

# Police custody health care: a review of health morbidity, models of care and innovations within police custody in the UK, with international comparisons

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**Abstract:** This paper is a scoping review of the available evidence regarding health care issues in police custody. It describes the types and prevalence of health disorders encountered in custody and provides an overview of current practice and recent innovations in police custody health care. In contrast to the health of prisoners, the health of police custody detainees has, until recently, received little academic or clinical attention. Studies on health care in police custody identified for this review are limited to a few geographical jurisdictions, including the UK, continental Europe, North America, and Australia. There are significant health concerns among police detainees including acute injury, chronic physical health problems, mental and cognitive disorders, and the risks associated with drug and alcohol intoxication or withdrawal. There is some evidence that deaths in police custody have reduced where attention has been paid to the latter issue. Police personnel continue to experience difficulties identifying detainees with health issues relevant to their safe detention, but research shows that the use of evidence-based screening tools improves detection of such morbidities. Innovations in police custody health care mainly relate to detainees with mental disorders, including improved identification of illness, timely access to mental health services, the protection of the rights of mentally disordered detainees, and the diversion of mentally disordered persons from the criminal justice system into appropriate health and social care interventions. There is a lack of rigorous research relating to interventions for physical health problems, protecting those at risk of substance withdrawal, and detainees with preexisting or peri-arrest injuries. Research to improve the health of police custody detainees requires greater priority, focusing on case identification and service redesign to address high levels of morbidity and to facilitate health promotion and prevention activities.

**Keywords:** police, vulnerable detainees, criminal justice system, deaths in custody, mentally disordered offenders, police health care innovations

## Introduction

The scope of this review is to explore health care issues encountered in police custody, discussing current and emerging service delivery models to address them. There is a small but growing body of research in this field that has taken place in only a few jurisdictions worldwide. This review reflects current health care practices in the UK, mainly England and Wales, but refers to research from comparable jurisdictions internationally, where it exists.

## Police powers of detention

Being arrested and detained in police custody is the usual entry point into the Criminal Justice System (CJS) for people under investigation for a criminal offence.

Lengths of detention in police custody in England and Wales are determined by the Police and Criminal Evidence Act 1984 (PACE). PACE allows for detention for up to 96 hours in total, with reviews by senior police officers and a magistrate required at set intervals after the initial 6 hours.<sup>1</sup> In cases where people are held under specific terrorism legislation, detention can be for up to 28 days before charge or release is required.<sup>2</sup>

In Australia's federal system of government, the delivery of policing and health services is largely controlled by both the state and territory-based legislation.<sup>3</sup> As such, police have powers to arrest a person if they suspect a criminal offence has been committed relevant to the criminal code in their jurisdiction, if there is an outstanding warrant for a person's arrest, or in instances where it is reasonable to suspect a person is likely to commit an arrestable offence. Police officers can also detain and convey people to a place of safety for the purpose of a mental health assessment; in some states, similar powers are afforded to ambulance staff under related transportation powers and provisions of the various Mental Health Acts.<sup>4,5</sup> Lastly, police can use discretionary powers to resolve situations informally when none of the former options are deemed appropriate or necessary.<sup>6</sup> If taken into custody, the length of time spent in custody is generally dependent on what is deemed reasonable, with legislation not specifically stating what this may be, rather it is determined by the severity of the alleged offence and the scope of initial investigation and information gathering required. Police can seek magistrate approval to extend the length of detention, should this be deemed necessary.

In Canada, another federal government system, procedures again vary across provinces and municipalities. In British Columbia, for example, the police can both arrest people upon suspicion of having committed a crime or, if they are thought to be experiencing a mental health crisis, people can be apprehended under mental health legislation and taken to an Emergency Department designated facility.<sup>7</sup> When under arrest, a person can be held for up to 24 hours before appearing before a Justice of the Peace.<sup>8</sup>

In the US, state and federal legislation influences policing's response to both crime and mental health problems. Organizations such as the Federal Bureau of Investigation; the Drug Enforcement Administration; and the Bureau of Alcohol, Tobacco, Firearms and Explosives operate

nationwide to enforce federal law. However, under the US Constitution, these national agencies are not authorized to execute general police powers at state level; instead, each of the 50 states retain their own policing organizations. In common with the Australian situation, police detention is usually limited to a reasonable time, routinely regarded as a maximum of 72 hours.<sup>9</sup>

## Morbidity and arrangements for police health care

Just as the mode and form of detention vary from one jurisdiction to another, so do the arrangements to oversee the treatment and general welfare of detainees.<sup>10</sup> Some nations have statutes or common law in place to ensure the welfare of the detainees, although this is by no means the case in all areas.<sup>11,12</sup>

In England and Wales, a number of high-profile deaths in police custody in the 2000s led to calls for efforts to be focused on the identification of risks and vulnerabilities as early as possible within the CJS.<sup>13</sup> However, the full extent of health morbidities encountered in police detainees and the resultant management challenges have received scant attention in peer-reviewed literature until relatively recently.

Police responses to mental health crises vary considerably internationally. In some countries, police officers have powers to convey individuals to mental health units or other hospital and custody settings for assessment, while in others, police-operated mental health units have been established, with directly employed mental health clinicians. Part of the role of these units is to proactively reduce demand from recidivist high utilizers of emergency services.<sup>14</sup>

For the current review, the primary author conducted literature searches of relevant online databases (eg, PubMed, Medline, Web of Science, CINAHL, Embase) using the keywords "police" "health", and "screening", combined with appropriate Boolean operators, truncations, and wild cards. The initial search was conducted on 2008 and then updated in 2012 and 2015. Papers published in the English Language since 1980 were considered. Reference lists of all papers identified were hand searched to identify any further relevant articles. Gray literature, such as governmental reports, was also considered, where relevant. In respect of innovative service models, those described here are intended to give the reader an understanding of some of the recent UK-based developments that are becoming more commonplace at the interface of police and health services.

## Health concerns in police custody: types and prevalence

Recently, the health care of detainees has become a greater policy and practice priority in England and Wales, with a number of reports by professional bodies and the UK Government being published in this sphere.<sup>15–17</sup> These have been published not only to drive improvements in professional standards, but also because of the high level of attention given to deaths in police custody, especially where the use of force and comorbid illness were found to be a contributory factor or where the cause of death was potentially avoidable.<sup>18,19</sup>

Early investigations concentrated on the matter of deaths in custody. A study describing 274 police custody deaths between 1970 and 1979 in England and Wales reported that they were most commonly attributed to alcohol or drug poisoning (39%), asphyxiation/hanging (15%), or head injuries (10%), with the remainder due to cardiovascular/respiratory causes or cerebral hemorrhage.<sup>20</sup> Just over a decade later, little had changed; a retrospective analysis of 32 police custody deaths in England and Wales in 1994 found the greatest cause of death to be drug and alcohol poisoning (40%), followed by asphyxiation/hanging (37%), suggesting that substance use and suicide risk continued to pose significant risks to safety in police custody.<sup>21</sup>

Since these early investigations into deaths in custody, the wider health needs of those in police custody have come under increasing scrutiny, leading to an understanding of the need to adequately identify risks and vulnerabilities early in the custody process. By 2015, a report by the Independent Police Complaints Commission (IPCC) showed a steady decline in overall deaths in custody over the preceding 11 years including confirmed suicides.<sup>13</sup> However, health-related research in police custody settings continues to vary in respect to method, scope, and rigor. Some studies have focused on specific morbidities (eg, substance misuse or serious mental illness), whereas others have taken a broader overview of health conditions that are relevant in this setting. These will be reviewed in this paper.

