1,657)
- An audit of one month's information held on the MPS management information system, NSPIS (n=2,257 records relating to 1,592 individuals)
- Analysis of one year's risk assessment data from July 2013–June 2014 (n=230,105 records), with additional analyses of a subset of this information where there was information on whether an HCP was called out or not in a 'yes' or 'no' dichotomy (n=65,004)

All information was compared to two data sources. The first is a pooled composite of information held on the health needs of detainees from nine police force areas in the south of England, compiled by the research team (n=21,304). The categorisation of the conditions was based on the recoding of various streams of data; in other words, some data held by HCPs and police forces used different categories to describe a condition. The second dataset examines the prevalence of various conditions reported by detainees across the wider health and criminal justice literature. The study initially examined the efficacy of comparing the health needs of detainees with the wider population, but the preliminary analysis suggested that the comparisons were not meaningful as the detainee and general population are entirely different (the wider population being older, more likely to be female and with a greater prevalence of chronic conditions than the detainee population). Research has already shown that the detainee population suffers from a range of complex health-related issues (cf. Rekrut-Lupa and Lapa, 2014) and it is not clear what this mode of analysis would have added to our existing knowledge base.

HCP Survey

A survey was administered to all HCPs within the MPS area to understand the nature of detainees' needs; this was implemented during February 2015. The survey content included questions on the reasons for calling an HCP; conditions were identified by including specific questions on mental health, self-harm, illicit drug use, and alcohol use (through use of the Alcohol Use Disorder Identification Test [AUDIT] short questionnaire, AUDIT-C).

During 2013–14, there was an estimated average of around 10,000 examinations (10,152) per month relating to 6,530 individual contacts. At a confidence level of 95% and assuming a margin of error of 5%, this would require a sample size of 371 survey responses. At the time of completing this preliminary report, 1,657 returns were received (some returns were excluded – for example, if there was no text in the survey and two surveys that were completed by a police officer rather than the HCP). The distribution of HCP survey returns was also examined and, overall, 52% were from inner London areas (n=869) and 48% were from outer London sites (n=788). The survey distribution suggested that, while there were gaps according to borough, all areas (if stratified by East–West, North–South, and central areas) had received some returns. Inner South-East London was oversampled compared to other areas, but it is the contention of this study that this does not affect the generalisability of the findings. Information held in the survey was subject to multivariate modelling to help answer a number of key research questions. First, the correlates of key conditions were interrogated using logistic regression modelling (including statistically significant associations with mental health issues, self-harm, all drug use, Class A drug use, and problematic alcohol use [as identified by AUDIT and with detainees injured]). The aim of this approach is to identify potential segments of need (through how well conditions correlate with each other).

NSPIS Audit

In addition, one month's information held on the MPS management information system (NSPIS) was audited to identify the prevalence of certain conditions as identified by the police and HCPs based on entries to the system. In total, 2,257 records relating to 1,592 individuals (as based on the individual's custody record number held on each detainee) were read and conditions were transcribed onto a separate pro forma. This approach raised a number of methodological issues, including how best to code conditions when there was a degree of uncertainty. From a police perspective, the information was derived from the 'Reason for HCP Call-out' field. This held some information on the presenting conditions, including the relevant Police National Computer (PNC) checks for specific issues such as problematic drug and alcohol use, mental health concerns and self-harm. The audit identified a degree of ambiguity in a number of potential conditions, including vagueness in the initial call-out (e.g. "possible mental health issues") to variations in recording the prevalence of certain conditions. For example, the recording of alcohol use varied by HCP from reporting on whether alcohol was detected on the breath of a detainee to notes on the actual level of intoxication.

On occasion, there was disagreement over a symptom's diagnosis (e.g. the reason for call-out was illicit drug use but the HCP identified no drugs had been taken) or some police notes were not referred to (e.g. police may have referred to previous markers held on the PNC but the HCP did not refer to this in the notes). It was estimated that this affected 2% of the prevalence estimates. Where inconsistent recording was noted, it was decided that to ensure consistency, the HCP clinical notes were deemed the final arbiter of whether a detainee had a condition, issue or problem. It is therefore possible that this may understate the overall prevalence rates but it was felt that it is likely that inclusion of all police notes may artificially overstate need.

Risk Assessment Analysis

Information obtained as part of the police risk assessment (RA) was also examined. This block of work was extremely time-consuming, as significant levels of data manipulation were required to create datasets for further interrogation. The data, as held on NSPIS, was provided for one year (July 2013–June 2014) and is held at police station level. Therefore, each station's location was coded to a local borough – the extent of health needs (as measured by the extent of HCP call-outs per 1,000 arrests) was then correlated to a range of external indicators to determine whether any associations existed. The exploratory variables included: (a) demographic information, including ethnic population levels, age distributions, and deprivation and unemployment levels; (b) mental health prevalence and incidence rates; and (c) substance misuse prevalence rates. The aim of this approach was to determine whether any variations in the rate of health needs could be attributable to external or wider 'societal' factors.

The RA data at borough-level was also analysed separately using a 'hot spot' analysis, which looks for statistically significant clustering of high or low values. It identifies hot and cold spots in a way that is more objective than the impression given by a particular cartographic style. This analysis shows if there are clusters of neighbouring boroughs with particularly high or low values for each of four key variables.[6] Hot spots could be attributable to regional differences (within London) of the criminal population being arrested; they could also be attributable to regional differences in RA reporting practices, where neighbouring boroughs are more likely to have more similar biases (due to greater interaction and exchange of staff, etc.). Hot spot analysis does not explain clustering, but does show whether apparent clusters are likely to be genuine. A hot spot is not necessarily a borough with a high level itself; rather, it is the borough at the centre of a cluster of boroughs with high levels. The ArcGIS Hot Spot Analysis (Getis-Ord GI*) tool was used. There are many possible parameters that can be used in hot spot analysis. The key ones are scale and the conceptualisation of spatial relationships. The 'Zone of Indifference' conceptualisation was used, which expects that an entity is primarily influenced by neighbouring entities (within a selected distance), but allows for there to be spatial interactions across the whole study area. A common method of determining an appropriate scale of analysis is to use the Spatial Autocorrelation (Global Moran's I) tool. By running this for many distances (repeated for each of the four variables), particular scales can be identified where the strongest spatial interrelationships are present, meaning that there might be spatial processes taking place. This analysis gave multiple possible scales for each variable. Distances around 7 km were chosen, as this generally covers neighbouring boroughs but allows for more limited interaction beyond that. The findings are presented in Appendix I.

[6] 1. Appears to have taken or be under the influence of alcohol, drugs, or any other substance. 2. Indicates having some mental health problems. 3. Has indications of self-harm. 4. Is in need of an HCP.

A second level of analysis included examining the correlates of whether a detainee received an HCP intervention at the point of RA (using the 'yes' or 'no' dichotomy recorded on NSPIS). This approach required significant manipulation of the data, as there were 4,998,946 lines of data to recode (each RA question was one line of data) relating to 230,105 RA 'events'. A final data file was created of 65,004 records that included all RA questions and a range of derived variables including: (a) age/sex of detainee; (b) time seen by HCP; and (c) month of contact. The aim of this approach was to establish whether there were any potential gaps in detainees less likely to be seen by an HCP (in other words, those reported as 'no' in the RA). This may determine whether any groups are significantly more or less likely to receive an HCP intervention. A logistic regression model was created to examine the correlates with seeing an HCP at RA.

Patient Perceptions

The HNA aimed to examine the views and perceptions of the service provided to detainees. This component was the subject of much thought by the research team and commissioners. Previous research in detainee populations (Therapeutic Solutions, 2013) found significant issues with interviewing detainees at the point of arrest:

- There are significant sampling issues that need to be considered when examining detainee populations. In the few large and national studies of police custody, these projects have struggled to ensure statistical representativeness when interviewing detainees (Boreham et al., 2006).
- Other studies have not always been clear about the level of non-response when undertaking patient/detainee surveys.
- Studies on detainee needs rarely include sufficient commentary on power calculations to ensure that any sampling is representative of the overall level of need; therefore, most (if not all) research conducted in this area cannot be shown to be representative.
- The sample will be skewed towards detainees not under the influence/withdrawing or with immediate medical needs – these detainees are unlikely to be able or willing to cooperate with a detailed study on patient satisfaction.
- The point of arrest is an emotionally charged juncture at which to take a reading on patient satisfaction and is likely to be influenced by a range of factors not related to an individual's health needs.

This HNA therefore opted to use a retrospective patient survey to measure detainee perceptions. Two sources were identified: (a) through police custody suites managed through the MPS and (b) through detainees accessing the Drug Interventions Programme (DIP). The response through police custody suites was negligible and no meaningful responses were received (although there were some returns provided directly from one HCP). In total, 186 responses were received; these can be shown to be representative at 95% confidence and with a 10% margin of error; caution is advised in the interpretation of these findings due to the potentially biased nature of returns.

Qualitative Methods: Five Case Study Sites

In addition to the epidemiological and patient perception analysis, the study deployed qualitative techniques to understand stakeholder perceptions and to derive an understanding of the process by which a detainee could access an HCP. Five case study sites were selected by the MPS using the following criteria to ensure that the findings are representative of type and range of healthcare services provided:

- Mix of inner and outer London areas
- Geographical spread across East–West, North–South, and central London
- Mix of operational models (in-house nurse provision and a duty doctor service)
- Sites that included the active engagement of DIP teams for substance misuse and Liaison and Diversion services for mental health

Detailed observations were also undertaken at two case study sites. Stakeholder perceptions were supplemented by three focus-group events to discuss health needs with current HCPs, including a range of doctors and nurses working in police custody across London. A total number of 82 semi-structured face-to-face and telephone interviews were undertaken with key practitioners who work within the custody environment including:

- Custody Sergeants
- Police Inspectors
- Designated Detention Officers
- HCPs (doctors and nursing staff)
- Mental health practitioners
- Drug Interventions Programme officers
- Appropriate Adults

Field notes were collated as a result of the observations undertaken in the custody suites and supplemented by the semi-structured interviews. Interviews with participants were recorded and transcribed using MAXQDA qualitative data analysis software to organise and manage the data. Codes were assigned to the data and a thematic analysis was used to identify relationships within the data.

Study Limitations

Thornton-Jones et al. (2005) advise caution in the delivery of a criminal justice HNA on methodological grounds. In particular, they argue that epidemiological methods may not be suitable when applied to criminal justice settings and can be seen too often as merely a mechanism to collect as much data as possible. The authors argue that there are issues with sample size compared to the wider population that reduces the meaning of prevalence figures. In addition, there are a number of limitations to the HNA approach including:

- The epidemiological literature on detained persons' (DPs) needs in police custody is extremely limited; although there has been some evidence published in recent years, the number of papers from which to draw comparisons remains limited. Moreover, the epidemiological comparisons are based on small-scale studies based on snapshot data in only a few locales (e.g. a small number of police stations in London and Northumbria). A recent study has pooled a range of prevalence estimates together (Rekrut-Lupa and Lapa, 2014) with a larger sample size of 12,000; although the estimates provided only cover the extent of medication, substance misuse and mental health needs.

- The study was enhanced through a comparative analysis of pooled data from 21,304 records derived from this research group (including work with partner organisations) across nine police force areas (Avon and Somerset, British Transport Police, City of London, Dorset, Gloucestershire, Surrey, Sussex, Thames Valley, and Wiltshire). The data were pooled to ensure that the measurements were consistent, although there were two main sources for this information – either from existing management information systems or via a data audit of clinical records. Each approach has its own advantages and disadvantages and may be subject to inherent biases due to the methods used.

- There are major issues with interviewing detainees. A previous HNA by this research group (Therapeutic Solutions, 2013) examined the feasibility of interviewing a representative sample of detainees accessing healthcare services. This study found significant operational and clinical challenges that worked against undertaking interviews with DPs at the point where healthcare is delivered in custody, as highlighted above.

The report is structured over three main chapters. Following on from the introduction, we will present the findings from the analysis of healthcare needs in police custody sub-divided by methodological approach.

Police Custody: Epidemiology

Overview

This chapter provides an overview of the level of need found within police custody. The first section presents the basis on which healthcare is provided – that is, how the demand for healthcare provision may be shaped by the custody environment. The second section provides an overview from the existing literature based on detainees' needs, including a review of the epidemiological comparisons with other studies.

The statutory basis for the provision of healthcare services within police custody is linked to the Health and Safety at Work Act (S3) 1974, which allows for access to "appropriate" healthcare during police custody. Guidance (ACPO/NPIA, 2012) highlights three main reasons why a DP may access medical services, including: physical and mental health needs; to support their "welfare"; and to provide a forensic examination. Police and Criminal Evidence Act (PACE) Code C Paragraph 9(b) provides an overview for police custody staff as to who is appropriate to access medical attention including:

- Those who appear to be suffering from physical illness
- Those who are injured
- Those who appear to be suffering from "mental ill health" (or disablement, or difficulty that means that the detainee is likely to be mentally vulnerable or require additional support)
- Those who appear to have a drug or alcohol dependence or withdrawal likely to affect safety
- Those who appear to need medical attention
- Those who request a medical examination

Guidance from the British Medical Association's (BMA, 2009) Medical Ethics Department and the Faculty of Forensic and Legal Medicine enhances this definition to look at the type of individual (e.g. adult and child) that may require a medical intervention and what type of service they may receive.

Category of Detained Person Requiring a Medical Examination

TABLE 1: Detained persons who may require a medical examination (British Medical Association, 2009)

Detainees	Children
• Detained for a period including overnight stay	• Accompanying prisoners being detained
• Detained for a short period for interview	• Needing assessment
• Detained but released without charge	• Persons requiring a 'place of safety'
• Juveniles	• People with no fixed abode needing general care
• Immigration cases	• Mentally ill, needing psychiatric assessment
• Prisoners – remand and sentenced	• Who are drunk or on drugs requiring a place of safety
• Complainants	
• Detained for robbery, making statements	
• Subject to physical assault, with injuries	
• With serious crime against the person	

Types of Medical Intervention Used Commonly in Police Custody

TABLE 2: Typology of medical examination used in police custody (British Medical Association, 2009)

Fitness for detention	**Fitness for interview**	**Forensic examination**	**Therapeutic assessment and treatment**	**Transfer and care**
Assessment of illness (physical or mental)/injuries/ drug and alcohol problems	Assessment of competence to understand and answer questions	Assessment and recording of injuries (incl. injured police officers)	For illness	From one custody suite to another
Advice to custody officer on general care while in custody	Where patient is mentally ill or vulnerable, advising on the need for an Appropriate Adult	Interpretation of injuries	For injuries sustained	From police stations to court
Provision of necessary medication	Advising on any special provisions required during interview	Collecting samples, e.g. to test for toxicology and intimate samples	Advice to custody officers on general care while in custody	Custody in court
Referral to hospital	Reassessment after interview	Road Traffic Act 1988	Provision of necessary medication	Transfer from court to prison
Admission under mental health legislation	Assessment of competence to understand and answer questions		Provision of a report of any illness or injuries when the detainee is transferred	

Police Custody Healthcare Provision

Following a successful pilot by Dorset police in 2011, a voluntary partnership between police forces and NHS England was established to ensure the transfer of commissioning responsibility for all police custodial healthcare to the NHS. In the first year, ten police forces joined up, followed by 23 more in year two; the final tranche saw the joining of the remaining English forces, including the British Transport Police. The aim of this approach was to provide parity and improvements of healthcare for those in temporary detention by standardising several key outcomes through infection-control audits, HNAs, compliance against national standards, the formation of local partnership agreements, improving access to mental health services, and Liaison and Diversion interventions. At this time, a change in legislation is still expected (by April 2016) that will pass the legal responsibility for commissioning of custodial health services to NHS England. The expectation will be that the new service provided will conform to the Care Quality Commission's fundamentals. The NHS-commissioned services will be expected to meet these appropriate fundamental standards.

Health and justice services will be commissioned in April 2016 to improve care according to the five domains of the NHS outcome framework:

Domain 1 – Preventing people from dying prematurely
Domain 2 – Enhancing the quality of life for people with long-term conditions
Domain 3 – Helping people recover from periods of ill-health or following injury
Domain 4 – Ensuring that people have a positive experience of care
Domain 5 – Treating people in a safe and caring environment and protecting them from avoidable harm

Integrated commissioning with partners and stakeholders – including clinical commissioning groups, local authorities, Public Health England, and across justice departments – will promote improved health outcomes with the joint aim of improving health and wellbeing and reducing offending behaviour; this integrated commissioning aims to reduce inequalities in care provision, and ultimately show improvements against the wider factors that affect health and wellbeing, and health inequalities.

Review of the Literature

There is an acceptance that detainees who engage with health-related services in police custody will be highly vulnerable and chaotic, with limited or variable contact with services in the community (Lord Bradley, 2009). Detainees with mental health problems or learning disabilities in the criminal justice system have been described as "the least developed in the offender pathway in terms of engagement with health and social care services" (2009: 34). Moreover, the point of arrest may find individuals at a low point in terms of worsening health in the context of a chaotic home lifestyle (cf. Payne-James et al., 2004; Payne-James et al., 2005). Studies within a police custody environment have suggested that this confluence of poor lifestyle and offending behaviours is predictive of poor management of ill-health and a lack of compliance with medication (ibid.).

Healthcare within a police custody setting has traditionally been under the purview of a Forensic Medical Examiner (FME) or police surgeon who would traditionally focus on a number of key areas, including forensic sampling (cf. Payne-James et al., 1992). Over time, a mixed model has developed to allow for a move towards allowing an HCP to provide routine care in police custody with arguably greater focus on providing a health-check to police to minimise the risk of death or injury. A specific model of service delivery has not been defined to allow for flexibility in providers' clinical responses. Broadly, there are four main approaches:

- Paramedics/nurses (HCPs) on call
- Forensic physicians/GPs on call
- Forensic physicians/GPs employed by external suppliers
- Nurses or paramedics employed as police staff, under contract through agencies or on call-out from the NHS

(ACPO/NPIA, 2012)

Commentators have highlighted this mixed provision in medical services across England and Wales, with most models comprising of: a doctor only; a doctor and nurse in combination; and, to a lesser extent, a doctor/nurse/paramedic or emergency care practitioner (Payne-James et al., 2010). Similarly, research has suggested a 'trend' towards commissioning Custody Nurse Practitioners (CNPs) that has allowed nurses to take on some of the functions that have traditionally been provided by FMEs; this has allowed FMEs to focus on the more complex forensic cases (Bond et al., 2007) and has been driven by the assumption of lower costs. Elvins et al., (2012) studied the introduction of nurse-led healthcare in police custody settings in Tayside and found that that CNPs undertook a wide range of activities with detainees, including the administration of medication, offering brief alcohol interventions, injury assessments, substance withdrawal management, and helping to contribute to mental health assessments. This change, the authors argue, has not led to any serious deterioration in the quality of service; rather, in comparison to what is described as a 'traditional' service, CNPs demonstrate a faster patient-response time, enhanced collaboration with police and other working relationships across NHS services, improved forensic examining, a comparable number of consultations, and they are seen as more approachable (Hurley et al., 2013; Elvins et al., 2012).

However, there remain wider issues around HCP competency without formalised forensic medical training within a custodial setting – clinicians are likely to be ill-equipped to competently examine, diagnose and manage detainees with complex physical and mental health needs without a clear supervision, governance and support structure (Payne-James et al., 2008).

Epidemiology and Prevalence

Studies in a police custody environment have consistently highlighted the higher prevalence of physical health needs alongside substance misuse and mental health needs. For example, in their questionnaire survey of 168 detainees seeing a Forensic Medical Examiner (FME) in police custody in London, Payne-James et al. (2010) found that over half (56%) of their sample had "active medical conditions" in need of management while in detention (this does not imply that each condition required an FME or HCP contact – rather this was a count of the wider issues faced with this cohort). Mental health issues, including depression, predominated with an overall conclusion that detainees experienced "a very large range of complex, mixed disease pathology" (2010: 16).

One study (McKinnon and Grubin, 2010) surveyed 646 police arrest records across five London boroughs, of which 307 (47.5%) were subsequently seen by the forensic HCP.[7] Of these, 144 had physical health issues, 113 were drug-related, and 63 stated issues with mental health. The most frequent reason for requesting a medical examination was alcohol intoxication (68 referrals to HCPs) and requests to examine injuries (61 requests). The study found that drug and alcohol problems were more likely to be diagnosed through the forensic HCP than via the police Custody Sergeant's RA. In addition, a similar study examined the process of screening for health-related problems in London (McKinnon and Grubin, 2012). This study found high overall levels of health morbidity but suggested that the screening process created significant levels of false-negative reporting – in other words, there were reasonably high levels of under-reporting of specific diagnoses. Overall, across all diagnoses, only 66% of all positive diagnoses were picked up, including 51% for asthma and 40% for epilepsy. The study found that less than half of all detainees at risk of alcohol withdrawal were recorded as having an alcohol issue; although 81% of these did see an HCP. Police screening also missed over one-quarter (28%) of heroin use and 68% of crack-cocaine use. The authors concluded that there was sufficient need to better identify specific diagnoses at initial reception into custody (ibid.). Mental health issues were identified and noted in 79% of the detainees with serious mental illnesses, but the risk history of suicide or suicidal ideation was not recorded in one-third and one-half of the detainees, respectively. Only about half of the vulnerable adults that needed access to an Appropriate Adult were identified. The study found that current police custody screening procedures potentially miss large proportions of physical and mental health problems and have difficulties in identifying vulnerable individuals in custody.

[7] The proportion of the total police custody population that sees an FME varies widely – in two studies in London, around half (47.5% for the McKinnon study and 55.9% for Payne-James et al., 2009) of detainees were in contact with a medical examiner, compared with, for instance, 23% in a study in Northumberland (Sirdifield et al., 2012); this may reflect relative demand for clinical services.

The authors highlighted the need for improvement of health screening procedures for use by police officers and argued that, while it is not the purpose of the healthcare screening to diagnose correctly detainees with ill-health, the role of the assessment is to identify those individuals who require further assessment. If severe health needs, such as diabetes, head injuries or alcohol withdrawals are not identified and appropriately addressed, the detainee's condition may deteriorate rapidly in custody. The authors concluded that, given the amount of illness in police custody and the need for appropriate triage, an improvement of the health screening procedure in police custody is needed. In addition, an evaluation of the NSPIS custody RA used by the MET (McKinnon et al., 2013; McKinnon and Grubin, 2013) highlighted a high prevalence of a range of health needs in custody and confirmed widely held beliefs that the existing routine screening was unable to identify a substantial amount of health needs. The authors recommended that modifications needed to be made to existing screening procedures within police custody. The range of physical health diagnoses as identified and reported by the forensic HCP is shown below (Tables 3 and 4):

TABLE 3: Comparative analysis of the likely prevalence of a range of physical health diagnoses

Diagnoses (forensic HCP)	McKinnon and Grubin (2010)	Sirdifield et al. (2012)	Payne-James et al. (2008)
Injury (excl. head)	23% (70/307)		
Epilepsy	4% (13/307)	4% (19/440)	11% (10/94)
Asthma	8% (25/307)	2% (9/440)	21% (20/94)
Head injury	6% (18/307)		
Musculoskeletal	7% (20/307)		10% (9/94)
Diabetes mellitus	2% (7/307)	2% (8/440)	9% (8/94)
Hypertension	2% (7/307)		9% (8/94)
Heart disease	3% (10/307)		
Pregnancy	1% (4/307)		
DVT	1% (3/307)		9% (8/94)
Abdominal pains	3% (9/307)		
HIV	<1% (1/307)		1% (1/94)
Hepatitis (B/C)	1% (3/307)		10% (9/94)

TABLE 4: Comparative analysis of the likely prevalence of mental health and substance misuse diagnoses

Conditions	McKinnon and Grubin (n=307)	Sirdifield et al. (n=440)	Payne-James et al. (n=168)	Rapley and Sandberg (n=260)	Rekrut-Repa and Lapa (n=12,015)
Mental health	-	17% (76/440)	23%*	10%	≈ 20%
Unspecified mental health problem	4% (12/307)				
Depression	13% (40/307)		25% (24/94)		
History of self-harm	11% (33/307)				
Suicidal	2% (6/307)				
ADHD	1% (3/307)				
Psychosis	2% (5/307)				
Bipolar	1% (3/307)				
Schizophrenia	<1% (1/307)				
Substance misuse				10%	≈ 50%
(Drugs)		19% (83/440)	33% (heroin/ crack-cocaine)		
(Alcohol)		46% (202/440)	25% ("dependent")		
Drug and alcohol problems (general)	66% (202/307)				
Alcohol intoxication	25% (78/307)				
Acute alcohol withdrawal	4% (13/307)				

For both tables, the comparisons across studies depend largely on two main factors. Firstly, the methodology used – for McKinnon et al. and Sirdifield et al., the main approach was secondary interrogation of clinical datasets and records. The Payne-James study was a detailed forensic re-examination of the DPs' clinical records, with a view to offer a "revised" diagnosis, and Rapley and Sandberg (2011) reported on a snapshot of police RAs in one inner London borough; this is likely to explain some of the variations across the four studies. Secondly, the studies will depend on the definitions used – for instance, in Payne-James et al., the prevalence of heroin and crack-cocaine "dependency" was measured and compared to other studies that look at clinical records as to whether, for instance, alcohol or drugs were mentioned at all in the clinical notes. The main conclusion from these studies is that there is a higher prevalence of both wider physical health issues and 'forensic' needs (namely substance misuse and mental health issues). For instance, one study of police detainees in the Netherlands (Ceelen et al., 2012) concluded that DPs suffer nearly two times (1.6) the level of chronic diseases compared to the general population.

Mental Health

Mental health forms a priority area in terms of public health and risk of death or injury in police custody (GLA, 2014; Lord Bradley, 2009). Mental health problems will include a range of conditions that may impact on the detainees' functioning in custody; the appointment of an Appropriate Adult may be necessary. Concerns have been expressed as to whether mental health and learning difficulties are being detected correctly in police custody and, once identified, whether they are appropriately acted upon, either by getting the support of an Appropriate Adult and/or referring to a mental health specialist. A thematic inspection in Scotland (HMP Inspectorate of Constabulary for Scotland, 2103) revealed widespread variation in how forces responded to situations where the mental health of an individual was a cause for concern. Staff interviewed during the inspection expressed a desire to have clearer processes in place, including protocols with local mental health practitioners.

In a follow-up to previous studies on the identification of health problems in police custody (McKinnon et al., 2010; 2012), a study (highlighted previously) was conducted to evaluate the ability of standard police screening procedures to identify mental disorders, detainees at risk of self-harm and suicide, and discuss the implications for managing detainees with mental health problems in police custody (McKinnon et al., 2013). The study found that police detected 52% of those detainees that presented with some form of mental disorder compared to those figures identified by the research team. Police identified 79% of detainees with psychosis, 69% of those with a moderate depressive disorder, half (48%) with a mild depressive disorder, and 24% with substance misuse-related mental health disturbances. Of those 28 detainees who were considered by the researcher as mentally vulnerable and needing support from an Appropriate Adult, only 12 (43%) had one called for them. Only a third of detainees with a risk history of self-harm or suicide ideation were identified. Roberts et al. (2005) have also suggested significant under-reporting of mental illness in police custody suites, largely because the proportion of detainees examined while intoxicated renders mental health assessment difficult or impossible, and this may result in detainees not being appropriately referred for mental health assessments or treatments.

Intellectual disabilities (ID) and attention deficit hyperactivity disorder (ADHD) are common among detainees in custody and are recognised psychological vulnerabilities (cf. CIAO and ISIS studies). A study has been carried out to: examine the prevalence of these disorders among detainees in police custody in the London MPS and their interrelationship with conduct disorder (CD); study the impact of such conditions on police staff resources; and look at the effectiveness of current custody assessment tools used to identify such conditions and the use of Appropriate Adults in interviews (Young et al., 2013). In this study, 200 detainees in police custody were interviewed and screened for ID, ADHD and CD. The screening rates were 6.7% (ID), 23.5% (ADHD) and 76.3% (CD). The study found that detainees with ADHD requested significantly more staff input. Difficulties in reading and writing and mental health problems were often identified by custody officers during the RA and were recorded. However, this did not always lead to a decision that an Appropriate Adult was needed for interview. The reason this did not happen may be due to ineffective use of the RA and a lack of use of HCPs in custody; this presents a missed opportunity to identify vulnerabilities among detainees in custody.

A study screening for mental health issues across court attendees held in police custody overnight found some element of mental health disorders at around 7% (Shaw et al., 1999). However, it is suggested that this may be a significant under-representation of the true prevalence rate. Research looking at the prevalence of mental health disorders in police custody at any one time (for instance, regardless of whether the detainee sees a forensic HCP) has suggested a rate of around one-third with "psychiatric" symptoms (Ogloff et al., 2011), comprising 24% stating depression and 22% with more "general" mental health issues. This study in Australia also identified that over half of those detainees with a mental health issue had some exposure to mental health services. A recent study in Amsterdam screened a random sample of 264 detainees and found an overall prevalence rate of around 40% who may have a mental health diagnosis (Dorn et al., 2013). By way of comparison, prevalence data on prisoners in short-term sentences (Stewart et al., 2008) found a much higher level of mental health disorders recorded prior to incarceration and in particular:

- 82% reported some symptoms (1–10) of anxiety or depression prior to prison
- 61% were screened for a personality disorder
- 10% of all men and women were thought to have a "likely" psychosis before prison
- 8% reported a suicide attempt in the year before prison
- 5% stated that they self-harmed in the year before prison

Moreover, there is some evidence that the prevalence of mental health issues is greater across certain segments of the detainee population. For example, 91% of female detainees assessed by a mental health professional in Belfast were shown to exhibit at least one symptom and most with an "above threshold" clinical diagnosis (Scott et al., 2009). Furthermore, over half (59%) of all contacts were subsequently referred to primary care services.

Substance Misuse

The prevalence of substance misuse problems can be shown to vary considerably across studies in part due to the definitions used to describe these issues. McKinnon and Grubin (2010) found, in their survey of London custody suites, that 66% of clinical forensic records related to "drug and alcohol problems".

Siridifield et al. (ibid.) in Northumberland looked at whether drugs or alcohol were included in the clinical notes, and Payne-James et al. (2009) defined substance misuse according to dependency, previous consumption in the last 24 hours, and a diagnosis of "alcoholism".

A national prevalence study of detainees found that just over half (52%) of all detainees had used some substance in the four weeks prior to arrest (Boreham et al., 2006), the majority comprising cannabis use (41%) and 26% for heroin and/or crack-cocaine. The study was also able to examine dependency and, using the Severity of Dependency Scale, 85% of all heroin users, 35% of crack-cocaine users, and 23% of powder cocaine users were shown to be clinically dependent on their substance of choice. The same study also found that among all detainees, over half (57%) were also clinically dependent on alcohol, based on FAST[8] scores (of 3 or more). In comparison, among newly sentenced prisoners (Stewart et al., 2008), 41% of all male and female prisoners surveyed reported use of heroin and/or crack-cocaine in the four weeks prior to prison. The study also reported on alcohol use and found over one-third (36%) of the sample interviewed were "heavy drinkers" (defined as consuming more than twice the recommended daily drinking limits).

In two separate studies of activity in police custody suites, detainees presenting with alcohol problems were shown to be the main issue for custody staff and among these individuals, their need for healthcare was much higher than any other type of presenting issue (Lan-Ho, 2002). Overall, despite these major differences in describing drug and alcohol use, the broad conclusion points towards exceptionally high and often problematic usage of drug and alcohol prior to police custody.

A study in Greater Manchester (Gregory et al., 2007) surveyed by questionnaire 103 drug users held in police custody and, of these, nearly two-thirds (62%) stated a desire to see a forensic HCP or "doctor". Of those that desired a medical examination, half (51%) "wanted treatment" mainly to alleviate symptoms of withdrawal, and a quarter (26%) wanted an intervention to treat an unrelated medical problem. Another study (Stark and Gregory, 2005) also interviewed HCPs and found that forensic HCPs were willing to offer harm-reduction advice, and 60% also thought that use of brief interventions was an appropriate vehicle for disseminating advice. However, this contrasted with over two-thirds of service users who stated that they did not want doctors to provide harm-reduction/brief intervention advice and rather wanted them focus on immediate medical needs.

[8] Fast Alcohol Screen Test

Epidemiology

Police Arrest Data

This section examines the footfall of detainees entering custody and provides a basic overview of the likely characteristics of clients facing healthcare. The study examined the number of detainees entering police custody (based on data from 2012–2013); in total, this amounted to 230,824 records (based on an individual detainee entering a police custody suite – additional arrests for that 'event' were excluded from the analysis to avoid double counting).

For 2012–13, the overall description of the detainee population was male (85%) with a modal age group of 25–34 years (29%); although over-one quarter of all detainees (26%) were shown to be aged between 18–24 years. Two-thirds (66%) of the detainee population for 2012–13 were aged under 35 years, suggesting that the health needs will likely be commensurate to that age population – for example, we would expect a greater percentage of illicit drug misuse issues arising, as opposed to more chronic age-related health issues (such as hypertension). This compares to the 49% of the overall population aged between 17 and 34 when compared to all persons (aged 17 or more) in London.[9] In addition, just under half (49%) of the detainee population were recorded as white, with one-quarter (25%) reported as black; 13% were also recorded as Asian, with 6% as mixed.

It was also possible to look at the time in which a detainee is likely to enter into police custody (Figure 1 overleaf). This shows that there is a consistent period from 8am to 8pm where detainee footfall remains consistent, with a noticeable spike at around 4–5pm. Subsiding after 8pm, the footfall rises again from 10pm to 12am, leaving a steady decline in the numbers entering police custody from 12am until 6am. This distribution was confirmed as "real" following informal discussions with MPS leads, suggesting that the 4pm spike may be linked to drug-related issues, including links to optimal times for shoplifting offences to be processed. This would suggest, therefore, that the 8am–8pm period is the period in which to catch a large percentage of detainees, with the 4–5pm afternoon spike a key period. Consultation with police staff suggests that detainee needs may worsen after arrival (e.g. due to withdrawal from drugs or alcohol) and that healthcare services will need to be made available from a period of 4pm onwards for some conditions. It is, however, a contention of this study that this acts as a proxy marker for demand using the equation below. This assumes that there is an equal probability of needing to see an HCP across all time periods. Put another way, this approach assumes that there are no differences in the need for healthcare services at different times.

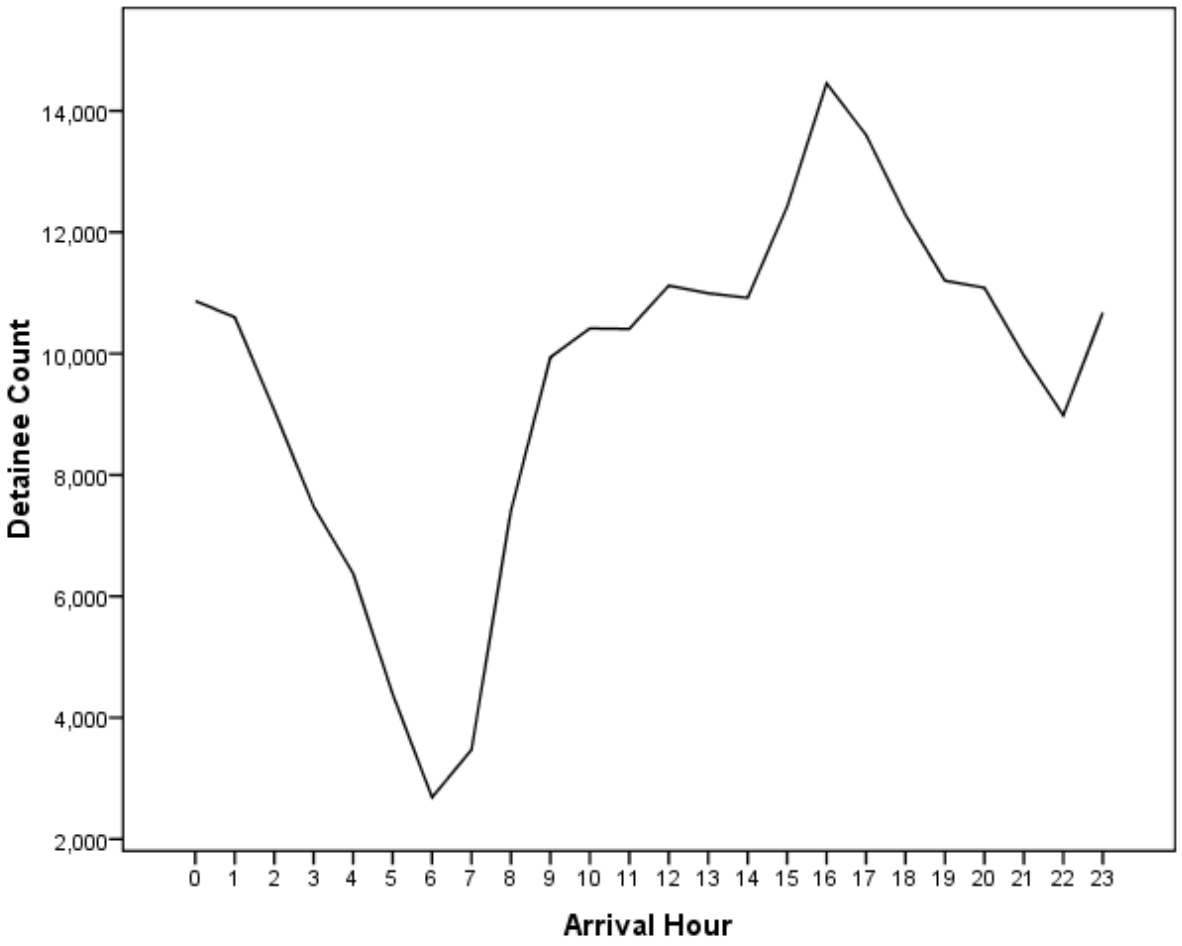
Demand for HCPs = number of individuals arriving into police custody* probability of having a health condition requiring attention.