### Physical health

Physical morbidity in police custody relates primarily to chronic illnesses that have the potential to require treatment while in the police cells; however, more acute presentations may also require the attention of a health care professional. A study of detainees in London referred to a custody physician found 13% with asthma, 5% with diabetes mellitus, and 6% with epilepsy.<sup>22</sup> Another London-based study of consecutively interviewed detainees reported prevalence rates of 16% for

asthma/pulmonary diseases, 5% for diabetes mellitus, 5% with symptoms of active cardiovascular conditions, and 2% for epilepsy. More than four in ten (42%) had active prescriptions for at least one type of medication.<sup>23</sup> An examination of over 10,000 custody records in Sussex, UK, reported that 2% of detainees required transfer to hospital; the researchers classified one half of these as life threatening, including incidences of poisoning/overdose, head injuries, and suspicion of drugs having been swallowed.<sup>24</sup>

In other jurisdictions, a study conducted in France found 7% detainees with asthma, 4% with diabetes, and 1% with epilepsy.<sup>25</sup> In the Netherlands, interviews with 264 randomly selected detainees concluded that 10% had chronic lung problems, 3% diabetes mellitus, and 4% serious heart conditions.<sup>26</sup>

A few studies have reported rates of communicable diseases among police custody samples. The research appears to point to a modest excess of hepatitis infection and HIV compared to the general population, although the numbers reported are low; rates for hepatitis viruses vary from 3% to 4% with rates of HIV infection varying from 0.5% to 3%.<sup>22,23,26</sup> These conditions may have more treatment relevance to longer stay parts of the CJS, but police officers and staff will wish to consider safe working practices in respect to the risk of cross-infection.

### Injuries

There is the potential for some detainees to be injured prior to, or at the time of, contact with the police; these too may well have health-related sequelae during detention in police custody. Carter and Mayhew's study found that minor injuries requiring sutures and possible bony fractures comprised 31% of the necessary transfers from police custody to hospital, head injuries representing a further 18%.<sup>24</sup>

The custody health records of 2,700 detainees in Paris, France, revealed that more than a quarter (27%) complained of an injury prior to, or during, police custody.<sup>27</sup> Of these injuries, the vast majority (86%) were ascribed to be the result of an assault, while between 80% and 87% were reported to be superficial wounds or bruises, 10% were hematomas, and 1%–2% were deep wounds or fractures. Twenty-three percent of the consultations in the study by Payne-James et al involved the assessment of injuries.<sup>22</sup> The authors' earlier study of detainees requiring assessment of injuries found that 86% were males, with around one-quarter claiming that injuries occurred at the time of arrest.<sup>28</sup> McKinnon and Grubin reported rates of serious head injury of 3%–4% across two phases of their investigations in London, UK.<sup>29</sup>

Two-hundred and forty-six incidents involving injury over the fiscal years 2004–2005 were reported in Victoria, Australia; most commonly these were due to self-harm (36%), fighting with other detainees (13%), injuries sustained while being restrained (9%), and being injured as a result of attempts to assault police (9%).<sup>30</sup> Of note, an ambulance was called in a third of these instances, while smaller proportions were managed in the custody suite by custody nurses and/or with police providing first aid.

A proportion of injuries are attributed directly to contact with the police. In Paris, among 11,653 medical encounters in police custody in 2004, 119 (1%) detainees alleged police assault and 245 (2%) showed evidence of aggressive police manhandling, such as tight handcuffs.<sup>31</sup> Approximately 5% of detainees in these categories were reported to require emergency hospitalization. Injuries associated with being handcuffed were also reported in France by Chariot et al.<sup>32</sup> Six percent of detainees examined showed evidence of distal neurological symptoms possibly related to handcuff application, with the severity of symptoms being positively associated with the duration of handcuffing. A study of the effects of incapacitant spray in London found that symptoms and signs of exposure lasted almost 3 hours on average; one-third had ocular effects and one-fifth had skin irritation.<sup>33</sup>

## Intoxicating substances

Individuals coming into contact with the CJS are known to have significant problems with illicit substances and alcohol use,<sup>34</sup> both historically and proximally to their offending behavior. Given the robust association reported between substance use and criminal offending, suspects/perpetrators coming into custody are likely to be at increased risk of suffering from the effects of substances or alcohol.<sup>35,36</sup>

While detainees may frequently be under the influence of drugs, alcohol, or both, the key challenge is accurate identification, especially when considering clinical presentations can be complicated by concomitant illness or head injury.<sup>14,37</sup> However, the importance of identifying and responding to substance-related intoxication is emphasized through both Australian data on deaths in custody and more recent findings from England and Wales; data from the former show that 8% of deaths in police custody were attributable to drugs in 1998.<sup>38</sup> However data from England and Wales revealed that all but one of 17 deaths in police custody had concerns related to drugs and alcohol, as did one-third of the cases of suspected suicide following release from custody.<sup>13</sup> Comparisons between these jurisdictions are difficult due to differences in the way data are collected and counted;

the Australian data cite a single cause of death, whereas the England and Wales data look for any presence of intoxicating substances contributing to deaths.

## Drug use and dependence

There are regional and international variations among substance misusers in police custody making it difficult to precisely quantify the scale of the problem of responding to and managing drug-affected detainees.

Among 144 self-reported drug misusers in police custody in London, combined heroin and crack cocaine use was reported among 30%.<sup>35</sup> Overall, 77% were using heroin and 32% of these were prescribed substitute therapy. Only 2% used crack cocaine alone. In the authors' follow-up study, a substantial increase in crack cocaine use was seen over a 10-year period, whereas opiate use remained static.<sup>39</sup> A health needs assessment for Northumbria Police in North East England found that one in five detainee consultations with the police doctor recorded drug misuse.<sup>40</sup> Variations in self-reported heroin (5%–11%) and crack cocaine (2%–21%) misuse across different boroughs of London have been reported, with discrepancies in the availability of mandatory drug testing equipment suspected of contributing to the variability of self-reported Class A drug use.<sup>29</sup>

In Australia, a cross-sectional study estimated that over one-half of detainees have a substance use disorder, with the odds of having such a disorder in excess of 26 times higher than that for the general community.<sup>41</sup> A recent Australian Institute of Criminology report found that 59% of police detainees admitted to drug use in the 30 days preceding arrest, increasing to 87% when alcohol was included.<sup>42</sup> Of note, 54% of heroin and 33% of amphetamine users attributed their alleged offence directly to drug use.

Many of these studies rely on detainees' self-report, and the validity of self-reported drug use has been called into question, with one study reporting that only 75% of detainees who claimed to be taking methadone had positive tests for opiates; this has clear implications for how to reliably identify detainees requiring attention and treatment in this respect.<sup>43</sup>

## Alcohol

Crime statistics commonly indicate that alcohol consumption is implicated in antisocial behavior and criminal offending, especially public order offences and assault.<sup>44</sup> Addressing the clinical sequelae of alcohol use requires enhanced resources in custodial settings. Alcohol withdrawal is a medical emergency that can lead to seizures and death; thus, specific and timely identification of its risk is necessary.<sup>45</sup> Given the strong

association between alcohol use and criminal offending, withdrawal from alcohol is therefore a significant risk in police settings. Alcohol intoxication is also inherently linked to injuries in police custody, thereby adding an additional complexity that police must monitor and respond to. Just under a quarter (60/246; 24.4%) of the injuries recorded by police in Victoria, Australia, involved detainees who were drunk, with most injuries being due to self-harm or the person sustaining head injuries as a result of falling over in custody.<sup>30</sup> UK-based studies have reported variable, but still substantial, effects of alcohol on detainees. Robertson et al observed 20% of custody arrivals to be intoxicated with alcohol.<sup>46</sup> Payne-James et al reported current or previous alcohol dependence among 28% of detainees referred to the police doctor in London, with one quarter exceeding safe limits.<sup>36</sup> Again in London, McKinnon and Grubin estimated that 11%–19% were at potential risk of alcohol withdrawal, based on consumption patterns and clinical histories.<sup>29</sup>

## Cognitive impairment and developmental disorders

A rigorous estimation of intellectual and developmental disability in the wider CJS has been hampered by a lack of standardized approaches and inherent difficulties with the custodial environment and its effects on detainees.<sup>47,48</sup> In the context of England and Wales, the Report of the Royal Commission on Criminal Procedure noted an array of mental disorders among detainees about to undergo police interview including intoxication, mental handicap and personality problems.<sup>49,50</sup> Detainees judged to be suffering from mental handicap comprised 2% of the sample. This work provided a springboard for more in-depth investigations of detainees with mental vulnerability, including the impact of detainee suggestibility on wrongful convictions.<sup>51</sup>