[9] Office of National Statistics (2012), London Census: Population tables HH01, MM02, PP04, PP05, PP06, PP07.

TABLE 5: Description of the detainee population, MPS 2012–13, n=230,824

Police arrest	**Number**	**Percentage**
Gender		
Male	196,251	85%
Female	31,915	14%
Not stated	2,658	1%
Age		
Under 18 years	26,020	11%
18–24 years	59,109	26%
25–34 years	67,465	29%
35–44 years	42,247	18%
45–54 years	25,013	11%
54–64 years	6,681	3%
65 years and over	2,036	1%
Not stated/outliers	2,253	1%
Ethnicity		
White	112,672	49%
Asian	30,142	13%
Black	57,950	25%
Mixed	13,153	6%
Other	8,911	4%
Not stated	7,996	3%

FIGURE 1: Hour that a detainee arrived into police custody, MPS 2012–13, n=230,824



NSPIS Audit

This component of the study compares the prevalence rates of various conditions using two methods. The first audited one month's records held on NSPIS; this included police and HCP notes. The methodology is described in more detail above. The sample can be shown to be broadly comparable with the overall detainee population provided in Table 5. A description of the sample characteristics is presented along with the prevalence rates of various diagnoses (Table 6), including an additional breakdown of the conditions that underpin what comprises a mental health issue or problem (Table 7).

TABLE 6: Summary tables of the characteristics and conditions using the NSPIS audit methodology

NSPIS variable	Number	Percentage
Gender		
Male	1,294	81%
Female	296	19
Not recorded	2	<1%
Ethnicity		
White	864	54%
Black	353	22%
Asian	182	11%
Mixed	80	5%
Other	40	3%
Not stated	73	5%
Mental health condition	349	22%
Drug use	234	15%
Alcohol use	308	19%
HIV	11	1%
Hepatitis	9	1%
Diabetes	308	19%
Epilepsy	35	2%
Hypertension	67	4%
Cardiovascular disease	36	2%
Asthma	75	5%
Injuries (including head injuries)	376	24%
Musculoskeletal	76	5%

TABLE 7: Detailed breakdown of mental health conditions using the NSPIS audit methodology

NSPIS variable	Number	Percentage
Mental health condition		
Depression	164	10%
Psychosis	8	1%
Schizophrenia	54	3%
Bipolar	29	2%
Undefined issue	61	4%
ADHD	19	1%
Learning difficulties	1	,1%

HCP Survey

The study also included a detailed survey for one month (February 2015) whereby HCPs would return patient/detainee-specific details on the individuals accessing their services. Overall, 1,657 returns were received and entered onto a database for secondary analysis. There was an even split across inner/outer London and by geography. There were 869 returns from inner London (52%), compared to 788 from outer London (48%). Inner South-East London was over-represented in the survey, with 385 returns (just under-one quarter [23%] of all returns). Inner West London was under-represented, with only 1% of returns (n=21). Despite these vagaries, and as discussed previously, it is the study's contention that the differences do not represent a sufficient gap in knowledge from this area, as there is no clear population demographic that would be missed from this overview.

The surveys was administered over one month and largely comprised tick-box questions, although a large number of HCPs did provide additional free text that complemented the data collected. The reasons for calling out an HCP are shown overleaf; the table shows that 'fitness to be detained (FTBD)' (40%) and 'fitness to be interviewed (FTBI)' (30%) were the main reasons for a call-out. A cluster of conditions or issues coalesce around one-fifth of all call-outs, including injuries (22%), medications (21%), and mental health issues (20%). Alcohol (16%) and drugs (15%) were given as reasons for engaging an HCP at a slightly lower rate. The medication provided by HCPs was included in the HCP survey, but this yielded little specificity due to the open nature of the question asked.

TABLE 8: Call-out reason for an HCP, n=1,657 (note that more than one reason may be included)

Call-out reason	Number	Percentage
Alcohol	272	16%
Drink/drug driving	24	1%
Drugs	254	15%
Forensic sampling	36	1%
FTBD	670	40%
FTBI	489	30%
Injuries	369	22%
Mental health	334	20%
Medications	347	21%
Other	206	12%

Table 9 overleaf presents the prevalence of key physical health conditions and other medical issues such as the extent of GP registrations, extent of medications, and whether or not the detainee had a previous operation. Overall, there are high levels of prevalence for most conditions including asthma (9%) and diabetes (7%). 82% of the detainee population who are known to healthcare services have also been registered with a GP (excluding 9% who did not know or who did not recall at the time of the survey). The comparisons between these estimates and the wider research literature are presented and discussed in more detail below.

In addition, over half (54%) of the survey sample were reported to be on medication; this is less than the estimate from Payne-James et al. (2010) of 70%, albeit from a much smaller study sample but in line with the pooled estimate from Rekrut-Repa and Lapa (2014). In addition, 13% of those surveyed stated that they had received an operation before; although caution is advised with this total, as a further fifth (20%) did not remember or were not able to recall.

Data in Table 10 show the high prevalence rates for any mental health condition (reaching 38% of the total sample) including just under one-fifth (19%) reporting depression as an issue. Over one-fifth of the survey sample stated that they had self-harmed at some point and the definition of self-harm was quite wide, including from "cutting", "overdose" and "suicide attempts" to "head-banging in the police cell". Overall drug use was shown to comprise one-third (33%) of those detainees known to HCPs, with Class A use reaching 21%. Two-thirds (66%) of the sample were current drinkers (as defined by the AUDIT-C measure), with a further 37% stating that they drank at high- or increasing-risk levels. The AUDIT-C is a summary three-question marker for problematic drinking and does not include measures for dependency. In total, 77% of detainees known to HCPs in February 2015 were either current alcohol drinkers and/or users of illicit drugs.

TABLE 9: Prevalence of physical health conditions and other medical concerns, n=1,657

Physical health conditions/medical concerns	**Number**	**Percentage**
Asthma	150	9%
COPD	23	1%
Diabetes	117	7%
Epilepsy	63	4%
Hepatitis	27	2%
High blood pressure	118	7%
HIV	14	1%
Previous heart attack	19	1%
Stroke (CVA/TIA)	8	<1%
Other conditions	204	12%
Musculoskeletal	72	4%
GP registration		
- Yes	1,356	82%
- No	144	9%
- Don't know	157	9%
Currently medicated		
- Yes	892	54%
Previous operations		
- Yes	220	13%
- No	1,101	66%
- Don't know	336	20%

TABLE 10: Prevalence of mental health and substance misuse (illicit drugs and alcohol) issues, n=1,657

	Number	Percentage
Mental health condition	628	38%
- Depression	311	19%
- Psychosis	25	2%
- Schizophrenia	92	6%
- Bipolar	51	3%
- Undefined	60	4%
- Self-harm	350	21%
Drug misuse		
- Amphetamines	11	1%
- Cannabis	240	14%
- Cocaine	144	9%
- Crack-cocaine	165	10%
- Heroin	235	14%
- Street opiates	15	1%
- Street benzodiazepine	20	1%
- Legal highs	3	<1%
- Other drugs	26	2%
Any drug use	547	33%
Class A	348	21%
Alcohol prevalence		
- Any alcohol use	1,094	66%
- AUDIT-C +	613	37%
Use of any substance	1,276	77%

Comparison of Prevalence Rates: Discussion of Differences

The differences in the prevalence rates achieved through using the two methods deployed for this study (the NSPIS audit and the HCP survey) are marked, with a much higher level of reporting noted when using the survey methodology. It should be noted that the responses are based on self-reported information that has not been validated. The NSPIS audit is closer in approach to the wider published literature and the Therapeutic Solutions' pooled dataset of over 21,000 records and, therefore, there is a closer comparison with these datasets. The HCP survey was compared to the larger Therapeutic Solutions' dataset and a simple test for statistical difference was undertaken. This test suggests that, when benchmarked with the larger dataset, the HCP survey indicates that for every condition tested for (bar two), there is a statistically significant difference between the two (in other words, the difference did not happen by chance alone). The HCP survey found higher and significant prevalence rates for: asthma/COPD (10% v. 2%), which may reflect the prevalence of smoking and drug use by this population group; diabetes (7% v. 5%); hypertension (7% v. 3%); musculoskeletal problems (4% v. 2%); HIV (1% v. <1%); and injuries, which were consistent with the NSPIS audit at around 22–24% (compared to 7% from the pooled dataset and the 10% average from the published literature). The exceptions to this were the prevalence of hepatitis, which was shown to be as expected (2%), and epilepsy, which had a recorded prevalence rate of 4% compared to an expected level of 5% (the difference is statistically significant at $p<0.05$). The reporting of epilepsy was seen as problematic for comparative purposes as clinical staff suggested that epilepsy is sometimes reported by detainees in order to access benzodiazepines, and seizures related to alcohol have been recorded as an epileptic fit; therefore, caution is advised with the epilepsy figures.

Similar findings were seen with the comparison between mental health issues and substance misuse prevalence rates. The NSPIS audit suggested a prevalence rate of 22%, which sits within the expected range of 17–23% as shown by the pooled dataset and the published literature. By way of comparison, the prevalence rates recorded by the HCP survey reached nearly 40% (38%) and can be shown to be statistically significant when compared to the Therapeutic Solutions' pooled dataset of 17% (at $p<0.0001$). In addition, measures for substance misuse all show a higher prevalence using the HCP survey for "any current drug use" (at 36%), which is significantly higher than the Therapeutic Solutions' pooled dataset (21%) and the published literature (19%). The current prevalence of alcohol use can be shown to be three times the pooled dataset figures (67% compared to 21%, including a 19% figure derived from the NSPIS audit). It is a contention of this study that this may reflect methodological issues as the alcohol prevalence figure relates to an AUDIT-C question that allows for current consumption to be measured. Conversely, the other datasets, including information derived from the wider literature, tended to be gleaned from official records – in other words, the derivation of alcohol use is dependent on it being mentioned in the files. In a similar vein, the prevalence of alcohol and/or drug use reaches 77% of all detainees contacted by an HCP, which is over twice the Therapeutic Solutions' pooled dataset (at 34%) and NSPSIS audit (30%). We are content that this also reflects how the information was gathered, including the use of calibrated and specific questions on a survey as opposed to a more passive 'wait' for the issue to be raised in the case-files.

TABLE 11: Estimates of physical health needs using the NSPIS audit and the HCP survey compared to comparators

Physical health	NSPIS audit (n=1,592)	HCP survey (n=1,657)	Therapeutic Solutions' pooled data (n=21,304)	Statistical difference HCP survey and comparator		Published pooled data (n=841/12,015)
Respiratory system – asthma/COPD	5%	10%	2%	χ^2=507.3	P<0.0001	6%
Diabetes	4%	7%	5%	χ^2=7.9	P=0.004	3%
Epilepsy	2%	4%	5%	χ^2=8.2	P=0.004	5%
Hypertension	4%	7%	3%	χ^2=90.8	P<0.0001	4%
Musculoskeletal	5%	4%	2%	χ^2=15.9	P<0.0001	7%
HIV	1%	1%	<1%	χ^2=5.7	P<0.01	<1%
Hepatitis	1%	2%	2%	Not significant		3%
Injuries	24%	22%	7%	χ^2=457.2	P<0.01	10%

TABLE 12: Estimates of mental health needs using the NSPIS audit and the HCP survey compared to comparators

Mental health	NSPIS audit (n=1,592)	HCP survey (n=1,657)	Therapeutic Solutions' pooled data (n=21,304)	Statistical difference HCP survey and comparator		Published pooled data* (n=841/12,015)
Mental health issues	22%	38%	17%	χ^2=1218.7	P<0.0001	17–23%
- **Depression**	10%	19%	-	-	-	16%
- **Psychosis**	1%	2%	-	-	-	2%
- **Schizophrenia**	3%	6%	-	-	-	<1%
- Bipolar	2%	3%	-	-	-	1%
- **Self-harm**	7%	21%	-	-	-	11%

TABLE 13: Estimates of illicit drug use and problematic alcohol use using the NSPIS audit and the HCP survey compared to comparators

Substance use	NSPIS audit (n=1,592)	HCP survey (n=1,657)	Therapeutic Solutions' pooled data (n=21,304)	Statistical difference HCP survey and comparator		Published pooled data* (n=841/12,015)
Drugs	15%	36%	21%	χ^2=601.0	P<0.0001	19%
- **Class A**	11%	22%	-			-
Alcohol	19%	67%	21%			
- **AUDIT-C +**	-	37%	-			-
Substance use						
- **Combined drugs and alcohol**	30%	77%	34%	χ^2=69.0	P<0.0001	50%

Epidemiological Modelling of Needs

The analysis developed statistical models using the HCP survey data to show associations and interactions between variables. The authors sought to examine the extent to which an epidemiological model could predict use of several key variables: (a) any drug use; (b) Class A drug use; (c) being at risk of an alcohol use disorder (through testing AUDIT-C positive); (d) having a mental health need; and (e) reporting self-harm to an HCP. The aim of this approach was to understand whether any variables are correlated to each other. The data were initially tested for significance using a standard chi-squared measure of association to understand which variables may help explain drug use (for instance). A final logistic regression model was run based on variables that were shown to significantly correlate to each other (at $p<0.05$). The list of variables included any reported at around 10% of the total sample and is included in Appendix II. The statistically significant variables are shown in Tables 14–18:

TABLE 14: Logistic regression model of current use of any illicit drugs

Predictor variable in final model	Odds ratio	95% confidence interval	P
Aged 25–34 years	1.3	(1.0 – 1.7)	0.046
Self-harm	1.7	(1.3 – 2.3)	<0.0001
Aged 55 or over	0.4	(0.2 – 0.7)	0.002
Diabetes	0.4	(0.2 – 0.8)	0.01
Hypertension	0.4	(0.2 – 0.7)	0.004
Injuries	0.6	(0.4 – 0.8)	<0.0001

The logistic regression modelling of four segments shows close correlations between mental health issues, problematic alcohol use as measured by AUDIT-C, and illicit drug use, suggesting the need for an integrated response.

- Modelling of the correlates of use of any illicit drug (Table 14) show positive, statistically significant correlations with the age group 25–34 (odds ratio (OR) 1.3, p=0.046) and self-harm (OR 1.7, p<0.0001).

- Being aged 55 or over (OR 0.4, p=0.002), having diabetes (OR 0.4, p=0.01) or hypertension (OR 0.4, p=0.004), and being injured (OR 0.6, p<0.0001) are all negatively correlated with illicit drug use.

TABLE 15: Logistic regression model of current use of any Class A drugs

Predictor variable in final model	Odds ratio	95% confidence interval	P
AUDIT-C +	1.4	(1.0 – 2.0)	0.040
Self-harm	1.9	(1.3 – 2.6)	<0.0001
Under 24 years	0.4	(0.3 – 0.7)	0.002
Aged 55 years or over	0.3	(0.2 – 0.7)	0.007
Diabetes	0.2	(0.2 – 0.9)	0.03
Hypertension	0.5	(0.2 – 0.9)	0.03
Mental health issues	0.6	(0.4 – 0.9)	0.013
Injuries	0.3	(0.2 – 0.5)	<0.0001

- A logistic regression model was run for the correlates of Class A drug use (Table 15); it found positive associations with having an alcohol use disorder (OR 1.4, p=0.04) and self-harm (OR 1.9, p<0.0001).
- Being aged under 24 years (OR 0.4, p=0.002), being aged 55 or over (OR 0.3, p=0.002), having diabetes (OR 0.2, p=0.007) or hypertension (OR 0.5, p=0.03), being reported as having a mental health condition (OR 0.6, p=0.013), and being injured (OR 0.3, p<0.0001) are all negatively correlated with Class A drug use.

TABLE 16: Logistic regression model of any detainees with an alcohol use disorder (AUDIT-C positive)

Predictor variable in final model	Odds ratio	95% confidence interval	P
Aged 35–44 years	1.4	(1.1 – 1.9)	0.012
Mental health issues	1.4	(1.1 – 1.8)	0.013
Self-harm	1.4	(1.1 – 1.9)	0.015
Residing in outer London	1.3	(1.1 – 1.6)	0.016
Diabetes	0.3	(0.3 – 0.9)	0.03
Hypertension	0.6	(0.4 – 0.9)	0.048

- A third model (Table 16) was run to identify the correlates of detainees reported to drink at risky levels (identified as having a potential alcohol use disorder on AUDIT-C). A detainee being aged between 35 and 44 years (OR 1.4, p=0.012) and being arrested in outer London (OR 1.3, p=0.016) both predicted risky drinking. As already highlighted, risky drinking is associated with mental health issues (OR 1.4, p=0.013) and self-harm (p=0.015).
- Perhaps intuitively, conditions such as hypertension (OR 0.6, p=0.048) and diabetes (OR 0.3, p=0.03) are relative protective factors preventing risky drinking habits.

- A model was run predicting correlates of any mental health condition (Table 17 overleaf) and four variables were shown to be positively correlated with having a mental health problem. If a detainee was on medication, they were three times more likely to have a mental health condition (OR 3.2, p<0.0001). Detainees with a mental health issue or problem are also twice as likely to be risky drinkers (OR 1.6, p=0.002) and users of any illicit drug (OR 2.2, p<0.0001). Age was also correlated with mental health, as detainees aged between 35 and 44 years were more likely to report having a mental health problem (OR 1.4, p=0.01).

- Younger detainees (aged under 24 years) were less likely to be reported with a mental health condition than older detainees (OR 0.7, p=0.012); further work is required to understand whether this relates to a gap in service provision or a reflection of the expected prevalence rates for younger people.

- As with other conditions reported on above, diabetes (OR 0.4, p<0.0001) and hypertension (OR 0.6, p=0.047) are negatively correlated with detainees and mental health problems.

TABLE 17: Logistic regression model of detainees with a mental health condition (non-specific)

Predictor variable in final model	Odds ratio	95% confidence interval	P
Being on medication	3.2	(2.5 – 4.2)	<0.0001
AUDIT-C +	1.6	(1.7 – 2.2)	0.002
Any drug use	2.2	(1.5 – 3.3)	<0.0001
Aged 35–44 years	1.4	(1.1 – 1.9)	0.01
Class A drug use	0.5	(0.3 – 0.8)	0.001
Aged under 24 years	0.7	(0.5 – 0.9)	0.012
Hypertension	0.6	(0.4 – 0.9)	0.047
Diabetes	0.4	(0.2 – 0.6)	<0.0001

- Detainees' reporting of self-harm as an issue was also modelled and shown (Table 18 overleaf) to be associated with being on medication (OR 1.7, p=0.001), being AUDIT-C positive (OR 1.5, p=0.027), and having an HCP called out for an alcohol problem (OR 1.9, p<0.0001) and for any drug use (OR 1.9, p=0.003).
- There was a positive correlation between detainees reporting self-harm and higher levels of epilepsy (OR 1.9, p=0.041) and asthma (OR1.5, p=0.047).
- By way of contrast, there were negative correlations with being aged 45–54 years, which would seem to indicate a potential gap in service delivery, and for detainees with diabetes (OR 0.4, p=0.017) and with a reported injury (OR 0.7, p=0.025).

TABLE 18: Logistic regression model of any detainees reporting self-harm

Predictor variable in final model	Odds ratio	95% confidence interval	P
Being on medication	1.7	(1.2 – 2.2)	0.001
AUDIT-C +	1.5	(1.0 – 2.1)	0.027
Call-out reason: alcohol	1.9	(1.3 – 2.8)	<0.0001
Any drug use	1.9	(1.2 – 2.8)	0.003
Epilepsy	1.9	(1.0 – 3.3)	0.041
Asthma	1.5	(1.0 – 2.3)	0.047
Aged 45–54 years	0.6	(0.4 – 0.9)	0.028
Diabetes	0.4	(0.2 – 0.9)	0.017
Injuries	0.7	(0.5 – 0.9)	0.025

Analysis of Risk Assessment (RA) Data

The study deployed two levels of analysis on RA information held on NSPIS. The first examined whether there were any external influences that would predict variations across geographical location (defined as the borough where a police custody suite was located) for whether a HCP would be called – in other words: whether differences at borough-level in HCP contact rate can be explained by external factors such as the level of deprivation, or local prevalence of mental health issues and substance misuse. In all, 17 factors were tested using a simple Pearson's chi-squared test of association. The second approach tested which variables held as part of the RA process were correlated with calling out an HCP (using a 'yes' or 'no' dichotomy). Variables were created, including the time of month of an HCP call-out, and a multivariate regression model was created.

The geospatial distribution of selected questions held on the RA model is presented overleaf (Table 19) and shows little variation by key questions across different geographical areas. For questions on the RA asking whether a detainee was "under the influence of alcohol, drugs or any other substance", the range was low, from 6% in Lewisham to 11% in Ealing. A similar low range was reported for whether a detainee has "any mental health problems", from 5% in Ealing to 9% in Kensington and Chelsea. Indicators of self-harm varied from 2% in Brent to 5% in Sutton. The overall level of need for an HCP was also consistently low at the point of the RA at between 3 and 6%. A 'hot spot' analysis of the data, as described in the methods section, was also undertaken (see Appendix I for more detail). The findings suggest that there may well be some real (statistically significant) spatial clustering of higher or lower values in each of the RA variables; this suggests that there are spatial processes affecting the RA variables. However, most of these clusters are quite limited in size and/or significance, and do not seem to indicate major regional divisions or patterns across the city. As such, they may prove difficult to illuminate further using a geographic regression model.

The study attempted to model differences between levels of need for an HCP (defined as requiring an HCP call-out following on from the RA) and external influences. The analysis of RA data found no correlations between variations in calling out an HCP at police-custody level that could be explained by demographic factors (ethnicity, age profiles, level of deprivation, or unemployment). There were no correlations with mental health issues or substance misuse indices.

A second model was established that attempted to understand the variations in whether an HCP was called out during the RA process. Using the 'yes' or 'no' dichotomy discussed below and in more detail in the methods section, a logistic regression model was created that aimed to understand associations with being called to see an HCP based on the composite variables held in the RA. Additional variables were created or derived based on available data including: (a) the socio-demographics of the detainee (age, ethnicity, gender); (b) the time of day the RA was delivered; and (c) the time of month, as there had been some theoretical discussion that there may be a seasonal element to demand. The model examined what predicted an HCP call-out and found that most items on the RA predicted needs; this suggests that the revised RA is successful in ensuring key risk groups of detainees are in contact with an HCP. The model also correlated a number of other factors with whether an HCP was required by police. These factors included:

- HCPs were less likely to be called out if the RA was undertaken in the morning between the hours of 12am and 7am (OR 1.1. p=0.03) and between 8am and 12pm (OR 1.5, p<0.0001).
- HCPS were also less likely to be called out during February (OR 1.2, p=0.002) and March 2014 (OR 1.1, p=0.046).

The finding that HCPs were less likely to be called out in the morning was tested within the model, as the approach tests for the interaction with other factors such as alcohol or drug consumption, suggesting that other procedural factors may be at work.

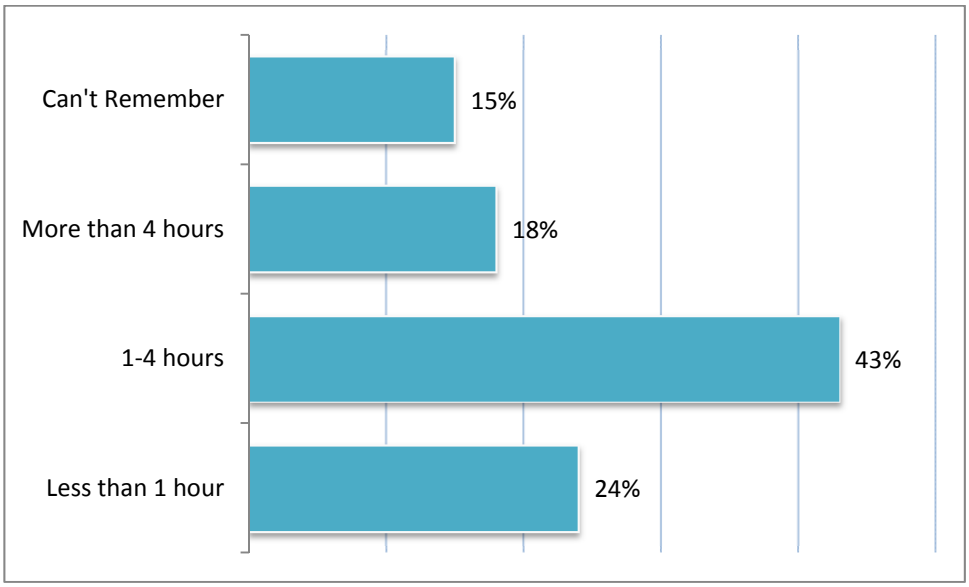
TABLE 19: RA analysis for selected questions by inner/outer London borough

Borough	Appears to have taken or be under the influence of alcohol, drugs, or any other substance?	Do you have any mental health problems?	Has indications of self-harm?	Is in need of a Healthcare Professional?
Inner London				
Camden	10%	7%	3%	4%
Greenwich	8%	7%	3%	4%
Hackney	8%	7%	3%	4%
Hammersmith	10%	7%	3%	3%
Islington	8%	7%	3%	4%
Kensington and Chelsea	8%	9%	3%	3%
Lambeth	9%	7%	3%	4%
Lewisham	6%	7%	4%	5%
Southwark	8%	6%	4%	6%
Tower Hamlets	10%	7%	3%	5%
Wandsworth	8%	7%	3%	3%
Westminster	9%	6%	3%	4%
Outer London				
Barking and Dagenham	8%	6%	3%	4%
Barnet	8%	7%	3%	3%
Bexley	7%	8%	3%	3%
Brent	9%	6%	2%	3%
Bromley	7%	8%	3%	4%
Croydon	8%	7%	4%	4%
Ealing	11%	5%	2%	4%
Enfield	9%	6%	3%	4%
Haringey	9%	6%	4%	5%
Harrow	9%	6%	2%	3%
Havering	7%	7%	4%	4%
Hillingdon	9%	6%	3%	4%
Hounslow	9%	7%	4%	3%
Kingston Upon Thames	9%	7%	4%	3%
Merton	10%	7%	3%	3%
Newham	8%	6%	3%	6%
Redbridge	8%	6%	3%	4%
Richmond	8%	8%	4%	4%
Sutton	8%	7%	5%	5%
Waltham Forest	9%	6%	3%	5%

Detainee Perceptions

The study also examined the perceptions of detainees through a short, bespoke survey of patient/detainee needs (n=194). There were two sources for the survey; the first included responses from HCPs and the second came via the DIP. The response overall should be treated with some caution as, although the findings can be shown to be representative at 95% confidence and with a 10% margin of error (the lowest level of representativeness), the response from the HCP component was limited to one doctor (n=66) and, therefore, we are cautious about drawing any conclusions from this dataset.

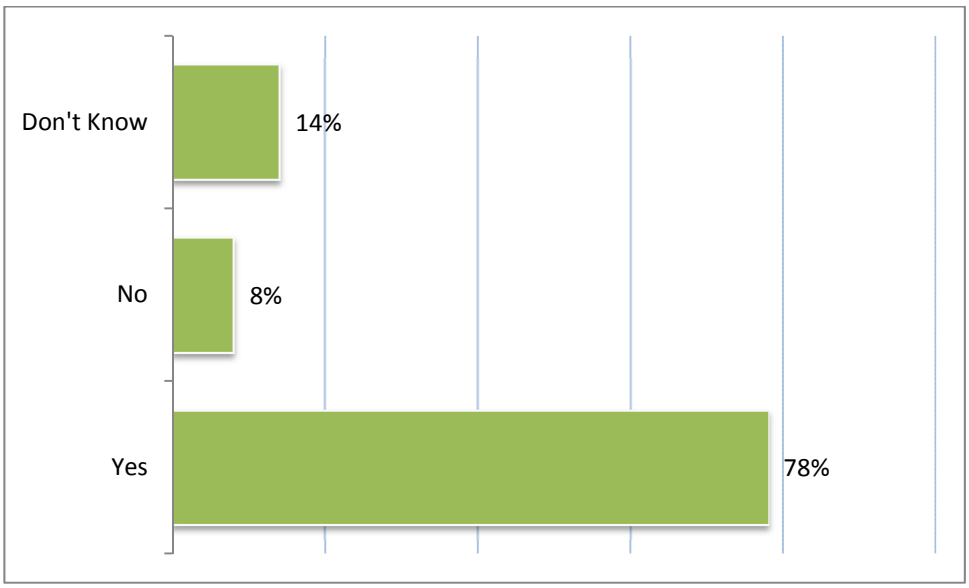
FIGURE 2: Time taken to see an HCP, n=194



- 43% of respondents stated that it took between one and four hours to see an HCP, with 18% stating that it took longer than four hours. Just under one-quarter (24%) of detainees surveyed stated that they saw an HCP within one hour.

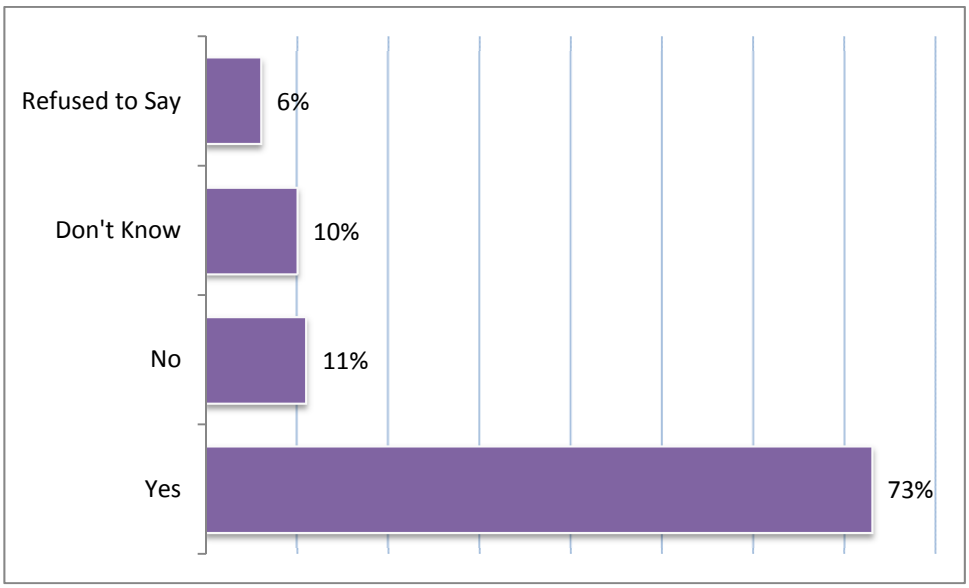
- The survey made the assumption that the time taken is from the point of call to an HCP. Future surveys should be explicit in specifying the call-out time rather than the time of arrival into custody.

FIGURE 3: Detainee perceptions as to whether they were treated with respect and dignity by an HCP at a consultation in police custody, n=194



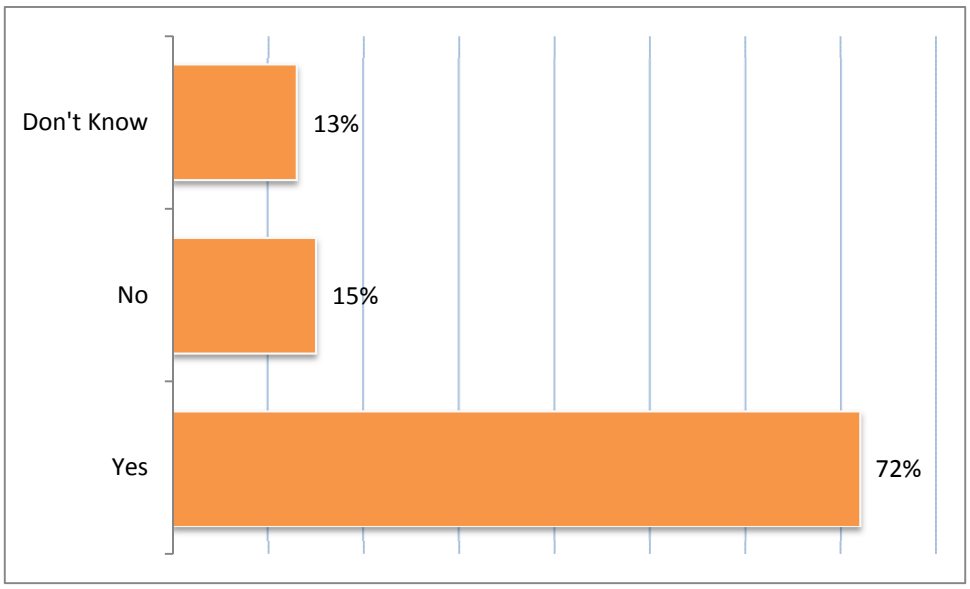
- Over three-quarters (78%) of respondents stated that they felt that the HCP treated the detainee with respect and dignity at the consultation within police custody.

FIGURE 4: Detainee perceptions as to whether they were treated with respect and dignity by police at a consultation in police custody, n=194



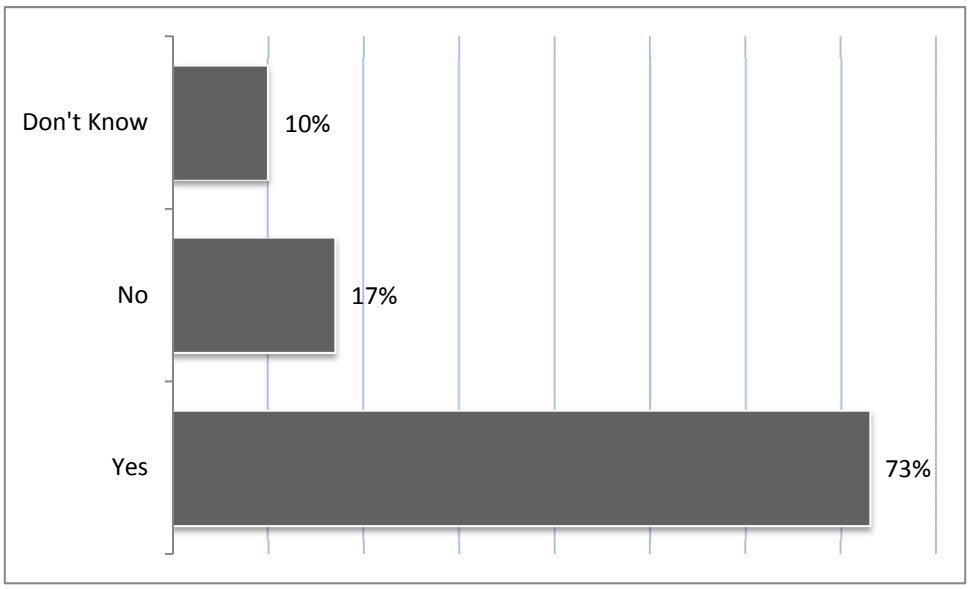
- 73% of detainees stated that the police treated them with dignity at the point of arrest while in custody.

FIGURE 5: Detainee perceptions as to whether they were given enough time with an HCP while in police custody, n=194



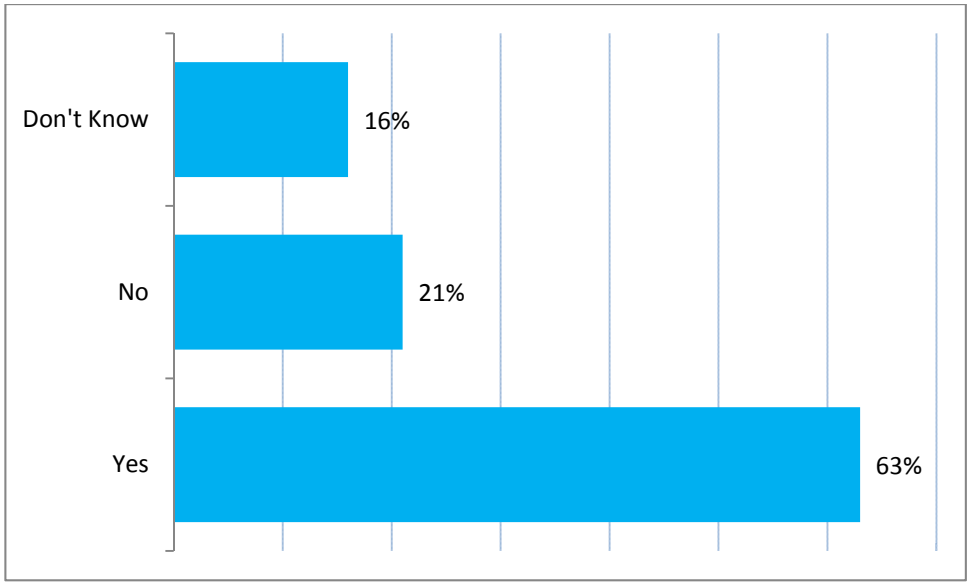
- 72% of detainees perceived that they were given enough time with the HCP while in police custody.

FIGURE 6: Detainee perceptions as to whether they were adequately listened to by an HCP while in police custody, n=194



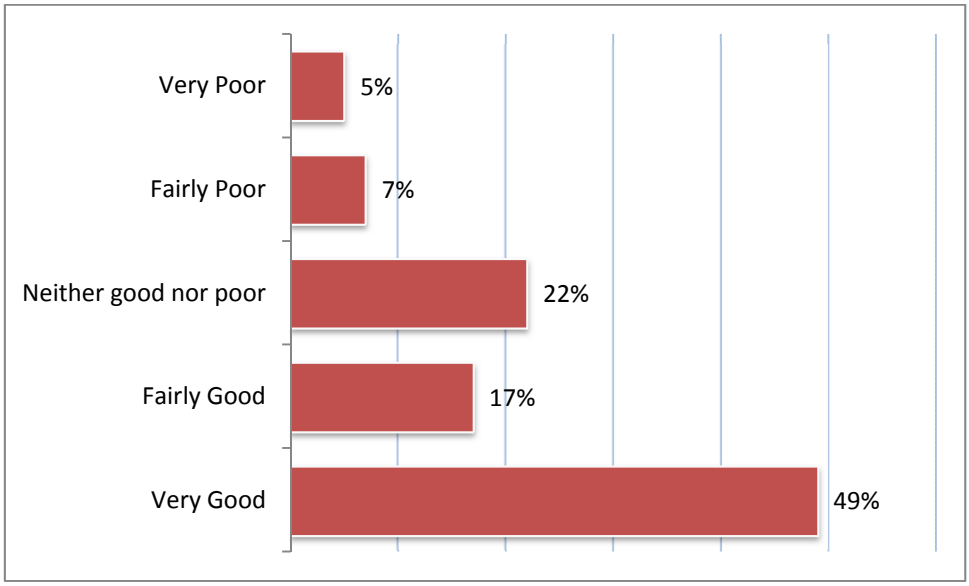
- Just under three-quarters (73%) of detainees felt that the HCP that dealt with their medical condition listened to their needs at the consultation in custody.