In a study conducted in London, 150 custody detainees were assessed prior to police interview, of which 9% were reported as having a Full-Scale Intelligence Quotient under 70 (range indicative of potential intellectual disability). A further 42% scored between 70 and 79 (indicative of borderline intellectual impairment).<sup>55</sup> Among a convenience sample of detainees in a Cambridge police station, 29 detainees (12%) reported as having attended a special needs school.<sup>52</sup> Seventeen of these were for emotional and behavioral difficulties and 12 were for learning disabilities or difficulties. A further nine had attended educational support units within mainstream schools. Of note, those in the special school for educational reasons group were more likely to be remanded in custody or bailed for court than those in the mainstream

school group, even when controlling for offence types. A further study estimated the rate of intellectual disability (ID) among police custody detainees to be 1% in Northern Ireland, although the two stage sampling technique employed may have led to false negatives.<sup>53</sup> An Australian study estimated a prevalence of 5% for learning disorders.<sup>42</sup>

Although not specifically validated in police custody settings, the Learning Disability Screening Questionnaire has been used in studies in police custody in England and Wales to serve as a proxy for estimation of prevalence.<sup>54</sup> Using the Learning Disability Screening Questionnaire, 3% of detainees in police stations in West Yorkshire and 7% in London screened positive for ID.<sup>55,56</sup> Using a structured clinical assessment, 3% of consecutive detainees had clinical indicators consistent with intellectual and developmental disability in London.<sup>57,58</sup> Hayes described the validation of a screening tool that could identify people who, in a police setting, need to have the protections offered to vulnerable suspects; the onus here was on police to identify ID as early as possible.<sup>59</sup> In this study, standardized assessments using Kaufman Brief Intelligence Test<sup>60</sup> found scores <70 (ID range) among 21% of a sample of people in contact with the CJS, but the sampling method was unclear.

## Mental health disorders

Police contact with people experiencing mental illness is commonplace and occurs for a range of reasons.<sup>6,61</sup> A series of robust international studies reported a strong statistical association between mental illness and criminal offending; hence, there is a strong likelihood that people experiencing mental illness will be overrepresented in police contacts.<sup>62,63</sup>

International research suggests that, while police are relatively proficient at identifying common signs and symptoms of mental illness, diagnosing a detainee with a specific mental disorder in a police custody setting is fraught with difficulties.<sup>64</sup> Disentangling the complex interplay between inherent mental vulnerabilities, mental illness, drug use, and situationally generated high levels of expressed emotion and anxiety all serve to complicate the matter. However, accurate and timely identification of mental illness is of paramount importance to ensure detainee well being and to allow investigations and interviews to proceed.

Unlike in the prison setting, there has never been a national UK study on mental health issues in police detainees but a number of small-scale studies have addressed the issue. In London, McKinnon et al interviewed two samples of consecutive police custody detainees (n=600) using the Mini International Neuropsychiatric Interview, finding evidence

of mental disorder in 39% of the sample. Eight percent had psychotic disorders and 5%–8% displayed major depression.<sup>29,65</sup> Another questionnaire survey of ~200 police detainees in London identified active health issues that required management during detention in 56% of those surveyed; of these, 32% were mental health related.<sup>22</sup> Seven percent of the sample as a whole had previously been detained under mental health legislation; 17% had a history of deliberate self-harm; and nearly a quarter (24%) reported previous, significant mental health issues.

Related research investigating the mental health needs of people attending magistrates' court in Manchester found serious mental disorder in just over 1% (3/229) of those appearing in the court directly from the community, for example, those answering bail; the equivalent measure among those appearing directly from overnight police custody was 6.6% (96 of 1,460).<sup>66</sup> Of the 99 defendants with serious psychiatric disorder, 34 had schizophrenia and other psychoses and 55 had depressive disorders; 42 (76%) of the 55 individuals with depressive disorders had suicidal ideas. Of particular concern was the fact that only 14 of the 96 (15%) defendants from overnight custody with serious psychiatric disorder were detected by court staff and referred to the court diversion program.

Two studies conducted in mainland Europe provided differing results. A study in Amsterdam reported that 50% of detainees referred to police health services were seen for mental health problems.<sup>67</sup> In the same study, a sample of almost 250 detainees was administered the Brief Jail Mental Health Screen, with 40% screening positive, indicating the need for more detailed assessment of their mental health.<sup>68,69</sup> By contrast, a recent study in Paris estimated that 8% of those examined by the police doctor had psychiatric disorders.<sup>25</sup> However, the authors acknowledge that their findings are not easily compared with the Dutch study because the detainees in the latter study were significantly younger and no specific screening of mental disorders was performed.

An Australian study of over 600 detainees found that 55% had prior contact with public mental health services, with 10% previously diagnosed with psychosis and a further 10% with affective disorders.<sup>70</sup> A third of this sample reported being in receipt of treatment for psychiatric symptoms in the community. The same team of researchers also interviewed 150 consecutive police detainees in three busy metropolitan police stations using a structured clinical assessment, reporting psychotic disorders in 7% of detainees, 1% with bipolar disorder, 35% with a depressive disorder, and 9% with

anxiety disorders.<sup>71</sup> Research from the Australian Institute of Criminology using the Corrections Mental Health Screen found that 5% of detainees had psychotic disorders, 33% had mood disorders, and 15% had anxiety disorders.<sup>42,72</sup>

## Comorbidities

Addressing the issue of comorbid mental health and substance issues, a UK study of 43 drug-related deaths in custody found evidence in 42% of cases (n=18) of one of three groups of mental health symptoms. In five cases, there was evidence of psychosis; in a further five of previous self-harm or suicidal attempts; and in eight, there were indications of anxiety or depression.<sup>73</sup> Those with mental health factors were more likely to have swallowed the drugs used; to have used prescription drugs; and to have been believed to be faking their symptoms by the officers involved.

Similarly, a link between substance use disorders and the presence of mental disorders has been described in Australian research. Baksheev et al reported that the prevalence of mental disorders increased from 50% to 75% when substance misuse was included in a broader definition of mental disorder.<sup>41</sup> In addition, Heffernan et al interviewed 288 police detainees in Brisbane, finding 86% with at least one substance use disorder, evidence of psychological distress among 82%–94%; and higher levels of psychiatric caseness for those with a substance use disorder.<sup>74</sup>

Given these comorbidities, concerns have been raised that detainees' behavior may be ascribed to the substances alone and that underlying mental disorders such as mental illness may be overlooked.<sup>75</sup>

## Female detainees

An examination of the discrete needs of female offenders was undertaken based on data from 217 female detainees assessed by a police custody-based liaison and diversion service in Belfast.<sup>76</sup> Forty-one percent of the sample had previously received psychiatric inpatient care and 76% were using mental health medication when arrested. Ninety-one percent had a mental illness. The most common diagnosis was depression (61%), followed by anxiety (9%), personality disorder (9%), and schizophrenia (3%). Nearly a quarter of the sample (23%) had drug- or alcohol-related issues. Ten detainees had a possible ID.

## Health care in police custody

The international literature on models of police health care is not well developed. Summers describes the history of the

Police Surgeon in the UK, originating initially in London to tend to police officers' ailments, with responsibility for the assessment and care of unwell detainees being added later.<sup>77</sup> The Metropolitan Police Surgeon Association was established in the 19th century to provide peer support among police surgeons in London; latterly, the Association of Police Surgeons of Great Britain was formed in an attempt to harmonize services across the UK.<sup>78</sup>

Access to a health care professional for police detainees is enshrined in statute in England and Wales, Northern Ireland, the Republic of Ireland, and in common law in Scotland.<sup>79–82</sup> In France, all detainees are entitled to medical examination.<sup>83</sup> Teams of forensic physicians and nurses employed by the Amsterdam Public Health Service deliver police health care service in the Dutch capital.<sup>67</sup> In Melbourne, custodial nurses are present in police stations;<sup>41</sup> however, a report by the Office of Police Integrity in Victoria, Australia, found that police detainees were not being afforded equal recognition of their basic human rights.<sup>30</sup> The report stated that services for detainees with health-related needs were deficient and should be equivalent to those available in the community.

A recent questionnaire survey of police services across 25 European countries found large variations in the systems of care in place.<sup>84</sup> Models varied from on-call doctors to permanent health care professionals. Guidelines and specific qualifications for custody health care professionals also varied. Furthermore, as well as intercountry variations, some states such as the UK and Germany, have different relevant legislations in different jurisdictions/constituent countries.

## Innovations for detainees with health morbidities and vulnerabilities

There has been significant change in the provision of police custody health care in recent years. As a result of persisting variability across police forces, attempts have been made to streamline services further.<sup>85</sup> Across Scotland, England, and Wales, there has been a move to employ custody nurses around the clock in an effort to provide a more responsive health service and potentially reduce costs.<sup>86–88</sup> Quality standards for custody nurses have been published alongside guidance for the medical treatment of custody detainees.<sup>14,16</sup> Some early evaluation work is encouraging; a study conducted in Tayside found that a nurse-led service supported by forensic physicians improved the efficiency of resource utilization, supporting better collaborative working and better engagement with external health resources.<sup>86</sup>

The Bradley Report has also impacted on police custody in England.<sup>15</sup> As a result, liaison and diversion services for detainees with mental disorders have developed across much of the country, although the effectiveness of these is yet to be established.<sup>89,90</sup>

Other than the aforementioned innovations, most of the literature pertains to interventions for detainees with mental disorders, and much of this emanates from Europe, the US, and Australia. Some specific examples are described in this paper.

## Provisions for detainees with mental vulnerabilities

In the light of the Royal Commission on Criminal Procedure discussed earlier, PACE and its associated codes were introduced in England and Wales to protect the rights of detainees with mental vulnerabilities.<sup>1,50</sup> As a result, the Appropriate Adult (AA) was introduced, a person designated to support potentially vulnerable suspects to safeguard and improve communication between police and the detainee, with the intention of reducing the risk of an unreliable interview and its inadmissibility in court.<sup>91,92</sup> AAs have been introduced across the UK, although differences exist between England, Wales, and Scotland.<sup>93</sup> In a survey of custody records from four police stations in England, the need for an AA was documented on 2.3% of records; however, an AA was called in fewer than 1% of cases.<sup>94</sup> Issues regarding the disparity between the need and provision of AAs continue to provide a vexed issue for the police.<sup>95</sup>

In Australia, the equivalent role of Independent Third Person can be utilized where police suspect the person may be suffering from a cognitive impairment; this includes mental illness, ID, and/or acquired brain injury. The uptake of these services is dependent on police identifying or suspecting cognitive impairment. Spivak and Thomas interviewed a group of trained volunteers in Victoria, Australia, about their experiences as an Independent Third Person.<sup>96</sup> They described two distinct roles: to help facilitate communication between police and the person being interviewed, ensuring the person understands their rights, and to provide emotional support to the person being interviewed. Volunteers generally considered police to be competent at identifying cognitive impairment but described more practical challenges associated with attending in unsocial hours, and being able to respond in a timely manner to geographically distant police stations.<sup>97</sup> Police were described as relying on prior records or verbal/behavioral cues indicative of communication difficulties to identify people with ID, and in cases where the person has no prior official police records, new cases were rarely detected by police.<sup>96</sup>

The cognitive impairment umbrella in Australia captures a broad spectrum of disorders. In England and Wales, however, the need for a more coherent definition of what constitutes mental vulnerability has been highlighted and appears to cause confusion among police officers and clinicians alike, resulting in difficulties identifying the people requiring these special provisions.<sup>98</sup>

## Risk assessment screening and identifying detainees needing attention

Given the high levels of morbidity and the potential ramifications of detainees being unwell while in custody, there is an obligation to identify the need and provide an appropriate care pathway. Risk assessment screening is carried out by police officers when a detainee enters the custody suite. In some jurisdictions, this is a statutory procedure,<sup>1,99</sup> whereas in others it is the subject of local policy.<sup>82</sup>

Screening requires an acceptable balance between identifying cases and ruling out those without morbidity; thus, one argument is that risk assessment screening should be deliberately overinclusive so as minimize false negatives, ie, those with health care needs that are not picked up.<sup>71</sup>

A systematic review found studies reporting 22 reception screening tools in correctional settings worldwide, although most were biased toward screening for mental disorders, eschewing physical health screening.<sup>100</sup> Similar studies investigating systematic risk assessment screening in police custody settings are much less common.

In Australia, there is no standard approach/tool for health risk assessment screening upon entry into police custody. Baksheev et al reported that a routine police-administered risk assessment screening form, which prompts officers to assess various risks and vulnerabilities on a simple 0–10 scale, only correctly identified one in seven of those later diagnosed as being depressed or suicidal.<sup>71</sup> The risk assessment screen performed similarly badly for identification of detainees with Diagnostic and Statistical Manual Axis-I mental disorders,<sup>101</sup> identifying only one in four with a disorder. The authors contrasted this approach with the use of valid and reliable screening instruments that significantly increased the accuracy of screening for Axis-I disorders, with a sensitivity of 99% for one of the tools designed for used in the prison system, the Jail Screening Assessment Tool.<sup>102</sup>

In London, McKinnon et al found that the police risk assessment screen currently used by the Metropolitan Police Service detected 58% of detainees with psychotic disorders and 67% with major depression.<sup>65</sup> It performed less well in detecting those at risk of alcohol withdrawal (48%), serious head injuries

(25%), elevated suicide risk (48%), and/or significant cardiovascular complaints (2%).<sup>23</sup> The Metropolitan Police Service was using a standard screening tool developed as part of a Home Office IT program, National Strategy for Police Information Systems, which entailed a number of questions to ask detainees along with officers' observations.<sup>103</sup> The project redeveloped the screen for mental, physical, and substance-related disorders, creating the HELP-PC screening tool. When piloted HELP-PC resulted in improvements in identification of psychotic disorders (93%), major depression (75%), alcohol withdrawal risk (76%), serious head injuries (57%), and elevated suicide risk (77%).<sup>29</sup> There were also improvements in the detection of asthma (76% compared to 49%), diabetes (100% compared to 67%), epilepsy (83% compared to 60%), and those with cognitive impairment/disability (83% compared to 25%). These improved detection rates were achieved without an increase in overall referrals to custody health care professionals as a result of the better targeting of clinical resources.

Other innovations to improve mental health screening and pathways include PolQuest.<sup>104</sup> Designed for use by police officers, this screening tool allows for the identification of a range of mental health symptoms, some of which are identified as requiring urgent intervention, for example, risk of suicide and psychosis. The tool is designed to operate alongside a locally agreed management and service response plan that underpins a service level agreement between different agencies, outlining who should respond to identified need and within what time period, both daytime and nighttime.

There are no replication studies on evidence-based risk assessment screening tools in police custody. Furthermore, these screening tools are likely to be beset by their self-report nature, thus highlighting the need for better interagency information sharing between health and justice to triangulate data.

## Liaison and diversion services

While UK police custody suites have on-site or on-call services to address the physical needs of detainees, the same is not yet true with regard to mental health issues. However, a recent announcement from HM Treasury has confirmed funding for a final wave of police custody-based mental health liaison and diversion services to be rolled out, giving full population coverage in England.