FIGURE 7: Detainee perceptions as to whether the HCP was able to treat the detainee's needs while in police custody, n=194



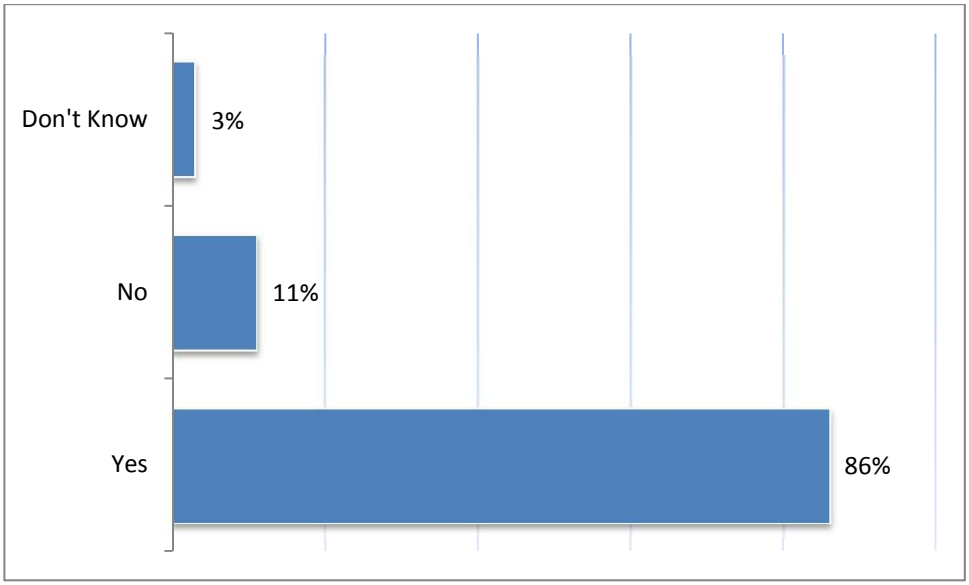
- 63% of detainees surveyed felt that the HCP was able to meet their immediate needs while in police custody.

FIGURE 8: Overall detainee satisfaction with HCPs while in police custody, n=194



- Just under half (49%) of respondents stated that their experience with an HCP was "very good". Two-thirds (66%) of all detainees rated the service provided as "good", with 12% stating the offer was "poor".

FIGURE 9: Self-reported levels of GP registration, n=194



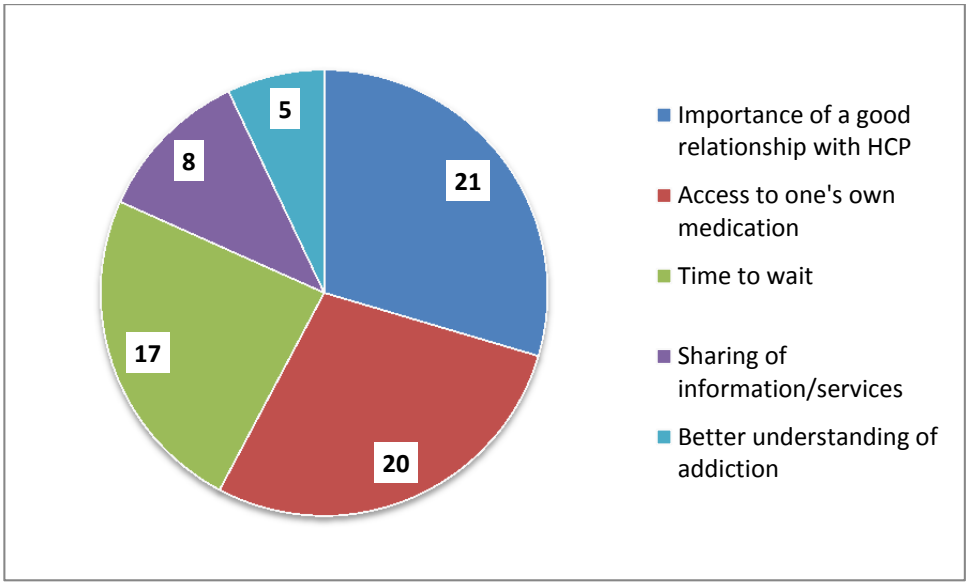
- A high proportion (86%) of detainees reported being registered with a GP at the time of the HCP consultation. This figure is closely related to the 82% registration rate identified as part of the HCP survey. Only 3% stated that they did not know their GP registration status.

- It was not possible to contrast the level of GP registrations among detainees with the general population. Data from the GP Lists Populations of Primary Care Organisations (aggregated to Strategic Health Authorities) for 2011 show 6,135,046 registrations for males and females in London[10] with the ONS population for all persons aged 18 or more at 6,105,775[11]; therefore, the number of registrations exceeds the stated population of London, preventing comparisons being made with the general population.

10 Downloaded on the 18th May 2015. http://www.hscic.gov.uk/searchcatalogue?productid=4710&q=title%3a%22Attribution+data+set+GP-registered+populations%22&sort=Relevance&size=10&page=1#top

11 Table PP04, Office for National Statistics, 2011 Census: usual resident population by single year of age, unrounded estimates, local authorities in

FIGURE 10: Detainee statement of issues while in police custody, n=194



- Detainees were also invited to state specific issues or concerns on the survey (through free-text boxes). The majority of issues related to: the importance of a good relationship or rapport with the HCP (responses suggested that detainees were more likely to be satisfied with the contact if they were able to establish a positive working relationship with a clinician); the need to access their own prescribed medication in a timely fashion; and reducing waiting times to see an HCP while in police custody.

- Other areas raised by detainees included the need to have a better level of shared resources with other related services through, for example, sharing information and ICT, and for HCPs to have a better understanding of addiction and the impact it has on their lives.

Case Studies

Overview

This section of the research focused on the collection of primary data obtained from qualitative semi-structured interviews and observations at five research sites (Acton, Barking, Brixton, Camden, and Wood Green). One additional site had been selected (Islington) but it was not possible to undertake any fieldwork in this area. The research sites were a sample of custody suites selected by stratifying the police custody sites according to the following criteria:

- Geography (inner v. outer London)
- Model of service delivery (on-duty FME v. in-house CNP)
- Participation of additional mental health services compared to an area with no mental health coverage

Detailed observations were also undertaken in the custody suites. A total number of 82 semi-structured interviews were undertaken with key practitioners who work within the custody environment to support detainees (the fieldwork was supplemented by three separate focus-group events specifically for FMEs). These included:

- Custody Sergeants
- PACE Inspectors
- Designated Detention Officers
- Forensic Medical Examiners
- Community Psychiatric Nurses
- Custody Nurse Practitioners
- Mental Health Practitioners (adult and young people)
- Drug Intervention Workers

Field notes were collated as a result of the observations undertaken in custody suites. Interviews with participants were recorded and transcribed, and MAXQDA software[12] was used to organise and manage the data, allowing the analytical team to conduct a thematic analysis using a grounded approach. Codes were assigned to the data; these were analysed, identifying relationships within the data.

[12] MAXQDA is qualitative data analysis software.

Findings

This section outlines the key findings from the research. While they are presented as separate themes, they are not mutually exclusive of each other; wider issues such as austerity, reduced resources, and a core holistic definition of what is meant by 'healthcare' between and within the different agencies is vital to keep in mind while reading this section of the report. Given findings from the GLA (2014), HMIC (2013), Lord Bradley (2009), and subsequent press coverage, it is clear that cuts to a number of public services are further impacting on both the provision of healthcare within the custody environment and the ability for the police and indeed other agencies to deal with the complexity of the issues presented by detainees effectively. Moreover, this study places the health needs of detainees within the context of reducing clinical risk – that is, while health promotion matters may be important as an indicator of need, it is the risk of worsening health in police custody that is the driver of defining health need.

Theme 1: The delivery of healthcare in police custody needs to meet the high volume and complex case-mix demands of detainees

Delays in Accessing Healthcare (HCP and Mental Health)

A key theme from the study was the need to ensure that, whatever model is commissioned, it meets the demand and complex case-mix needs of detainees. For police staff, there was a desire for a rapid and responsive service to meet the health needs of detainees that included timely access to an HCP and a mental health professional. The issue of delay in accessing an HCP or mental health practitioner (where one was not on-site) was a recurring theme, and the study found consistent issues; there were, however, no sub-segments of detainee that routinely experienced delays in accessing an HCP (e.g. by age or ethnicity or whether the detainee was a foreign national). This was perceived to be frustrating both for custody staff (due to their experiences of dealing with detainees while waiting) and for detainees themselves. For example:

"… if they're like a violent prisoner or they're a bit volatile, it's a bit frustrating in your head because you want to do the best thing for them; and if they're saying they're going to take four hours to turn up and do this assessment and do whatever they need to do, it can get a bit worrying because they could be kicking off in the cell or all sorts could be going on. Sometimes it's not worth waiting that long, you need quick action, like you need it quick and you need them to come quicker than they do" (police interview).

"… depending on how many areas they [the FME] can cover, because sometimes they cover up to two to four areas, but normally if it's something that is important they will do their best to get here. It can be between half an hour to four hours, it varies. … Depending on the seriousness of it and how long the doctor advises us they may be, then we would call an ambulance if we needed to" (police interview).

This delay could lead to other negative consequences that could include further worsening of a detainee's physical (and often mental) health linked to substance misuse (for example, the effects of withdrawal from drugs and alcohol). Our research in custody suggests that there are four main areas of risk as a consequence of delays to an HCP seeing a detainee:

- Access times to receive medication and medical support are reduced, which can heighten a detainee's condition (particularly if a detainee is withdrawing from drugs and/or alcohol).
- The welfare of the detainee within custody and on release may be compromised.
- There may be instances when a Mental Health Act assessment is not undertaken (see below for more detail).
- In the absence of medical or mental health cover, there will be an increased probability of police staff using hospitals' emergency departments as de facto cover.

As evidenced above, custody staff felt that such delays could lead to further violence or increase the chance of self-harm by the detainee. There was also an element of risk attached to this issue and the consequences for the detainee and the police should an assessment not be conducted sufficiently. Given the recent criticism about individuals with severe mental health needs being held in custody rather than an appropriate place of safety, this is concerning for officers, particularly if they have to resort to restraining detainees who have these complex needs.

This quote highlights this point:

"If they're kicking off, there's nothing more you can do than take them straight down to a cell, and if that means getting leg restraints out and handcuffs, so be it. At the end of the day, it's for their own safety. If they're trying to get booked in and they're hitting their head on the counter or something like that, for their own safety, that is the best way to tackle it. We're not going to stand there and let them do that and make it worse" (police officer interview).

For FMEs working with the on-duty model, the need to access detainees in a timely fashion was also a point of frustration:

"My travel has increased way beyond what I should be doing. … I'm covering for nursing staff who are just not there more and more and this means I can't be all the places I should be at once. The police want me to be there [quickly] but I have a duty to each patient. I can't complete my work without my duty of care to each and every one" (FME interview).

Staffing Considerations

While the CNP model seems to work well, there were concerns that nurses are understaffed and that the rota system offers little flexibility.

"Well, first of all we have less staff; at the moment, our team is running with two full-time and one part-time. … [We have] 12-hour shifts [seven in the morning to seven in the evening, or seven in the evening to seven in the morning]. … We do two days/two nights, four on/four off. Again, the rota is a massive problem like with everything else, because you do long hours, you do the weekends and you don't have that good mixture. You never get an ideal rota but it's the main thing with people with family life, but well, anybody, because you need time off as well from work" (CNP interview).

Despite the caveats of the nurse rota cover system for nursing staff, a rapid and responsive model of service delivery was perceived as essential in helping to minimise risk and meet the needs of detainees:

"I believe each custody should have a nurse. To be perfectly honest, it's a risky area, every one of those clients walking through that door is a high risk. I would class every single one of them as a high risk unless deemed fit and well. Very few of them that come in here are normal, well, healthy, people, so I say you should have a healthcare professional in each custody, it will reduce that risk. Because, even if they're not sure, they have someone clinically who can monitor this person and say 'I have concerns here'. But if you don't have a nurse there or a doctor there and somebody comes in and there's a problem, you call an ambulance. It might be unnecessary, it might be something simple as somebody needs a sugary drink, but they wouldn't know that and that can be resolved in a few minutes with the right knowledge. An ambulance costs £300/400 to call out; it takes time" (CNP interview).

Theme 2: Mental health needs remain a gap in service provision

The study explored access to mental health professionals through on-site mental health practitioners in a similar on-duty model to that of FMEs. This is complex to arrange, especially when a detainee is in custody as a result of the 136 Mental Health Act. It is necessary for there to be one approved mental health practitioner present and two doctors. Where there is no Liaison and Diversion nurse present, police custody resources are pulled from other roles in order to organise the assessment team. This can be a long process within the support from the mental health workers. All of the boroughs visited for the research did have access to a mental health practitioner; however, access was often arranged on a rota basis, over a five-day period and, additionally, within some sites 'late shift' or Saturday nurse cover was in place (in all sites, there was no cover on a Sunday). In addition, CNPs on duty were often deployed to a range of custody suites within an area of London. This means they

have to assign their time, and also where they subsequently work from, depending on the demand. This did not allow for multiple support provision to a number of custody suites at one time and caused more delays when they were required at another site. The following quote sums up some of these issues:

"Basically, I will try and ring up all the custodies in the morning when I start. Sometimes it's a bit difficult because they are busy anyway … If I can't get through, they will ring me up if they want anybody assessing. I go to whichever of the four sites I can manage, you know … sometimes if I'm in one and if they've got more than one or two or three, it takes all my time to see them" (Liaison and Diversion nurse).

Where there was no on-site support, HCPs were notified of a request for their assistance via a phone call from the Custody Sergeant. Police custody staff perceived both CNPs and mental health practitioners to be an extremely valuable and essential 'custody resource'. They felt that having a dedicated nurse in each custody area would be beneficial in terms of providing more accurate RAs and more immediate care provision for detainees. Additionally, this would mean that critical advice and support could be delivered in cases where the detainee was not necessarily in need of 'urgent' medical support, but still required a more thorough and ongoing review to assess other social and health needs. The implication of time delays experienced when requesting both CNPs and mental health practitioners led to different 'healthcare pathways' being chosen in order to provide effective healthcare. This highlights a degree of inconsistency across the sites. All of the staff interviewed advocated the 'in-house' nurse model, as nurses were perceived to be invaluable both from the perspective of the custody staff and also by the nurses themselves.

"The introduction of nurses was one of the best things ever. And the mental health nurses. We've got two mental health nurses now and that's brilliant because they can take such pressure off your shoulders, because, previously, to get a mental health team out, we had to call a doctor; there might not be a doctor available and you would have to wait another eight hours" (police custody interview).

For police staff, arranging a mental health assessment was, in the past, very challenging (it requires one approved mental health professional and two doctors. FMEs will generally not perform this role; rather, it is the responsibility of social services). There are delays in the Mental Health Act assessment team turning up in custody, usually up to one or two hours, but quite often up to four hours. If a Liaison and Diversion nurse is not available, then police custody staff, including DDOs, can get frustrated because they are "getting the run around, never being able to talk to the right person, and not being taken seriously":

"Now if we think a mental health assessment is needed, we call [the mental health nurse] straight in and they will do the arrangements. Again, for us to make the arrangements was a real pain because you had to go through many different people. We didn't know who to contact nine times out of ten."

PACE v. Delays in Accessing Mental Health Services

Interviews also suggested a wider awareness by police of PACE requirements and the need to ensure that detainees are released as required by law; this may be a huge clinical risk, however:

> "You can't hold someone indefinitely in custody while you wait for a mental health assessment because … we have PACE to abide by, and it's not the right environment to keep someone in if they need help. … If you've got someone who needs a mental health assessment and your clock's running, it's like what can I do? I don't want to release him because if his clock runs out, obviously we've got to release him but … if I release him and we feel he needs a mental health assessment, what happens if he goes out of here and runs in front of a lorry or something on the busy road?"

There was a general perception that mental health workers knew who to call and would have more credibility to request the mental health team attending custody in a shorter time period. For example:

> "We recently had the mental health team attached to the custody suite … and he's brilliant. … He works nine to five and, in that period, anyone that comes in with any mental health, we can just refer him straight away and they can speak to him and that's brilliant because obviously he knows, he's the expert on the mental health side of things … whether in his opinion someone needs a mental health assessment, and if not, he's got all the agencies that he can refer them to and he can speak to other experts in certain areas. So having him here, he's an absolute godsend."

Theme 3: Access to medication is variable and is not well understood by detainees

Variable Communication with Community Services

Arranging medication for detainees can be a complicated and long process. As CNPs are non-prescribers, they are required to confirm a detainee's medication before administration, while a prescriber (e.g. an FME) can do so within their clinical judgement. CNPs will need to confirm medication if it is not correctly labelled. They give medication using guidance from the Patient Group Directive and refer to the FME if medication outside of this remit is required. In relation to the links with community services, as a matter of rule, the HCPs in police custody cannot trust detainees' information about their medication on its own, but the detainees' information needs to be confirmed by a General Practitioner (GP).

Some GPs seem to be forthcoming and promptly comply with requests for medication information; others insist on following a written process that can be compounded if the detainee is arrested on a weekend. During the short stay in custody, HCPs will usually not prescribe medication, but will instead only manage withdrawals.

"So what we tend to do is we confirm it from the GP; we will get it in writing. … You have some GPs who are brilliant and will give us information; some people will say no, we have to put everything in writing, fax it and wait, and then it's a long waiting game. … If we're just going to maintain him, we would take the prescription verbally 'Mr So-and-so is on benzos. Yes, we know he takes benzos. We're not going to get him a regular script for benzos, but we will treat him for benzo withdrawal if necessary'. So we'll wait for him to become symptomatic; that's how we play the game really, because they're here for 24 hours, so it's just really to maintain safety; half of these people, their lives are so chaotic they don't even know what days are coming and going" (CNP).

"If it's the weekend, it becomes tricky because, at weekends, we have no doctors to confirm, so we rely on their medication. We can't take their word because they're all over the place, so we will give them what is really important, i.e. the drugs which are for alcohol withdrawal; if they're diabetic we will aim to get their medication" (CNP).