The present-day rollout of mental health liaison and diversion services can be dated back to the publication of the Bradley Report, which stated that the needs of the offender or detainee should be identified as early as possible in the offender pathway, whilst taking into account the safety of the individual, public protection, and the seriousness of the offence.<sup>15</sup>



However, the origins of the present-day liaison and diversion services are rooted 20 years earlier in the publication of Home Office Circular 66/90. Following this, locally devised services proliferated to meet the Circular's express purpose that health and social care services provide care and treatment for mentally disordered people, and due consideration is given to whether prosecution is necessary in the public interest.<sup>105</sup>

The notable difference between the development of services in the 1990s and now is the way in which the policy is currently being implemented. During the 1990s, liaison and diversion schemes were developed across the country, but initiatives were generally very locally based; followed no overarching national or regional template as to what services should offer; were not well integrated with other local services; relied upon insecure funding streams; had unclear lines of accountability within National Health Service (NHS) organizations; and conducted poor data collection and analysis that prevented any clear measurement of outcomes.<sup>106</sup> Evidence of their ability to improve individuals' health and social outcomes was also limited, with only a handful of small-scale evaluations undertaken that returned mixed evidence as to impact and efficacy.<sup>107–110</sup>

Recent liaison and diversion developments have been led by a national program board with representation from a wide range of stakeholders, including the Department of Health, NHS England, Home Office, Ministry of Justice, Youth Justice Board, HM Courts and Tribunals Service, National Offender Management Service, and the Crown Prosecution Service.

Alongside national leadership, a new standard service specification has been developed, which is to be adopted nationally. A major change from prevailing, locally determined models was to make services all-age; previously, youth diversion schemes had been funded, set up, and operated separately from those for adults. In addition, the emphasis of the schemes broadened somewhat from an initial focus solely on mental illness to the identification and onward sign posting and referral for a much broader range of mental health, physical and intellectual disability, substance misuse, and other vulnerabilities.<sup>111</sup> At the time of writing, the findings of a national evaluation into the public and individual health and social impacts achieved by the early wave of services are expected.

## Street triage

The concept of street triage started in the US. Following the fatal shooting of a mentally ill man in Memphis in 1988, the police force developed new ways of responding to such incidents, establishing a Crisis Intervention Team. What became known as the Memphis Model involved a 40-hour

training program for volunteer police officers on the signs and symptoms of mental illness and how to better respond to people in crisis.<sup>112</sup> Recent estimates conclude that over 400 such programs are now in operation nationwide, with models adapted to meet local contexts and resources.<sup>113–116</sup> However, there is also the opportunity to prevent people presenting with symptoms of mental illness coming into contact with police custody, especially where it might be used as a place of safety rather than where a person is suspected of having committed an offence.

In the UK context, the term “street triage” covers a range of service models to mental health-related incidents involving a police response. In 2013, Department of Health funding was made available for nine pilot services, since when wider rollout has occurred.<sup>117,118</sup> Routinely, a street triage intervention involves police officers with additional training in mental health attending calls for help alongside a mental health clinician, usually a nurse, to allow an immediate assessment to take place for a distressed individual, accompanied by timely access to any NHS mental health records held locally. A key aim of street triage is to reduce detentions under Section 136 (S136) of the Mental Health Act (1983) in England and Wales. S136 allows a police officer to remove a person they think is mentally disordered and “in immediate need of care or control” from a public place to a place of safety, in the interest of that person or for the protection of others.

Other aims include less use of police cells as a place of safety; a reduction of the amount of police resources devoted to dealing with mental health incidents; and to improve the speed and appropriateness of assessment, care, and treatment provided to individuals in mental health crisis, including referral into other services and follow-up care.<sup>119</sup>

There is no national model for street triage services at present and, as in the US, local variations exist. For example, in some areas, the triage team is the first response to incidents deemed by police control room dispatchers as primarily concerning mental health problems, whereas in other areas, the street triage team attends incidents following an initial on-scene assessment by a nonspecialist response team. A third service model often badged as triage involves police officers directly contacting a discrete part of local NHS mental health services to obtain telephone advice and any known details regarding at-risk individuals without staff necessarily being colocated or responding in person.

As with liaison and diversion, the evidence base for street triage is only just emerging in the UK. At present, evidence is limited with inconsistent, but largely encouraging, findings, for example:

- an evaluation of the Scarborough, Whitby and Ryedale Street Triage Service found no impact on the number of S136 detentions, but reported that the service was valued by staff, judged to reduce police time spent on mental health and provided a pathway into care for those who needed it;<sup>120</sup>
- the Oxfordshire Street Triage Service reported, over the pilot period, a 20% reduction in S136 detentions in Oxfordshire; 78% reduction in the use of police custody cells as a Place of Safety; 44% reduction in repeat S136 detentions; 50% fewer patients released from S136 detention without onward mental health referral; and qualitative feedback from service users that they felt listened to, their issues were taken seriously, and that they were treated with courtesy and respect;<sup>121</sup>
- an evaluation of the Nottinghamshire Street Triage Team reported, over the first 9 months of a year-long pilot, a 39% drop in S136 detentions; a 52% decrease in the use of police cells as a Place of Safety; and an increase from 19% to 29% of people admitted to in-patient care following S136 detention, stated to be indicative of improved detention decisions by officers;<sup>122</sup>
- data from Northumberland, Tyne and Wear NHS Foundation Trust demonstrated that S136 detentions decreased by 75% in the first year following the introduction of a Street Triage team in one locale. The reduction was only 3% in a comparable area with treatment as usual.<sup>123</sup>

These initial localized findings require further investigation via longitudinal multisite studies that track service user outcomes over time and across a number of domains, including health and social care and criminogenic impacts.

## Summary

Research findings across different jurisdictions consistently confirm that there are high rates of physical and mental health disorders among police detainees. This presents a particular problem for police services due to the potential for deterioration and the disruption caused by behaviorally disturbed detainees. Furthermore, police custody represents an opportunity for early intervention where detainees are in need of a definitive health intervention. Nevertheless, there are problems with the practicalities and validity of establishing prevalence in this environment. Variation in estimated prevalence is determined in part by the methods by which the physical or mental disorders have been assessed, ie, self-report versus structured clinical assessment, versus official records, etc. Issues concerning the precise needs of special

groups, women, young people, ethnic minority groups in particular, need further consideration and investigation.

The signs and symptoms of detainees presenting with underlying psychological distress are likely to be exacerbated by the process of being arrested, detained, and potentially charged with a criminal offence. The coexisting effects of substances, alcohol, and potential withdrawal thereof do nothing to improve the acute mental state of these detainees. Detainees with underlying chronic physical health problems are also at risk of decompensating, especially where they rely on medication or where there has been an injury that has not been detected. Furthermore, there is the risk of death due to injuries sustained in custody through self-infliction, other detainees, or police involvement (eg, prone restraint).

There are a number of practical challenges that still need to be overcome in order to better fulfill the duty of care requirements regarding the health and well-being of detainees in police custody. Some of these relate to the expertise of police officers and the training they receive. The police also rely on detainees' self-report and there may be a hesitance to report morbidity to police where detainees think this will harm their defense or lead to longer periods of detention. The evidence around this is far from clear; however, the propensity for individuals to disclose vital health information may also vary depending on where in the CJS they find themselves, as well as whether they sense that such a disclosure will help or hinder their personal circumstances. The police's ability to draw on a range of reliable data sources in addition to detainees' self-report would appear to be an advantage.

Furthermore, there are issues of privacy in crowded, open areas of the custody suite and the practicalities of time taken to complete health screening and risk assessment in busy police station environments.

These difficulties with those encountered in interagency information sharing are in line with those encountered in other parts of the CJS. Although police services may have access to their own intelligence sources (police medical records, national databases), the accuracy and continued relevance of this information are not known. Real-time access to primary care health data may be more sensitive, and further research in this field is warranted to explore the benefits and risks of fuller interagency information sharing.

All of these raise the need for accurate screening procedures, followed by appropriate and timely interventions. This is needed in order not only to identify detainees in need of medication or treatment but also to ensure that detainees are not disadvantaged in criminal justice processes through vulnerability, ensuring appropriate supports are in place

throughout. Identification remains a real challenge, and there remains a piecemeal approach to assessment tools within and across jurisdictions.

While there is clearly the need for a more systematic, robust, and standardized approach to health screening processes for people entering police custody, and recent research has demonstrated its utility in better identifying mental illness, there are real challenges with police adopting such a detailed screening assessment. A central challenge that has previously precluded the more widespread adoption of standardized health screens is the limited time that custody sergeants have to complete the various procedural tasks associated with booking detainees into custody. On a practical level, a tiered approach to screening may be required, with an over inclusive first stage, followed by more detailed assessment for those screening positive.

There are some other positive innovations intended to improve identification and interventions for mentally disordered detainees. Street triage and diversion are showing promise, but it is unclear what this means for presentations to custody. There are still likely to be individuals who are unmanageable in community who are resistant or noncompliant. It may also be that these services divert those less acutely unwell but do little to address the high-risk people.

It is recommended that future research looks to develop and evaluate evidence-based screening and service delivery for these detainees. There is a lack of data from many jurisdictions and more research is required to investigate the true prevalence of health morbidity by using joined up and triangulated data. There also needs to be more research investigating the models of physical health care in police custody as these are not well described.

## Disclosure

IGM, HLN, and JS have received funding to develop screening tools for detainees in police custody. IGM and SDMT have published empirical research on the performance of routine screening of police custody detainees. The authors report no other conflicts of interest in this work.

## References

- Home Office. *Police and Criminal Evidence Act 1984 Code C*. London, UK: The Home Office; 2014.
- Home Office. *The Terrorism Act 2006*. London, UK: Home Office; 2006. Available from: <https://www.gov.uk/government/publications/the-terrorism-act-2006>. Accessed March 28, 2016.
- Chappell D. Introduction. In: Chappell D, editor. *Policing and the Mentally Ill - International Perspectives*. Boca Raton, FL, USA: Taylor & Francis Group; 2013:xviii–xix.
- Townsend R, Luck M. Protective jurisdiction, patient autonomy and paramedics: the challenges of applying the NSW Mental Health Act. *J Emerg Primary Health Care*. 2009;7(4).
- Bradbury JF, Ireland M, Stasa H. Mental health emergency transport: the pot-holed road to care. *Med J Australia*. 2014;200(6):348–351.
- Godfredson JW, Thomas SD, Ogloff JR, Luebbers S. Police perceptions of their encounters with individuals experiencing mental illness: a Victorian survey. *Aust N Z J Criminol*. 2011;44(2):180–195.
- British Columbia Ministry of Health. *Guide to the Mental Health Act (2005 edition)*. Victoria, BC, Canada: Crown Publications; 2005.
- Canadian Minister of Justice. *Criminal Code R.S.C., 1985, c. C-46*. Canada: Canadian Minister of Justice; 2015:106–107.
- Wikipedia. *Law enforcement in the United States*. Wikipedia; 2016 [16 March 2016]. Available from: [https://en.wikipedia.org/wiki/Law\\_enforcement\\_in\\_the\\_United\\_States#State](https://en.wikipedia.org/wiki/Law_enforcement_in_the_United_States#State). Accessed March 16, 2016.
- Heide S, Stiller D, Lessig R, Lautenschlager C, Birkholz M, Fruchtnicht W. Medical examination of fitness for police custody in two large German towns. *Int J Legal Med*. 2012;126(1):27–35.
- Payne-James J, Stark M. History and development. In: Stark M, editor. *A Physician's Guide to Clinical Forensic Medicine*. New York, NY, USA: Humana Press; 2011.
- Heide S, Chariot P, Green P, Fabian J, Payne-James J. Healthcare and forensic medical aspects of police detainees, suspects and complainants in Europe. *J Forensic Leg Med*. 2016.
- Independent Police Complaints Commission. *Deaths During or Following Police Contact: Statistics for England and Wales 2014/15*. London, UK: Independent Police Complaints Commission; 2015.
- Department of Health. *Lord Bradley's Review of People With Mental Health Problems or Learning Disabilities in the Criminal Justice System*. London, UK: Department of Health; 2009.
- British Medical Association. *Health Care of Detainees in Police Stations. Guidance from the BMA Medical Ethics Department and the Faculty of Forensic and Legal Medicine*. London, UK: British Medical Association, 2009.
- Faculty of Forensic and Legal Medicine. *Quality Standards for Nurses and Paramedics*. London, UK: General Forensic Medicine (GFM) [3 July 2013]. Available from: <http://ffm.ac.uk/upload/documents/1370351504.pdf>. Accessed July 3, 2013.
- Lord Victor Adebowale. *Independent Commission on Mental Health and Policing*. London, UK: House of Lords; 2013.
- Dodd V. *Sean Rigg Death in Custody: Police Used Unnecessary Force, Jury Finds*. Guardian News and Media Limited; 2012. Available from: <http://www.theguardian.com/uk/2012/aug/01/sean-rigg-police-used-unnecessary-force>. Accessed May 6, 2016.
- The Yorkshire Post. *Mother, 41, Died in Police Cell of Alcohol Withdrawal*. Johnston Publishing; 2011 [updated 4 October 2011 16 May 2016]. Available from: <http://www.yorkshirepost.co.uk/news/mother-41-died-in-police-cell-of-alcohol-withdrawal-1-3835212>. Accessed May 6, 2016.
- Johnson HR. Deaths in police custody in England and Wales. *Forensic Sci Int*. 1982;19(3):231–236.
- Norfolk GA. Deaths in police custody during 1994: a retrospective analysis. *J Clin Forensic Med*. 1998;5(1):49–54.
- Payne-James JJ, Green PG, Green N, McLachlan GM, Munro MH, Moore TC. Healthcare issues of detainees in police custody in London, UK. *J Forensic Leg Med*. 2010;17(1):11–17.
- McKinnon IG, Grubin D. Health screening of people in police custody—evaluation of current police screening procedures in London, UK. *Eur J Public Health*. 2013;23(3):399–405.
- Carter J, Mayhew J. Audit of hospital transfers January to March 2006 from Sussex police custody. *J Forensic Leg Med*. 2010;17(1):38–40.
- Chariot P, Beaufre A, Denis C, Dang C, Vincent R, Boraud C. Detainees in police custody in the Paris, France area: medical data and high-risk situations (a prospective study over 1 year). *Int J Legal Med*. 2014;128(5):853–860.
- Ceelen M, Dorn T, Buster M, Stirbu I, Donker G, Das K. Healthcare issues and health-care use among detainees in police custody. *J Forensic Leg Med*. 2012;19(6):324–331.
- Gahide S, Lepresle A, Boraud C, Mahindhoratp TS, Chariot P. Reported assaults and observed injuries in detainees held in police custody. *Forensic Sci Int*. 2012;223(1–3):184–188.