Strict Guidelines for Medications

Providing medication in police custody has to follow strict guidelines and protocols. The amount and nature of the medication that can be used is restricted, but can be provided on the advice of a doctor in accordance with MHRA, APP and local MPS guidelines:

"There's a list of drugs which we can give and what we use for alcohol withdrawal, so we use diazepam for alcohol and dihydrocodeine for withdrawals. We have a set protocol we will follow, so, with alcohol, we can medicate them the minute they come in if they're symptomatic and then we maintain them every eight hours. If that is not holding them, that's where our FME will come in, so we'll make our assessment, have a discussion with the FME, and then the FME can decide if they're going to write a prescription" (CNP).

Providing medication for drug treatment or withdrawal in custody is often a challenge as methadone is not prescribed routinely in custody and only withdrawal symptoms are treated. In some cases, when a drug user is known to be on a methadone script and can prove it, methadone can be given but this can be dependent on a number of procedural factors:

"There are very few people we will get the methadone for because our FME cannot prescribe methadone; you have to have a specialised doctor to prescribe methadone, so we will only maintain them unless we actually have the script, or the pharmacy agree to release it. With that, we write a letter, then the DPs [detained persons] sign it over to give us permission to collect it. So it's not just go and pick it up; we have to do the whole spiel, get consent and everything" (CNP).

Previous research by this research group (Therapeutic Solutions, 2014a) has suggested that the rules underpinning access to medication are not always made clear at the point of arrest and, given the nature of the environment, lack of access to medication is perceived as a consequence, as arbitrary. In this work (ibid.), the study found that drug users were often seen by police custody staff as the most disruptive and unruly due to not receiving methadone or other previously prescribed medication. Other research (Therapeutic Solutions, 2014a; 2014b) has suggested that the point of arrest for detainees can be a highly traumatic event that worsens conditions and it heightens an individual's agitation when medication is denied.

Theme 4: The police RA process is multi-layered

Studies have shown (e.g. McKinnon and Grubin, 2010) that the RA process may understate health needs by significant levels; this has led to the development of the 'Newcastle Risk Assessment Tool'. Our observation of practice found that the RA process is multi-layered, and that the RA acts as one of several components used to assess risk, as the process is not deemed as the primary means with which to identify health needs that may constitute a clinical risk.

Accuracy (or Honesty) of Detainees

The research identified that risk is continually assessed as soon as a detainee comes into the custody suite, and that the 'booking-in' process initiates the first formal RA. However, there were strong concerns from police custody officers regarding the honesty of detainees during the initial assessment when they were asked questions. The subsequent impact of this on the actual accuracy of RAs was critical if there was important information that detainees did not chose to disclose.

"… If they're not honest with you, then that's it. So you might, for example, we have a marker if someone's suicidal and the question you ask is 'Have you ever tried to harm yourself? Do you have any mental health issues?' And they might say 'No' and you say 'Are you sure?' and they go 'Yes'. The next question is 'Have you ever tried to harm yourself?' and they go 'No', but they might say on the markers 'attempted suicide'. So it'll only work if the person's honest, and we do say to them don't be embarrassed by the questions, we ask everyone the same questions. I think they're a little bit outdated" (Custody Sergeant).

This quote highlights a number of challenges – firstly, the perception that detainee honesty is the main information-provider for an accurate RA. This highlights the need and importance of proper training around how to identify risks and look for nuances; there are also wider issues, perhaps regarding how officers might build up trust with detainees to encourage them to disclose the information required more openly. The quote below highlights the difficulty some detainees may have in engaging about their issues in an honest way. Therefore, the importance of building up trust is critical.

"Some clients are reluctant to engage, and I suppose one of the difficulties is because we're based in the police station and with police officers, so we have to be quite clear that, although we work in the police station or the custody suite with the police officers and we work alongside them, we don't work for them. However, we need their consent, so we seek their consent to share information, specifically if things need to be diverted" (Liaison and Diversion worker).

Moreover, the RA has been considered "a blunt tool" (Therapeutic Solutions, 2014c) for a calibrated tool when it comes to determining more complex health needs, such as mental health needs. The study aimed to understand the points at which a detainee may give false information as part of the RA process. A number of reasons were given when a detainee might overstate a medical condition, including: the need to mitigate the offence committed; to access drugs; and to access an HCP as "someone else to talk to". We also found instances when the RA itself could not pick up issues without reference to a relevant HCP:

"Making it up I think sounds the wrong sort of phrase. We have a lot of times where they will self-diagnose, and … if they're in that environment, they're being asked those questions, then they might say that if they're a bit anxious and feel worried. … I had one guy last night, he stated that he was 19 years of age, had ADHD, had schizophrenia, was not on any medication, not known to any mental health services, and not had any previous contact. So I thought I'd go and find out a bit more about this. I said 'Okay, you say you've got schizophrenia; when were you diagnosed?' 'Oh, I don't have it but I've been told. My mum thinks I've got schizophrenia'. So I say 'Okay, why does she think you've got schizophrenia?' Then that opened up, 'Oh, I'm hearing voices at the moment and things'. So, 'Obviously, that's a concern but schizophrenia, there's a lot of other symptoms that have to be present and it's quite a serious mental illness. Let's try and find the best way for you to let us get assessed and things'" (Liaison and Diversion worker).

Custody Environment and Patient Confidentiality

This issue is further compounded by the custody suite environment itself. The data from custody suite observations and interviews with the non-custody officers indicated that the environment in which detainees are booked in to the custody suite is open and lacks privacy. This may impact on an effective delivery of an RA, as well as the level of personal detail willing to be disclosed by detainees.

Therefore, a lack of a 'safe environment' or 'private place' to book-in detainees may hinder the information assessed in the first instance to understand and identify risk and, consequently, needs may go undetected. The provision of a private place to undertake a more detailed clinical health assessment would be difficult to achieve due to health and safety concerns. Other research by this group (Therapeutic Solutions, 2014a) found that some detainees were reluctant to divulge personal details due to confidentiality concerns, as there was a perception that the police did not need to know every medical condition – rather the RA was there to help facilitate access to medication through an HCP and there was no overwhelming need to divulge every medical issue.

In addition, the observation of practice identified other aspects of police procedure that were used as part of assessing risk. First, there was widespread use in recording PNC 'markers' that identified whether any individual previously known to the police had disclosed any condition that may be relevant to the police during booking-in. Second, there was local intelligence on specific individuals that were known to the station staff. These, combined, help 'paint a picture' of that individual:

"We have PNC markers that we use to make our judgements, and this tells us whether the person has a history of mental health problems such as self-harm. We have to be mindful of the note made on the whiteboard and we also have the intelligence held on NSPIS. … This allows us to track back if we have suspicions about a detainee. … We also know about a lot of our customers. If you mention certain names to custody staff here, they can automatically say drugs or mental health problems without having to do any of the other stuff" (Custody Sergeant).

Third, the risk is gauged through a dialogue with other members of staff if there is a concern. This includes police discussion of individual detainees; this was best observed during the 'hand-over' (when a new shift arrives to take over custodial duties from the outgoing staff). We observed a range of discussions on the health and welfare needs of detainees that included awareness of drug and alcohol needs, and which detainees presented with potential self-harm concerns. The discussions we were allowed to observe included strategies for managing detainees, and when to call an HCP and under what circumstances. These were often detailed conversations that identified the health needs of a detainee in a pragmatic way while also highlighting the potential risk if a detainee's condition worsened. Allied to the informal awareness-raising during the hand-over was the increasing use of informal discussions with other professionals, including CNPs or Liaison and Diversion staff:

"I'll also chat to the staff about if there's anyone they're a bit concerned about, someone who they think is behaving a bit oddly or something … or they'll come to me … and say 'This person, I'm not really sure. Can you go and see them and find out a bit more information?'"

The process by which health needs were identified also included self-referrals to an HCP. These often included a range of conditions but each detainee was allowed the right to see a health professional. Therefore, health needs not identified by the RA process could be subsequently picked up by the detainees themselves.

Fourth, we argue that the process of constant supervision of detainees without a clear risk but who seem "not quite right" is supported by the process of rouse-checks (used especially for intoxicated detainees) and, where it existed, CCTV checks were used in conjunction with the rouse-checks. The use of CCTV has been key when identifying 'high risk' and managing crisis situations, as it enables an immediate response. This allows for checking up on detainees who may present with subsequent issues or for whom a diagnosis cannot be made earlier as part of the booking-in process. This latter element has been described as the "something is not quite right" (Therapeutic Solutions, 2014) element of intuitive policing that, in part, is a function of the above and of experience:

> "… one recent example may explain how it works in practice as it just happened to us very recently. We had a … gentleman come in and we went through the risk assessment. He was quiet and barely audible but polite and largely with it. He looked bad, sweating, but just looked ill. Something was not quite right about him so we called the doctor to have a look at him. She said he was not fit to detain and was sent to hospital so we did something right that day" (Custody Sergeant).

References

Association of Chief Police Officers/National Police Improvement Agency (2012) Guidance on the Safer Detention and Handling of Persons in Police Custody: Second Edition. London: ACPO.

Bennett, T. and Holloway, K. (2008) The statistical association between drug misuse and crime: a meta-analysis. *Aggression and Violent Behavior*, 13(2), March/April 2008: 107–118.

Bond, P., Kingston, P., and Neville, A. (2007) Operational efficiency of health care in police custody suites: Comparison of nursing and medical provision. *Journal of Advanced Nursing*, 60(2): 127–134.

Boreham, R., Fuller, E., Hills, A. and Pudney, S. (2006) The Arrestee Survey Annual Report: October 2003–September 2004. England and Wales. Home Office Statistical Bulletin 04/06. London: Home Office.

British Medical Association (2009) Health care of detainees in police stations: Guidance from the BMA Medical Ethics Department and the Faculty of Forensic and Legal Medicine. London: BMA.

Ceelen, M., Dorn, T., Buster, M., Stirbu, I., Donker, G., and Das, K. (2012), Health-care issues and health-care use among detainees in police custody. *Journal of Forensic and Legal Medicine*, 19(6): 324–331.

Dorn T., Ceelen M., Buster M., and Das K. (2013) Screening for mental illness among persons in Amsterdam police custody. *Psychiatric Services*, 64(10): 1047–50.

Elvins, M., et al. (2013) Provision of healthcare and forensic medical services in Tayside police custody settings. Scottish Institute for Policing Research. 20.

Greater London Authority (2014) Falling short: The Met's health care of detainees in custody. Greater London Authority.

Gregory M. (2007) Characteristics of drug misusers in custody and their perceptions of medical care. *Journal of Forensic and Legal Medicine*, 14: 209–12.

Hannan, M., Hearnden, I., Grace, K., and Bucke, T. (2010) IPCC Deaths in Custody in or Following Police Custody – an Examination of Cases 1998/99–2008/9. IPCC Research Paper 17.

HMIC (2013) Police custody is regularly being used to detain people whose only 'crime' is that they are suffering from mental disorder, a joint inspection has found. 016/2013 HMIC Inspectorate Report, published 19 June 2013.

Hurley J, Linsley P, Elvins M, Jones M. (2013) Nurses leading care in custody suite environments: a qualitative study from Scotland. *Journal of Forensic Nursing*, 9.1: 45–51.

Jordan, J., Downswell, T., Harrison, S., Lilford, R., and Mort, M. (1998) Whose priorities? Listening to users and the public. *British Medical Journal*, 316: 1668–70.

Lan-Ho, M., Best, D., Marshall, J., Godfrey. C and Budd, T. (2002) Dealing with alcohol-related detainees in the custody suite. Home Office Findings 178. London: Home Office.

Lord Bradley (2009) Lord Bradley's review of people with mental health problems or learning disabilities in the criminal justice system. Department of Health and Ministry of Justice.

Marshall, T., Simpson, S. and Stevens, A. (1999) *Healthcare in Prisons: A Healthcare Needs Assessment*. Birmingham: University of Birmingham.

McKinnon I. and Grubin D. (2010) Health screening in police custody. *Journal of Forensic and Legal Medicine*, 17(4): 209–12.

McKinnon, I. and Grubin, D. (2012) Health screening of people in police custody – evaluation of current police screening procedures in London, UK. *European Journal of Public Health*, Jun, 23(3): 399–405.

Newbury-Birch, D., McGovern, R., Birch, J., O'Neill, G., Kaner, H., Sondhi, A., and Lynch, K. (2015) Alcohol Screening and Brief Interventions in the Custody Suite Setting. Public Health England Fact Sheets. London.

Payne-James, J., Dean, P., and Keys, D. (1994) Drug misusers in police custody: a prospective survey. *Journal of the Royal Society of Medicine*, 87(1): 13–14.

Payne-James, J., Wall, I., and Bailey, C. (2005) Patterns of illicit drug use of prisoners in police custody in London, UK. *Journal of Clinical Forensic Medicine*, 12(4): 196–98.

Payne-James, J., Anderson, W., Green, P., and Johnston, A. (2009) Provision of forensic medical services to police custody suites in England and Wales: Current practice. *Journal of Forensic and Legal Medicine*, 16: 189–95.

Payne-James, J. (2010) Clinical risk and detainees in police custody. *AVMA Medical and Legal Journal*, 18(2): 56–60.

Payne-James, J., Green, P., McLachlan, G., and Moore, T. (2010) Healthcare issues of detainees in police custody in London, UK. *Journal of Forensic and Legal Medicine*, 17: 11–17.

Petrou, S. (1998). Health needs assessment is not required for priority setting. *British Medical Journal*, 317(7166), 1154.

Ogloff, J., Warren, L., Tye, C., Blaher, F., and Thomas, S. (2011) Psychiatric symptoms and histories among people detained in police cells. *Social Psychiatry and Psychiatric Epidemiology*, 46(9): 871–80.

Rapley, M. and Sandberg, S. (2011) Improving mental health screening for individuals in police custody. *Health Service Journal*, 3, October.

Rekrut-Lapa, T, and Lapa A. (2014) Health needs of detainees in police custody in England and Wales: Literature review. *Journal of Forensic and Legal Medicine*, 27: 69–75.

Roberts G, Roberts J, Patton HF, Patton M, Megson K, Murphy R.. (2006) A qualitative and quantitative survey of Forensic Medical Examiner workload in the Northumbria Police Force area October 2002–January 2003. *Journal of Clinical Forensic Medicine*, 13(1): 1–8.

Stevens, A. and Gillam, S. (1998) Needs Assessment: from theory to practice. *British Medical Journal*, 316: 1448–52.

Scott, D., McGilloway, S., and Donnelly, M. (2009) The mental health needs of women detained in police custody. *Journal of Mental Health*, 18(2): 144–51.

Shaw, J., Creed, F., Price, J., Huxley, P, and Tomenson, B. (1999) Prevalence and detection of serious psychiatric disorder in defendants attending court. *Lancet*, 353: 1053–6.

Sirdifield, C. and Brooker, C. (2012) Detainees in police custody: results of a health needs assessment in Northumbria, England. *International Journal of Prisoner Health*, 8(2): 8.

Stark, N. and Gregory, M. (2005) The clinical management of substance misusers in police custody – a survey of current practice. *Journal of Forensic and Legal Medicine*, 12: 199–204.

Stark, N., Norfolk, G. (2011) Training in clinical forensic medicine in the UK – perceptions of current regulatory standards. *Journal of Forensic and Legal Medicine*, 20(6): 610–17.

Stewart, D., (2008) Problems and Needs of Newly Sentenced Prisoners. Ministry of Justice Research Series 12/08. London: Ministry of Justice.

Thornton-Jones, H., Hampshaw, S. and England, P. (2005) Health needs assessments in prisons. *British Journal of Healthcare Management*, 11(4), April: 105–10.

Therapeutic Solutions (Addictions) (2013) Unpublished Health Needs Assessment. Health Needs Assessment for Sussex Police. Sussex Police: Brighton.

Therapeutic Solutions (Addictions) (2014a) Unpublished Health Needs Assessment. Health Needs Assessment for Avon and Somerset. Gloucestershire and Wiltshire Police.

Therapeutic Solutions (Addictions) (2014b) Unpublished Health Needs Assessment. Health Needs Assessment for Thames Valley Police.

Therapeutic Solutions (Addictions) (2014c) Unpublished Health Needs Assessment. Health Needs Assessment for City of London and British Transport Police.

Wilkinson, J. and Murray, S. (1998) Assessment in primary care: practical issues and possible approaches. *British Medical Journal*, 316: 1310–13.

Williams, R. and Wright, J. (1998) Epidemiological issues in health needs assessment. *British Medical Journal*, 316: 1379–82.

Williamson, M. (2006) Improving the Health and Social Outcomes of People Recently-Released from Prisons in the UK. Sainsbury Centre for Mental Health: London.

Wright, J., Williams, R., and Wilkinson, J. (1998) Development and importance of health needs assessment. *British Medical Journal*, 316; 1310–13.

Young, S., Goodwin, E., Sedgwick, O., and Gudjonsson, G. (2013) The effectiveness of police custody assessments in identifying suspects with intellectual disabilities and attention deficit hyperactivity disorder. *BMC Medicine*, 11: 248.

Appendix I: Feasibility of a Study Screening Detainees in Custody

Aims

The aim of this paper is to discuss the possibility of undertaking a health screening across Metropolitan Police Service (MPS) custody suites. The outcomes of such an approach will be to understand the prevalence and estimated level of need for key conditions. The existing methodology would assume contact with a clinician (for example an FME or CNP) who would act as a proxy indicator for need. The purpose of this paper is to examine the possibility of screening all or a representative sample of detained persons (DPs) for health-related conditions across MPS sites.

Prospective Screening in Police Custody

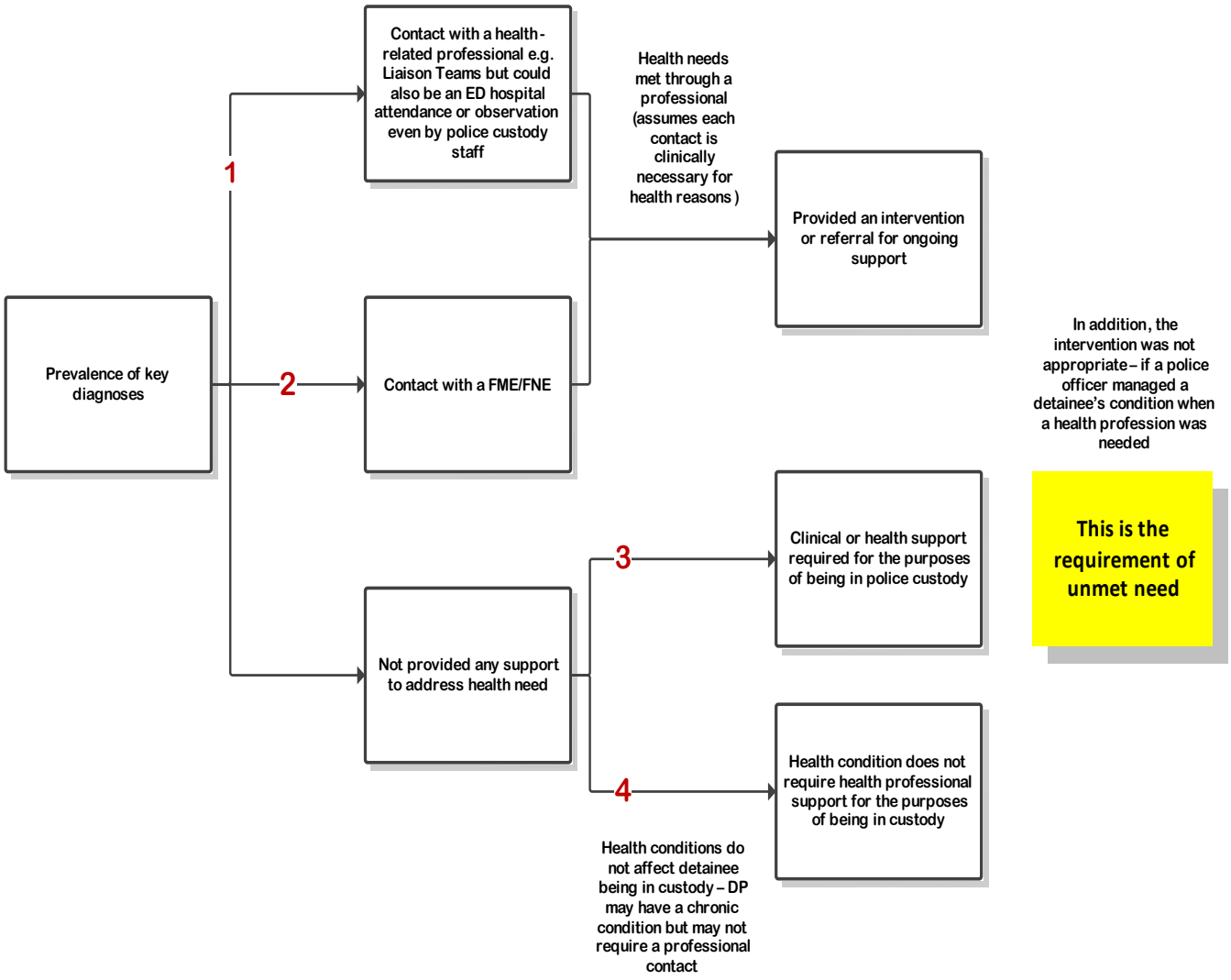
Conceptual Design

The approach to screening in police custody is shown in Figure A below. The logic of a health screening in custody would be to identify unmet needs (at Point 3), and healthcare utilisation assumes that a condition will need to be addressed, if not treated, at the point of contact with an HCP. However, this may not hold in a police custody environment – for example, points 1 and 2 below show that a condition may be 'known' to an HCP. One example could be excessive alcohol consumption – recovering from overconsumption may require ongoing observation rather than contact with an HCP; therefore, a health-related need has been diagnosed and effectively managed (met). As such, the logic of understanding prevalence rates can only make sense if it is linked to a clinical activity. Any prevalence measure would require a survey to understand whether a detainee was subsequently seen by a health professional or was satisfactorily managed during their time in custody. This may involve a simple linkage of a survey with DPs' records at custody that detail contact with an FME. Complications arise if a DP has contact with a health professional who is not required to complete the custody record (for example, a Liaison and Diversion worker may make contact, but the record of that activity is held elsewhere).

In addition, a detainee may have a diagnosed chronic condition (for example, diabetes) but this may not require contact with an HCP. A DP may also be able to manage their condition without an FME/FNE consultation. Moreover, the relative short time of the consultation (usually within 9–10 hours at a maximum) may only require police custody staff awareness of a condition and access to appropriate medication (including a possible onward referral, if required). This could be achieved without an HCP being called and, for the purposes of this study, may be seen as 'unmet need'.

For example, a detainee may have a particular condition that requires attention but there is no subsequent management of that health need. Therefore, Point 3 below may be considered the area of unmet need for the purposes of this study. This also assumes that an intervention or knowledge of a condition was necessary for the purposes of being in police custody but that an FME/FNE or other professional was not involved in managing that condition. For example, a condition may require specialist support but may be managed by the 'wrong' professional – a hypothetical example may be if a drug worker (who is not often clinically trained) intervenes for a substance misuser who may benefit from an FME/FNE intervention. Also, work by Payne-James suggested that there are a whole host of reasons for clinical "near misses" and variations in clinical practice. If a detainee was not seen (or poorly treated), it may reflect bad practice or inadequately trained staff. Similarly, differential call-out times may impact on whether a detainee was seen at all. If a detainee was not seen due to call-out issues, then this may be listed as an unmet need; this reflects operational or process problems rather than undiagnosed needs. The consequence of this discussion is that a screening exercise in police custody would require more detailed mapping of detainees' subsequent contact to determine the actual extent and nature of unmet needs.

APPENDIC FIGURE I: Concept model mapping met and unmet



Strategic Intent of Healthcare in Custody

The underlying principle of providing healthcare in police custody requires clarification, as this will help shape and define the methodologies used. If the aim of healthcare provision is to intervene and manage a person's health-related conditions (for example, by onward referrals or through health promotion), then there will be a need to shape service provision accordingly. The nearest comparison would be the establishment of healthcare services in prison. For example, alongside screening all prisoners at reception for key conditions (usually substance misuse, mental health issues, and chronic conditions), there is an accepted use of custodial settings to deliver health promotion such as smoking cessation, where the prevalence of smoking among prisoners has been estimated to be as much as 78% (Singleton et al., 1998).

Conversely, if the purpose of health is for forensic work and to ensure a detainee's fitness to detain (FTD) or interview (FTI), then a different type of service is required. This would be to ensure that detainees who require clinical treatment receive it – this may require an alternative methodology (for example, a case review of court records where a DP did not access healthcare services and this had a detrimental effect [e.g. health-related problems were worsened]). This, of course, would be a self-selecting sample, as cases will not reach court or adjudication, but this may offer some idea of the key conditions that may have been missed, misdiagnosed, or not treated while in custody.

In a similar vein, there may be a need to select the key conditions that influence FTD/FTI and, in addition, to develop a hypothesis about conditions that may result in the most harm if untreated. There may be a need to develop a hypothesis about detainees' health that may require testing; these may include mental health and substance misuse diagnoses. There would be too many conditions to test an entire range and some (for example, blood pressure) will be influenced by the stress of the arrest event. Evidence also suggests that these conditions are disproportionately linked to deaths in custody and problematic health-related issues. A prospective screening may therefore be selected to identify key diagnoses of concern that would affect FTD/FTI and cause the most harm. A hypothesised list of conditions to be screened could include:

- Substance misuse ('dependent' or problematic use of key substances)
- Mental health ('severe and enduring' conditions)
- Issues for pregnant females (e.g. chickenpox)
- Blood-borne viruses such as hepatitis
- Extent of untreated diabetes

Again, the prevalence estimates for each condition would need to be mapped against which interventions had previously been provided and what was subsequently offered. For example, a substance misuser may take a range of substances and be on medication for an addiction (such as methadone); in this example, indication of withdrawal can be managed within a custodial setting but, without understanding an individual's history, it may over-state the need for health provision in custody.

Difficulties of Working in Police Custody Settings

The operational challenges of screening or interviewing detainees in custody cannot be over-estimated. Other HNAs have shown that around 40–50% of all DPs will make initial contact under the influence of alcohol and/or drugs or be insufficiently mentally capable to undertake a health-related screening. Refusal rates in this environment can also be high and there are police procedural constraints (such as the PACE clock). DPs may have to be moved quickly within the criminal justice system and, in addition, there will be time constraints in screening DPs (the health screening must not take up too much time). Alongside these operational concerns are practical issues of accessing spare space to undertake a confidential screening/survey, and ensuring all custody staff are sufficiently engaged to ensure the smooth movement of detainees from the custody bridge to a research team. Few studies comment on these factors and tend to ignore refusal or did-not-contact rates, as these would profoundly influence whether a study may be considered as representative. For example, a number of published studies do not report on the number of detainees that did not engage with a study or who were missed, choosing instead to focus on the total number interviewed – this may be misleading and will be subject to statistical biases. An ideal sampling strategy should consider a range of factors to ensure representativeness, including procedural factors (time of intervention and type of detainee). Finally, there may also be a range of health and safety concerns (for example, those represented through indemnity insurance) for working in a police custody environment.

Further Methodological Considerations

This paper has raised issues with sampling methodologies to implement a prospective survey. There are further methodological concerns related to the questions asked and the validity of self-reported responses. Studies of testing-on-arrest in the USA and Australia have broadly found concordance with subsequent spot-testing through urine-hair-sweat tests. Confirmatory tests in the USA identified key groups of offenders (e.g. juveniles) who routinely under-state health conditions and, in particular, drug misuse. There remain issues with recall over specific time periods, and some evidence from prison healthcare screening has suggested that prisoners may be motivated to over-state the problems of conditions if they believe there is a quid-pro-quo arrangement – for example, to overstate drug addiction or mental health problems to access medication. The issues with self-reporting have focused on substance misuse, and it remains unclear whether there are any conditions that may influence self-reporting rates. There have been few (and none in the UK) studies aimed at testing self-reporting methods (for example, using a test–retest methodology).

In addition, some prevalence studies routinely and pragmatically aggregated all types of conditions into prevalence measures, with little reporting of the variations or severity of conditions. For substance misuse, 'dependency' is often used, but there is little clarity of how this is measured and it could comprise: (a) the presence of any withdrawal symptoms; (b) attendance at a drug service; (c) whether the individual was receiving medication; or even (d) asking such a simple question as "Are you dependent?" For alcohol, the prevalence measures do not often differentiate between consumption levels.

Screening tools do exist (such as the Alcohol Use Disorder Test) that 'score' alcohol problems to create a typology of drinkers (e.g. from low-risk to dependent). It remains unclear what the pathways are for drinkers who score at various levels (for example, a health promotion approach may advocate brief interventions for below-dependent drinkers) and a score of dependency is largely meaningless without a more detailed understanding of that person's drinking history and patterns.

Future Considerations

The use of a prospective screening of health-related conditions has prima facie validity to understand prevalence rates but requires clarity over the objective or intent of healthcare provision and recognition that the methodology may be subject to various constraints, including sampling issues, which may prohibit representativeness. We propose the following next steps to understand health-related conditions to the depth and methodological rigour discussed:

1. The MPS and NHS England should clarify the strategic vision of healthcare in police custody, as this will influence the research strategies deployed.

2. Commission a short feasibility study that examines the feasibility of undertaking a detailed health screening in police custody. The terms of reference should include:
   (a) Consider sampling requirements and strategies to ensure representativeness across London sites.
   (b) Understand which medical conditions should be the focus (e.g. in terms of greatest harm/risk, and relate these to FTI/FTD issues).
   (c) Develop a robust and validated interview schedule that understands the depth of a health condition, not merely its existence.
   (d) Consider the practicalities of patient screening in a police custody environment.

3. Consider commissioning a retrospective data linkage study with a representative sample of detainees linked to the GP Patient Register Dataset. This will allow for the non-invasive understanding of the clinical needs of detainees known to primary care. This approach will also understand the level of GP registrations and will be limited to DPs known to primary care. Further limitations will include accessing the data and ensuring Medical Research Ethics approval.

4. Consider a similar linkage study using Liaison and Diversion data to determine whether (a) detainees identified in custody as having a mental health need do engage with mental health services and (b) a concordance check on the diagnosis – what was the actual diagnosis of detainees identified in police custody?

5. (a) Learning from 'near-miss' reporting that may uncover unmet needs or issues with practice; including(b) an examination of post-release suicides.

Appendix II: Spatial Analysis

Based upon input data, the spatial analysis shows rates of four RA variables by London borough as percentages:

- Appears to have taken or be under the influence of alcohol, drugs, or any other substance ("Alcohol, drugs, etc.")?
- Do you have any mental health problems ("Has Mental health problems")?
- Has indications of self-harm ("Indications of self-harm")?
- Is in need of an HCP ("Needs HCP")?

Analysis was carried out using ArcGIS 10 software from Esri.

Hot Spot Analysis (Getis-Ord GI*)

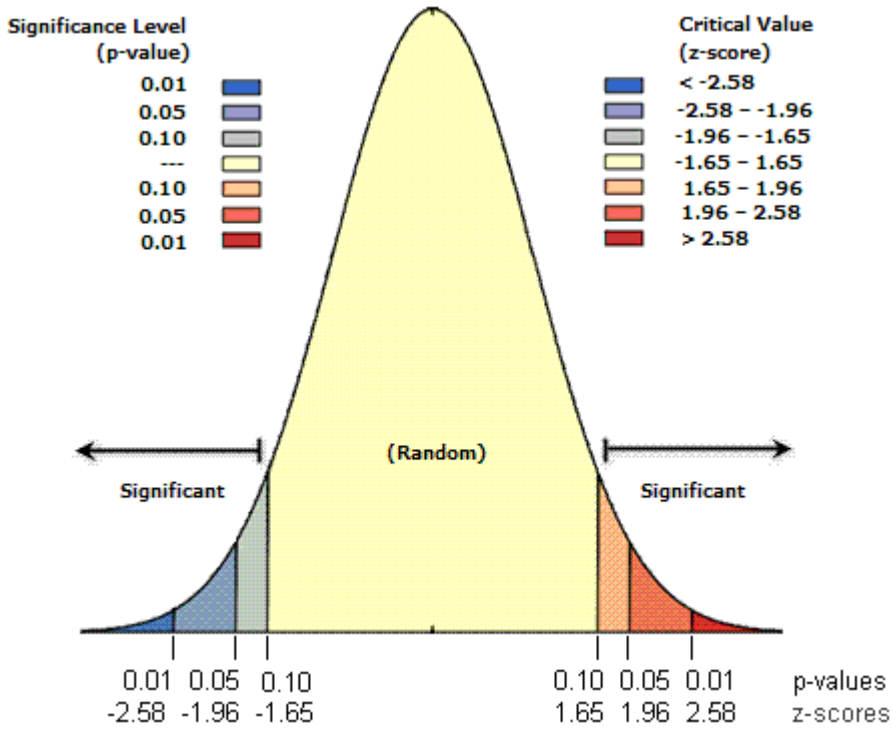
Hot spot analysis looks for statistically significant clustering of high or low values. It identifies hot and cold spots in a way that is more objective than the impression given by a particular cartographic style. This analysis shows whether there are clusters of neighbouring boroughs with particularly high or low values for each of the four variables. Hot spots could be attributable to regional differences (within London) in the criminal population being arrested. They could also be attributable to regional differences in RA reporting practices, where neighbouring boroughs are more likely to have more similar biases (due to greater interaction and exchange of staff, etc.). Hot spot analysis does not explain clustering but shows whether apparent clusters are likely to be genuine. A hot spot is not necessarily a borough with a high level itself, but is the borough at the centre of a cluster of boroughs with high levels.

The ArcGIS Hot Spot Analysis (Getis-Ord GI*) tool was used. There are many possible parameters that can be used in a hot spot analysis. The key ones are scale and the conceptualisation of spatial relationships. The 'Zone of Indifference' conceptualisation was used, which expects that an entity is primarily influenced by neighbouring entities (within a selected distance), but allows for there to be spatial interactions across the whole study area. A common method of determining an appropriate scale of analysis is to use the Spatial Autocorrelation (Global Moran's I) tool. By running this for many distances (repeated for each of the four variables), particular scales can be identified where the strongest spatial interrelationships are present, meaning that there might be spatial processes taking place. This analysis gave multiple possible scales for each variable. Distances around 7 km were chosen, as this generally covers neighbouring boroughs but allows for more limited interaction beyond that. All datasets exhibit some clustering at either 99% or 95% confidence levels. The map images for each variable show:

1) The basic distribution of each variable. The boroughs are styled in seven classes using equal intervals across the range of the variable chosen, so the yellow middle class shows boroughs with values around the average.

2) The hot spot analysis result. The strength of hot (red) and cold (blue) spots depends on the confidence level that they are statistically significant. The strongest colour band represents >99% confidence; the next band is 95–99% confidence; and the weakest band is 90–95% confidence.

APPENDIX FIGURE II: Getis-Ord GI Hot-spot analysis of Risk Assessment Data



All maps created by Lovell Johns. Maps contain Ordnance Survey data © Crown copyright and database right 2015. Maps contain Metropolitan Police Service data and require appropriate attribution.

Conclusions

This analysis shows that there may well be some real (statistically significant) spatial clustering of higher or lower values in each of the RA variables. This suggests that there are spatial processes affecting the RA variables. However, most of these clusters are quite limited in size and/or significance, and do not seem to indicate major regional divisions or patterns across the city. As such, they may prove difficult to illuminate further using a geographic regression model.

Appendix III: Epidemiological Models

The study tested for significant relationships across a range of variables including substance misuse (Class A and any drug use), problematic alcohol use, mental health issues, and self-harm issues. The predictor variables tested for were applied to all models and an initial Pearson's chi-squared test was undertaken to test for any statistical significance across the variables. Variables that were significant at $p<0.05$ were subsequently entered into the final model. The list of variables included any reported at around 10% of the total sample. The total variables (which were limited to information collected on the HCP survey) included:

- Aged under 24 years
- Aged 25–34; 35–44; 45–54; or over 55
- Police custody site located in inner or outer London
- Whether a detainee was on medication at the time of the consultation
- Whether alcohol was used and whether the call-out reason was for alcohol
- AUDIT-C positive
- Any drug use
- Class A drug use
- Registered with a GP
- Asthma
- Diabetes
- Epilepsy
- High blood pressure
- Reported injuries
- Mental health issues
- Self-harm

Appendix IV: MPS Addendum

This appendix provides additional analysis undertaken by the Metropolitan Police Service (MPS) and the following section has been authored by the MPS only. This includes analysis of information that did not specifically form part of the HNA or was not made available to the main authors of this report.

Purpose and Background

The purpose of the report is to highlight the policing needs relating to health provision in a police custody environment to enhance the broader context of the full HNA. The MPS Custody Health Needs Assessment was conducted by Therapeutic Solutions, commissioned by NHS England (London) on behalf of the joint Programme Board. The process was supported by the HNA sub-group consisting of the MPS FHS Team, Medical and Nursing Directors, which provided advice, support and feedback on the report. At the Programme Board on 9th June 2015 although the examination of the health needs was considered to be covered, it was felt further work was needed to look at the policing needs relating to health provision in custody. A seminar of front line police professionals was convened to add value to the HNA report and at the extra programme board on 9th July the production of an addendum was requested. Additional data was extracted from the MPS Custody IT system – NSPIS and a review of relevant IPCC recommendations was undertaken. For the purposes of this report, a Health Care Practitioner (HCP) is either a Custody Nurse or a Forensic Medical Examiner (Doctor).