28. Payne-James JJ, Dean PJ. Assault and injury in clinical forensic medical practice. *Med Sci Law*. 1994;34(3):202–206.
29. McKinnon I, Grubin D. Evidence-based risk assessment screening in police custody: the HELP-PC Study in London, UK. *Policing*. 2014;8(2):174–182.
30. Office of Police Integrity Victoria. *Conditions for Persons in Custody. Report of Ombudsman Victoria and Office of Police Integrity*. Melbourne, VIC, Australia: Ombudsman Victoria; 2006.
31. Lorin de la Grandmaison G, Houssaye C, Bourokba N, Durigon M. Frequency of traumatic lesions alleged by victims of assault during police custody. *J Forensic Leg Med*. 2007;14(6):364–367.
32. Chariot P, Ragot F, Authier FJ, Questel F, Diamant-Berger O. Focal neurological complications of handcuff application. *J Forensic Sci*. 2001;46(5):1124–1125.
33. Payne-James JJ, Smith G, Rivers E, O'Rourke S, Stark M, Sutcliffe N. Effects of incapacitant spray deployed in the restraint and arrest of detainees in the Metropolitan Police Service area, London, UK: a prospective study. *Forensic Sci Med Pathol*. 2014;10(1):62–68.
34. Fazel S, Bains P, Doll H. Substance abuse and dependence in prisoners: a systematic review. *Addiction*. 2006;101(2):181–191.
35. Payne-James JJ, Dean PJ, Keys DW. Drug misusers in police custody: a prospective survey. *J R Soc Med*. 1994;87(1):13–14.
36. Payne-James JJ, Keys DW, Wall I, Jerreat PG, Dean PJ. Alcohol misuse in clinical forensic medicine. *J Clin Forensic Med*. 1997;4(1):17–19.
37. College of Policing. *Authorised Professional Practice - Detention and custody - Alcohol and Drugs*. London, UK: College of Policing; 2015 [cited January 29, 2016]. Available from: <https://www.app.college.police.uk/app-content/detention-and-custody-2/detainee-care/alcohol-and-drugs/>. Accessed January 29, 2016.
38. Dalton V. *Australian Deaths in Custody & Custody-related Police Operations, 1998*. Canberra, ACT, Australia: Australian Institute of Criminology; 1999.
39. Payne-James JJ, Wall IJ, Bailey C. Patterns of illicit drug use of prisoners in police custody in London, UK. *J Clin Forensic Med*. 2005;12(4):196–198.
40. Sirdifield C, Brooker C. Detainees in police custody: results of a health needs assessment in Northumbria, England. *Int J Prisoner Health*. 2012;8(2):60–67.
41. Baksheev GN, Thomas SD, Ogloff JR. Psychiatric disorders and unmet needs in Australian police cells. *Aust N Z J Psychiatry*. 2010;44(11):1043–1051.
42. Forsythe L, Gaffney A. *Mental Disorder Prevalence at the Gateway to the Criminal Justice System*. Canberra, ACT, Australia: Australian Institute of Criminology; 2012.
43. Stark MM, Norfolk G, Rogers DJ, Payne-James JJ. The validity of self-reported substance misuse amongst detained persons in police custody. *J Clin Forensic Med*. 2002;9(1):25–26.
44. Martin SE. The links between alcohol, crime and the criminal justice system: explanations, evidence and interventions. *Am J Addiction*. 2001;10(2):136–158.
45. McKeon A, Frye MA, Delanty N. The alcohol withdrawal syndrome. *J Neurol Neurosurg Psychiatry*. 2008;79(8):854–862.
46. Robertson G, Gibb R, Pearson R. Drunkenness among police detainees. *Addiction*. 1995;90(6):793–803.
47. McBrien J. The intellectually disabled offender: methodological problems in identification. *J Appl Res Intellect Disabil*. 2003;16(2):95–105.
48. Lyall I, Holland AJ, Collins S. Offending by adults with learning disabilities: identifying need in one health district. *Mental Handicap Res*. 1995;8(2):99–109.
49. Irving B. *Police Interrogation. A Case Study of Current Practice*. Royal Commission on Criminal Procedure Research Study No. 2. London: Her Majesty's Stationery Office; 1980.
50. Irving B, McKenzie IK. *Police Interrogation: the Effects of the Police and Criminal Evidence Act 1984*. London: Police Foundation; 1989.
51. Gudjonsson GH, Sigurdsson JF, Bragason OO, Newton AK, Einarsson E. Interrogative suggestibility, compliance and false confessions among prisoners and their relationship with attention deficit hyperactivity disorder (ADHD) symptoms. *Psychol Med*. 2008;38(7):1037–1044.
52. Lyall I, Holland AJ, Collins S, Styles P. Incidence of persons with a learning disability detained in police custody. A needs assessment for service development. *Med Sci Law*. 1995;35(1):61–71.
53. Scott D, McGilloway S, Donnelly M. The mental health needs of people with a learning disability detained in police custody. *Med Sci Law*. 2006;46(2):111–114.
54. McKenzie K, Paxton D. Promoting access to services: the development of a new screening tool. *Learn Disabil Pract*. 2006;9(6):17–21.
55. Middlemiss A. *Final Report. Learning Disability Screening Project in Police Custody*. Leeds, UK: West Yorkshire Police; 2012.
56. Young S, Goodwin EJ, Sedgwick O, Gudjonsson GH. The effectiveness of police custody assessments in identifying suspects with intellectual disabilities and attention deficit hyperactivity disorder. *BMC Med*. 2013;11:248.
57. McKinnon I, Thorp J, Grubin D. Improving the detection of detainees with suspected ID in police custody. *Adv Ment Health Intellect Disabil*. 2015;11:174–185.
58. Bradley E, Lofchy J. Learning disability in the accident and emergency department. *Adv Psychiatr Treat*. 2005;11(1):345–357.
59. Hayes SC. Early intervention or early incarceration? Using a screening test for intellectual disability in the criminal justice system. *J Appl Res Intellect Disabil*. 2002;15(2):120–128.
60. Kaufmann A, Kaufmann N. *Kaufman Brief Intelligence Test*. Circle Pines, MN, USA: AGP Publishing; 2004.
61. Teplin LA. Criminalizing mental disorder. The comparative arrest rate of the mentally ill. *Am Psychol*. 1984;39(7):794–803.
62. Fazel S, Grann M, Carlström E, Lichtenstein P, Långström N. Risk factors for violent crime in schizophrenia: a national cohort study of 13,806 patients. *J Clin Psychiatry*. 2009;70(3):362–369.
63. Short T, Thomas S, Mullen P, Ogloff JR. Comparing violence in schizophrenia patients with and without comorbid substance-use disorders to community controls. *Acta Psychiatr Scand*. 2013;128(4):306–313.
64. Godfredson JW, Ogloff JRP, Thomas SD, Luebbers S. Police discretion and encounters with people experiencing mental illness. The significant factors. *Crim Justice Behav*. 2010;37(12):1392–1405.
65. McKinnon I, Srivastava S, Kaler G, Grubin D. Screening for psychiatric morbidity in police custody: results from the HELP-PC project. *Psychiatrist*. 2013;37(12):389–394.
66. Shaw J, Creed F, Price J, Huxley P, Tomenson B. Prevalence and detection of serious psychiatric disorder in defendants attending court. *Lancet*. 1999;353(9158):1053–1056.
67. Dorn T, Ceelen M, Buster M, Stirbu I, Donker G, Das K. Mental health and health-care use of detainees in police custody. *J Forensic Leg Med*. 2014;26:24–28.
68. Steadman HJ, Scott JE, Osher F, Agnese TK, Robbins PC. Validation of the brief jail mental health screen. *Psychiatr Serv*. 2005;56(7):816–822.
69. Dorn T, Ceelen M, Buster M, Das K. Screening for Mental Illness Among Persons in Amsterdam Police Custody. *Psychiatr Serv*. 2013;64(10):1047–1050.
70. Ogloff J, Warren L, Tye C, Blaher F, Thomas S. Psychiatric symptoms and histories among people detained in police cells. *Soc Psychiatry Psychiatr Epidemiol*. 2011;46(9):871–880.
71. Baksheev GN, Ogloff J, Thomas S. Identification of mental illness in police cells: a comparison of police processes, the brief jail mental health screen and the jail screening assessment tool. *Psychol Crime Law*. 2012;18(6):529–542.
72. Ford JD, Trestman RL, Wiesbrock VH, Zhang W. Validation of a brief screening instrument for identifying psychiatric disorders among newly incarcerated adults. *Psychiatr Serv*. 2009;60(6):842–846.
73. Best D, Havis S, Strathdee G, Keaney F, Manning V, Strang J. Drug deaths in police custody: is dual diagnosis a significant factor? *J Clin Forensic Med*. 2004;11(4):173–182.
74. Heffernan EB, Finn J, Saunders JB, Byrne G. Substance-use disorders and psychological distress among police arrestees. *Med J Aust*. 2003;179(8):408–411.
75. Brownell LW, Naik PC. Assessment in police custody of individuals under the influence of alcohol with co-morbid psychiatric disorders. *J Clin Forensic Med*. 2000;7(1):39–44.