HNA Review Seminar

The seminar was held on 7th July 2015 with front line custody officers, Forensic Medical Examiners and Nurses. The group identified the principles of health within custody are:

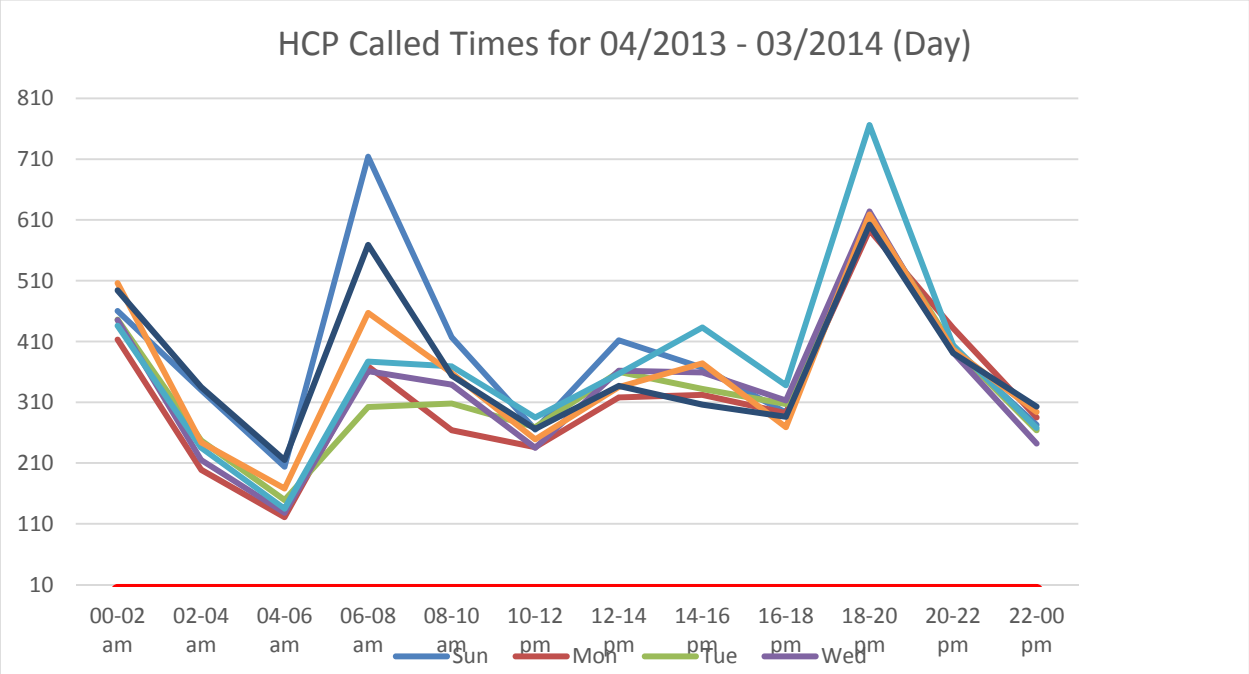
- to prevent deaths in custody
- to triage/ prioritise health needs within custody
- to ascertain fitness to detain and interview
- to examine and record injuries and obtain forensic samples
- to give any medication required, to keep the detainees safe and to alleviate symptoms

The group highlighted that police custody healthcare is unique and not directly comparable to a prison, a GP's surgery or an A&E department. They concluded the HNA report achieved its aim, based on accurate data with a sound methodology. The group did disagree with the interpretation with some of the data and a list of these issues was referred to the authors. These issues have been acknowledged in the final HNA version. The policing principles of health in custody should be reviewed in a HNA refresh.

Call Times for Health Care Professional (HCPs)

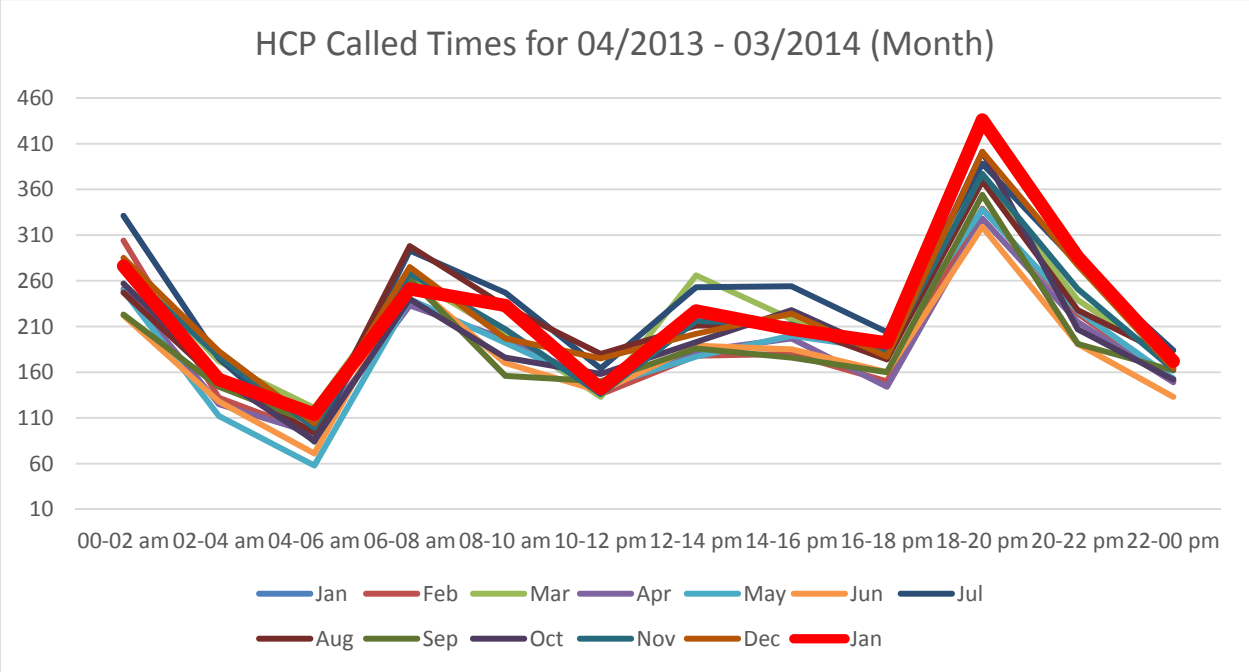
In the HNA, peak booking times were identified, which suggested what the call demand for health services might indicate. A further review of NSPIS has demonstrated two consistent peaks for health services (see graph below). It should be noted that the data presented below is based on different timescales compared to the analysis in the main report.

APPENDIX FIGURE III: MPS analysis of Call-Out Times 2013-2014



The first peak at 6pm to 8pm is consistent with HCPs being called after the peak booking in period of 5pm. The second peak at 6am to 8am is consistent with preparation for court or for those sobering up (particularly seen on Sunday mornings). The pattern over a 12 month period was also reviewed with a consistent picture seen across the year:

APPENDIX FIGURE III: MPS analysis of Call-Out Times 2013-2014 by month



Numbers of detainees seeing a Healthcare Professional

NSPIS data was extracted between 2012 and 2014 and the total numbers of detainees seen by a HCP has remained relatively constant at about 80,000 detainees per year. In percentage terms, this equates to:

APPENDIX TABLE 1: MPS analysis of Call-Out Times 2013-2014 by month

Year	Total number of detainees seeing a HCP	% of all detainees seeing a HCP
2012	80280	33.5%
2013	79274	34.2%
2014	80042	35.4%

The percentage increase is due to a slight decline in overall numbers of detainees (239,936 detainees in 2012, 232,016 in 2013 and 225,875 in 2014). The national figure is at about 40% of total detainees being seen by a HCP, although this varies according to Force and whether the HCP is embedded in the custody suite.

Detainees to hospital

The costs of sending a detainee to hospital can be high, not only in transport requirements but also with the need for police hospital guards. NSPIS was examined to establish the level of detainees going to hospital between 2012 and 2014. The overall numbers were very low consistently being below 1% of detainees going to hospital from police custody.

APPENDIX TABLE II: MPS analysis of the number and percentage of detainees sent to hospital by year, 2012-2014

Year	Total number of detainees to hospital from police custody	% of all detainees going to hospital from police custody
2012	841	0.4%
2013	868	0.4%
2014	703	0.3%

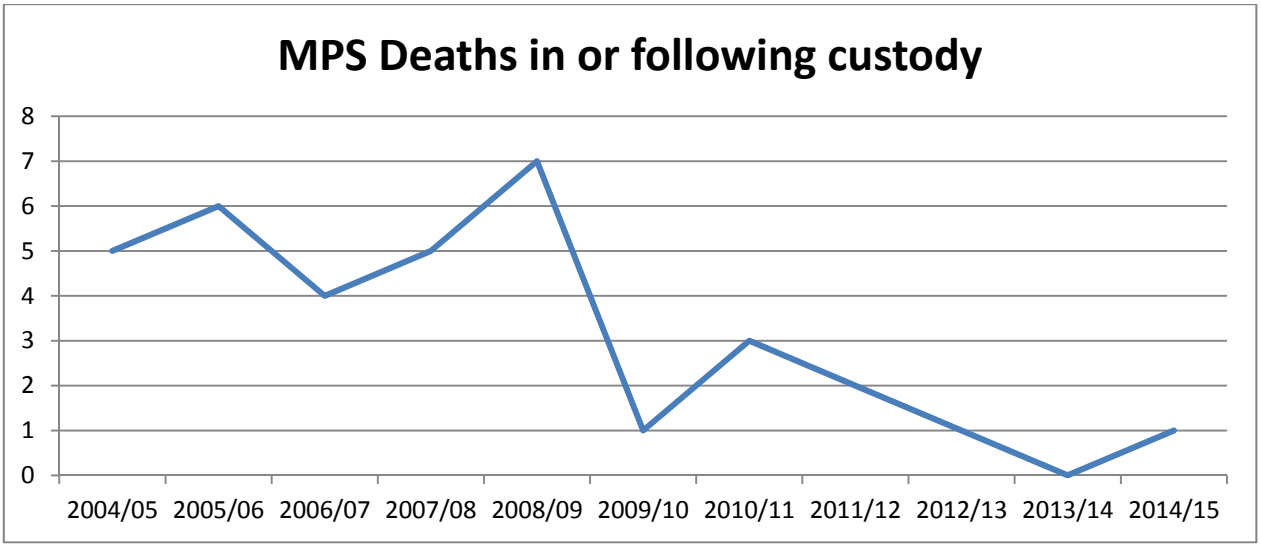
The data were quantitative and not qualitative. Therefore it was not possible to identify the reason for the hospitalisation or whether a HCP intervention could have reduced this figure without a manual examination of the custody record.

IPCC National Statistical Data 2014/15

Between 2004/05 and 2008/09 there was a national year-on-year reduction in the number of deaths in or following custody from 36 in 2004/05 to 15 deaths in 2008/09. Over the next two years the number of deaths in custody increased to 21 in 2010/11 before falling back to 15 in 2011/12 and 2012/13, with a further fall to 11 in 2013/14. This year has seen a rise to 17 fatalities, which while it is an increase compared to last year, is more in-line with the average number of deaths recorded in the previous six years. This is the first year since 2008/09 where a person has died after making an apparent suicide attempt while being held in police custody. Over the 11 year reporting period, six people are known to have made a fatal suicide attempt in a police cell[13]. 2014/15 there was one death in or following police custody in the MPS. The full time series data from the IPCC is shown in the graph below.

[13] IPCC (2015) Deaths during or following police contact: Statistics for England and Wales 2014/15

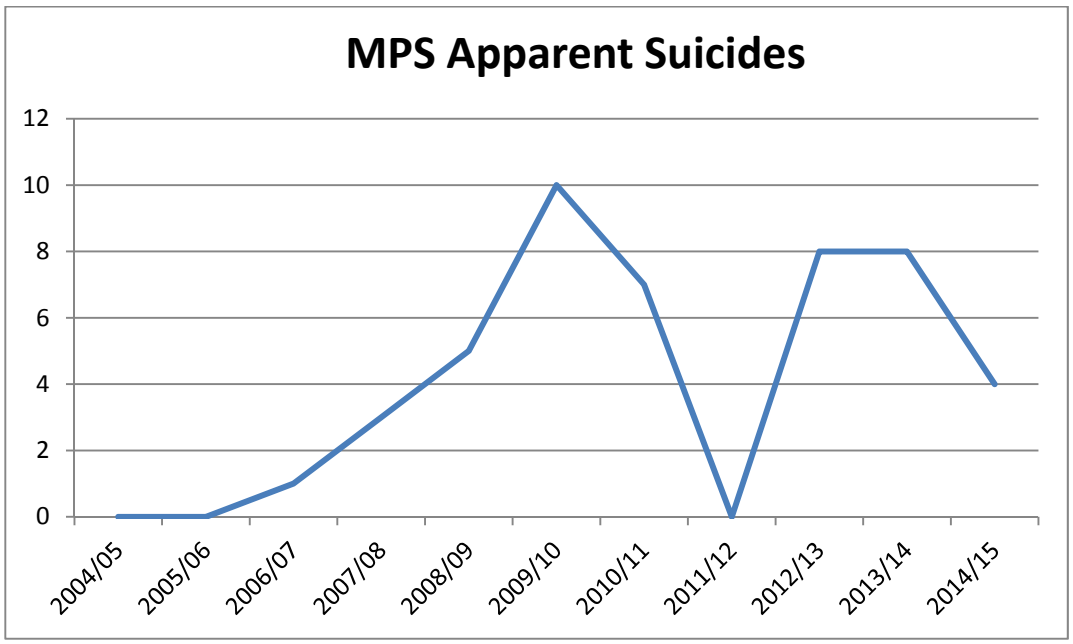
APPENDIX FIGURE IV: MPS analysis of Deaths in or following custody, 2004-5 to 2014-15



Suicide in 48 hours following police custody

The number of apparent suicides following custody is similar to the 70 recorded last year nationally, which was the highest number recorded in this category since 2004/05. Reporting of these deaths relies on police forces making the link between an apparent suicide and a recent period of custody. The overall increase in these deaths may therefore be influenced by improved identification and referral of such cases. In response to this concerning trend, Met Detention have reviewed the advice, guidance and training for custody staff on the Pre Release Risk Assessment and the interface with health care support. A new third party referral to Samaritans has also been recently introduced. In 2014/15 there were 4 apparent suicides following custody in the MPS.

APPENDIX FIGURE IV: MPS analysis of Apparent Suicides in or following custody, 2004-5 to 2014-15



IPCC Recommendations

A brief literature review of IPCC recommendations has been conducted. It should be noted that the Met Detention Business Improvement Team review all IPCC recommendations and incorporate the lessons learned into standard MPS guidance evidenced in the Custody Toolkits available to all officers via the internal Aware system. The 2010 review of deaths in police custody made a number of recommendations relevant to police custody health provision[14]:

- Recommendation 5: Police forces should emphasize to custody personnel the risks around head injuries being masked by intoxication
- Recommendation 6: Custody officers and staff should ensure that colleagues are aware of the circumstances and needs of all detainees (including any risks and medical needs) as part of handing over custody duties at the end of a shift.
- Recommendation 10: Healthcare professionals should ensure that their directions for custody staff on the frequency of checks required for a detainee are written in the custody record, in addition to being verbally passed on. The same applies to any recommendations on the rousing of detainees.

[14] IPCC (2010) Deaths in or following police custody: an examination of the cases 1998/99 – 2008/09

The report also identified a number of health related themes relevant to health services in custody:

"A strong theme to emerge in the cases we have examined concerns the healthcare of a population of people who commonly have a range of physical and mental health risks. These include people with medical needs such as diabetes and heart problems, people with long-term drug or alcohol addiction, individuals with mental health needs, people with no fixed abode and transient lifestyles, and individuals who have a combination of many of these needs and issues. The individuals in our study are reflective of the wider custody population, in terms of being a group who often have complex and extreme health needs. For example, Robertson et al (1995) estimate that between 22% and 25% of detainees are reported to be 'drunk' on arrival at police stations. In a study by Giles and Sandrin (1992), 85% of deaths in police custody over the ten year period analysed were linked to recent alcohol consumption or chronic alcohol abuse. Norfolk (1998) reported alcohol-related deaths as the second most prominent cause of death in police custody. Bennett (1998) found that an average of 69% of arrestees gave positive urine samples for at least one drug, 36% tested positive for two or more drugs, and 38% tested positive for opiates and/or cocaine. Finally, estimates on the number of people with mental health needs passing through police custody vary between 2% and 20% (Burney and Pearson, 1995; Winstone and Pakes, 2005). There is a debate about whether many of these individuals should actually be in police custody." (p88)

The current HNA addresses these issues in the MPS context and NHS England intend to commission further HNA work on the mental health demands in custody in relation to the proposed Liaison and Diversion scheme for London. The "Learning The Lessons" bulletin, published by the IPCC, also includes relevant issues for custody health services. The latest bulletin[15] from March 2015 identifies some key areas for health services:

1. Clarity regarding the information supplied if a detainee has arrived from hospital.
2. Recognising the effects of a head injury, especially when a detainee is intoxicated.
3. Recognising that those who are drunk and incapable are in need of medical assistance (this is now adopted by the College of Policing in Authorised Professional Practice).
4. Guidance to police staff on when to seek healthcare professional advice.
5. Advice to staff on how to challenge medical professionals' advice [16]
6. Advice on allowing a detainee to keep medication such as inhalers with them in the cell if no risk of self-harm [17]

MPS Tribune Themes

The Directorate of Professional Standards (DPS) maintains a database of complaint investigations named Tribune. A search of the database was conducted in July 2015[18].

[15] IPCC (2015) Learning The Lessons Bulletin 23 - Custody

[16] IPCC (2012) Avon and Somerset 1st May 2012 bulletin

[17] IPCC (2012) Devon and Cornwall bulletin August 2012

[18] Undertaken by DS Murray DPS, using key words such as 'Custody' 'Nurses' etc. Results were subjectively assessed to provide a list of current themes.

The key themes were identified as:

- Communications between healthcare professionals and custody staff.
- The ability to challenge medical professionals when deemed appropriate.
- Recognising ABD (Acute Behavioural Disorder) as a medical emergency.
- Risk assessments – particularly in relation to pre-release and the prevention of suicide.

All these issues have been reported through the Organisational Learning process and shared with the Met Detention Business Improvement Team. The MPS is addressing all these themes through improvements in training and awareness of staff. Explicitly, the Professional Development Days have been used to engage front line staff. Changes have also been made to Custody Toolkits easily accessible to all staff.

Conclusions and Recommendations

The additional data above supports and enhances the HNA and provides further insight into some of the demands likely to be placed upon health services in the MPS. The Met Detention Business Improvement Team actively promotes the safety aspects of detention and they are currently supporting the compliance of the 4R's protocol (the guidance used to rouse those intoxicated) with MPS staff. Intoxication of detainees has been identified a key health risk whilst in police detention. Prevention advice has been produced by the Medical Director on abuse of alcohol through a 'One Drink Too Many' leaflet and the Inspector's review template is being updated with improvements in regard to the focus of health and welfare issues for detainees. As new themes emerge from serious incidents, inspections or other recommendations, both DPS Organisational Learning and the Met Detention Business Improvement Teams are tasked to respond in fast time to address those issues. Their expertise and experience is useful in understanding the policing needs from forensic health services.

Recommendation 1: DPS Organisational Learning and the Met Detention Business Improvement Team are key stakeholders in understanding the requirements of health services in Met Custody and should be consulted in the development of the service. They are up-to-date with the key issues for custody and regularly review new recommendations from live investigations as well as having sight of successful intervention reports.

Recommendation 2: Dealing with mental health issues (as well as drugs and alcohol) plays an important part of managing safer detention. Data from mental health Liaison and Diversion schemes was not included in this HNA as it was not sufficiently robust for its inclusion, but should form part of the future HNA work proposal, particularly to understand the interface with Liaison and Diversion services.

Chris Bourlet
Chief Superintendent
TP July 2015