76. Scott D, McGilloway S, Donnelly M. The mental health needs of women detained in police custody. *J Ment Health*. 2009;18(2):144–151.
77. Summers RD. History of the police surgeon. *Practitioner*. 1978; 221(1323):383–387.
78. Metropolitan Police Surgeons' Association. *Lancet*. 1888;131(3363): 292.
79. *Police and Criminal Evidence Act*. In: Elizabeth II, editor. London, UK: The Stationery Office; 1984.
80. *Police and Criminal Evidence (Northern Ireland) Order*. In: Elizabeth II, editor. Belfast, UK: The Stationery Office; 1989.
81. *Criminal Justice Act*. Dublin; 1984.
82. Her Majesty's Inspectorate of Constabulary for Scotland. *Thematic Inspection: Custody Facilities*. Edinburgh, UK: The Scottish Government; 2008.
83. Chariot P, Briffa H, Lepresle A, Lefevre T, Boraud C. Fitness for detention in police custody: a practical proposal for improving the format of medical opinion. *J Forensic Leg Med*. 2013;20(8):980–985.
84. Heide S, Chariot P, Green P, Fabian J, Payne-James J. Healthcare and forensic medical aspects of police detainees, suspects and complainants in Europe. *J Forensic Leg Med*. In press 2016.
85. Payne-James JJ, Anderson WR, Green PG, Johnston A. Provision of forensic medical services to police custody suites in England and Wales: current practice. *J Forensic Leg Med*. 2009;16(4):189–195.
86. Hurley J, Linsley P, Elvins M, Jones M. Nurses leading care in custody suite environments: a qualitative study from Scotland. *J Forensic Nurs*. 2013;9(1):45–51.
87. Rose G. Nurses will replace police surgeons in bid to save cash. *Scotsman*. 2011.
88. Moffat R. Police medicine. *Med Leg J*. 2008;76(Pt 4):117.
89. Srivastava S, Forrester A, Davies S, Nadkarni R. Developing criminal justice liaison and diversion services: Research priorities and international learning. *Crim Behav Ment Health*. 2013;23(5):315–320.
90. Scott DA, McGilloway S, Dempster M, Browne F, Donnelly M. Effectiveness of criminal justice liaison and diversion services for offenders with mental disorders: a review. *Psychiatr Serv*. 2013;64(9):843–849.
91. Ventress MA, Rix KJB, Kent JH. Keeping PACE: fitness to be interviewed by the police. *Adv Psychiatr Treat*. 2008;14:369–381.
92. Rix KJB. Fit to be Interviewed by the Police? *Adv Psychiatr Treat*. 1997;3:33–40.
93. Thomson LDG, Galt V, Darjee R. Professionalizing the role of appropriate adults. *J Foren Psychiatry Psychol*. 2007;18(1):99–119.
94. Bean P, Nemitz T. *Out of Depth and Out of Sight*. Loughborough, UK: Midlands Centre for Criminology, University of Loughborough; 1995.
95. National Appropriate Adult Network. *There to Help. Ensuring Provision of Appropriate Adults for Mentally Vulnerable Adults Detained or Interviewed by Police*. London, UK: National Appropriate Adult Network; 2015.
96. Spivak BL, Thomas SD. Police contact with people with an intellectual disability: the Independent Third Person perspective. *J Intellect Disabil Res*. 2013;57(7):635–646.
97. Henshaw M, Thomas S. Police encounters with people with intellectual disability: prevalence, characteristics and challenges. *J Intellect Disabil Res*. 2012;56(6):620–631.
98. Nemitz T, Bean P. Protecting the rights of the mentally disordered in police stations: the use of the appropriate adult in England and Wales. *Int J Law Psychiatry*. 2001;24(6):595–605.
99. Department of Justice Northern Ireland. *Police and Criminal Evidence (Northern Ireland) Order 1989 - Code of Practice C*. Belfast, Northern Ireland: Department of Justice Northern Ireland; 2012.
100. Martin MS, Colman I, Simpson AI, McKenzie K. Mental health screening tools in correctional institutions: a systematic review. *BMC Psychiatry*. 2013;13:275.
101. First MB, Spitzer RL, Gibbon M, Williams JBW. *Structured Clinical Interview for Axis I and II DSM-IV Disorders—Patient Edition (SCID-IV/P)*. New York, NY, USA: New York State Psychiatric Institute, Biometrics Research Department; 1996.
102. Nicholls TL, Roesch R, Olley MC, Ogloff JRP, Hemphill JF. *Jail Screening Assessment tool (JSAT): Guidelines for Mental Health Screening in Jails*. Burnaby, BC, Canada: Simon Fraser University, Mental Health, Law, and Policy Institute; 2005.
103. Collins T. *All Change for Police IT—Again? : UK Campaign4Change; 2012*. Available from: <http://ukcampaign4change.com/2012/07/18/all-change-for-police-it-again/>. Accessed December 14, 2013.
104. Noga HL, Walsh EC, Shaw JJ, Senior J. The development of a mental health screening tool and referral pathway for police custody. *Eur J Public Health*. 2015;25(2):237–42.
105. The Home Office. *Home Office Circular No 66/90 - Provision for Mentally Disordered Offenders*. London, UK: The Home Office; 1990.
106. Winstone J, Pakes F. *Liaison and Diversion: Best Practice Assessment*. London, UK: Department of Health; 2010.
107. Chung MC, Cumella S, Wensley J, Easthope Y. A follow-up study of mentally disordered offenders after a court diversion scheme: Six-month and one-year comparison. *Med Sci Law*. 1999;39(1):31–37.
108. James DV, Harlow P. Increasing the power of psychiatric court diversion: a new model of supra-district diversion centre. *Med Sci Law*. 2000;40(1):52–60.
109. Kingham M, Corfe M. Experiences of a mixed court liaison and diversion scheme. *Psychiatr Bull*. 2005;29(4):137–140.
110. Centre for Public Innovation. *Review Into the Current Practice of Court Liaison and Diversion Schemes*. London, UK: The Centre for Public Innovation; 2005.
111. NHS England. *More Mental Health Teams to be Based at Police Stations and Courts*. London, UK: NHS England; 2014. Available from: <https://www.england.nhs.uk/2014/12/liaison-and-diversion/>. Accessed December 19, 2015.
112. Ralph M. The Impact of Crisis Intervention Team Programs: Fostering Collaborative Relationships. *J Emerg Nurs*. 2010;36(1):60–62.
113. Compton MT, Bahora M, Watson AC, Oliva JR. A comprehensive review of extant research on crisis intervention team (CIT) programs. *J Am Acad Psychiatry Law*. 2008;36(1):47–55.
114. Shapiro GK, Cusi A, Kirst M, O'Campo P, Nakhost A, Stergiopoulos V. Co-responding police-mental health programs: a review. *Adm Policy Ment Health*. 2014;42(5):606–620.
115. Steadman HJ, Deane MW, Borum R, Morrissey JP. Comparing outcomes of major models of police responses to mental health emergencies. *Psychiatr Serv*. 2000;51(5):645–649.
116. Heilbrun K, Dematteo D, Yasuhara K, et al. Community-based alternatives for justice-involved individuals with severe mental illness: review of the relevant research. *Crim Justice Behav*. 2012;39(4):351–419.
117. Department of Health. *Extending the Street Triage Scheme: New Patrols With Nurses and the Police*. London, UK: Department of Health; 2013. Available from: <https://www.gov.uk/government/news/extending-the-street-triage-scheme-new-patrols-with-nurses-and-the-police>. Accessed January 19, 2016.
118. Department of Health/Home Office. *Mental Health Nurses to Join Police on the Beat*. London, UK: Department of Health/Home Office; 2013. Available from: <https://www.gov.uk/government/news/mental-health-nurses-to-join-police-on-the-beat>. Accessed June 26, 2014.
119. Royal College of Psychiatrists. *Guidance for Commissioners: Service Provision for Section 136 of the Mental Health Act 1983 - Position Statement PS2/2013*. London, UK: Royal College of Psychiatrists; 2013.
120. Irvine AL, Allen L, Webber MP. *Evaluation of the Scarborough, Whitby and Ryedale Street Triage Service*. York, UK: Department for Social Policy and Social Work, University of York; 2016.
121. Thames Valley Strategic Clinical Network. *Street Triage 2014*. Available from: <http://tinyurl.com/z3hck5a>. Accessed January 27, 2016.
122. Molloy K. *Report to Police and Crime Panel 2015*. Available from: <http://tinyurl.com/jqxhky2>. Accessed January 27, 2016.
123. Keown P, French J, Gibson G, et al. Too much detention? Street triage and detentions under Section 136 Mental Health Act in the North-East of England: a descriptive study of the effects of a street triage intervention. *BMJ Open*. In press 2016.

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