



Original communication

## Mental health and health-care use of detainees in police custody

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## ABSTRACT

**Background:** In many countries, forensic physicians function as primary care providers for detainees in police custody. Their task is comparable to the tasks of general practitioners. Nevertheless, problems presented by both patient populations may differ. We therefore aimed to systematically compare presented problems and medication use in a population of police detainees to those of regular patients in general practice.

**Methods:** Health problems and prescription medications of 3232 detainees seen by the Amsterdam Forensic Medical Service were compared to those of general practice patients ( $n = 78,975$ ) adjusted for age and gender during a 12-month period.

**Results:** Among those obtaining medical attention (28% of all detainees), almost 50% were diagnosed with mental health problems, with substance abuse as the leading reason for consultation. Forty-two percent received at least one prescription affecting the nervous system. In general practice, 17% ( $P < 0.001$ ) of patients consulting their GP were diagnosed with mental health problems and 22% ( $P < 0.001$ ) were prescribed medications affecting the nervous system.

**Conclusion:** The magnitude of mental health problems among police detainees has significant implications for the qualifications of police health staff and those who provide health care in the police setting especially concerning substance abuse.

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## 1. Introduction

Forensic physicians function as primary care providers for detainees in police custody in several countries.<sup>1</sup> Health personnel in this setting are expected to treat acute health problems and to assess whether a stay in the police cell is safe, from a medical point of view. The health care issues of those detained by the police may differ from those seen in regular general practice for a variety of reasons. First of all, sociodemographic differences between the patient populations may exist, concerning age, level of education, socioeconomic status, access to health care prior to custody and ethnic background.<sup>2</sup> Secondly, in police custody, acute health problems such as intoxication, withdrawal from illicit drugs and alcohol, psychiatric conditions and injury predominate the work of health staff.<sup>3–5</sup>

From prison research, it is known that the prevalence of mental health problems and medical consumption among inmates is much higher than in the general population.<sup>6–10</sup> Recent research

performed among sentenced Dutch prisoners reports that 25% of all medical contact during custody included psychological aspects, while social problems and addiction were present in another 25%.<sup>11</sup>

Research performed among sentenced detainees is only partly informative for research on detainees held in police custody, however, as many of those arrested do not enter jail or prison because they are released at some stage following initial police contact. Moreover, lock-up only ranges from hours to a maximum of several days until the police investigations are finished. A look into the literature shows that, in contrast to prison populations, data concerning the mental health of police detainees are widely lacking. In police cells, only a few studies have been conducted so far.<sup>3,12–20</sup> Information on the mental health of police detainees is necessary, however, with regard to patient safety in police custody.

Furthermore, knowledge on mental health issues of detainees helps inform those involved in the education of police health staff. A comparison of reasons for consultation in the police and general practice setting can provide valuable information concerning the different qualifications of health care providers needed. Last but not least, there is evidence for a positive relation between unresolved or untreated mental health problems in detainees and subsequent

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recidivism, underlining the importance of the topic to public health and society.<sup>21</sup>

Against this background, the aim of the current study is (1) to present a detailed description of the mental health problems for which primary care services were provided during police custody, (2) to shed light on differences in reasons for consultations of police detainees as compared to patients in general practice.

## 2. Methods

The study is based on two sources of information:

- (1) the electronic registration of the Forensic Medicine Department of the Amsterdam Public Health Service providing on-site health care to police detainees held in cell blocks of the Police Service Amsterdam-Amstelland during July 2008 to June 2009 ('detainee sample').
- (2) data obtained from the Netherlands Information Network of General Practice (LINH, 'general practice sample'), covering the year 2009.

### 2.1. Detainee sample

The primary care team of the Forensic Medical Service in Amsterdam delivers approximately 12,000 consultations to detainees annually. The team consists of forensic physicians and nurses employed by the Amsterdam Public Health Service. Care is provided at police stations and at cell blocks of the Police Service Amsterdam-Amstelland. In total, there are three cell blocks with a total capacity of 170 cells specially equipped for overnight stays (maximum stay: 6 days). In contrast to Dutch prisons, there is no standard medical intake of all incoming detainees. Instead, medical assessment may follow at the detainees' request or at the request of the police if health care issues (such as drug or medication use) are identified.

Health problems of detainees were coded electronically according to the International Classification of Primary Care (ICPC) by the care providers.<sup>22</sup> Prescriptions were retrospectively coded for the purpose of this study using the Anatomical Therapeutic Chemical (ATC) classification. The ICPC is divided into 17 chapters based on the different body systems. The ATC classification categorises substances into fourteen main groups. Both classifications are considered important tools for presenting primary care and drug utilization statistics and are recommended for use in international comparisons.<sup>22,23</sup> Between July 2008 and June 2009, 7888 consultations concerning 3232 patients took place in the three cell blocks in Amsterdam. Since the focus of this study is on mental health, we selected all consultations belonging to the ICPC-chapter 'Psychological' ( $n = 4440$  out of 7888 consultations) and all prescriptions (4831 out of 9743 codes) belonging to the ATC-category 'Nervous system'. An overview of somatic diagnoses and prescriptions is provided by Ceelen et al.<sup>2</sup>

### 2.2. General practice sample

In order to compare the mental health care provided to police detainees with the general practice setting, data from the Netherlands Information Network of General Practice (LINH) were obtained for the year 2009. The LINH database contains longitudinal data on morbidity, utilization of services, prescriptions and referrals of individuals subscribed to general practices in the Netherlands. For this study, we used information from 40 GP practices covering 91,215 persons aged 20–60 years subscribed to these GP practices. This age group was selected in order to achieve

an age distribution comparable to that of the police detainee population. As a result, median age of the general practice population and detainee population visited by the forensic medical service was 41 years (25th–75th percentile 30–51) and 38 years (25th–75th percentile 28–47), respectively. As in the electronic registration of the Forensic Medical Service, diagnoses were coded using the ICPC (International Classification of Primary Care); prescriptions were coded according to the ATC-classification. Comparable to the detainee sample, we selected all consultations ( $n = 55,704$ ) where at least one diagnosis belonging to the ICPC-chapter 'Psychological problems' was made and all prescriptions ( $n = 93,443$ ) compromised by the ATC-category 'Nervous system'.

### 2.3. Analysis

ICPC and ATC codes as registered by forensic doctors and nurses were summarized using descriptive statistics and compared to Dutch general practice data equivalent for age and gender. Differences between groups were analysed using chi-square test (categorical data) and *t*-tests (continuous data). Since one patient can present several problems during one consultation, and can receive more than one prescription following consultation, two levels of analysis are distinguished in Tables 2 and 3: (1) the patient level and (2) the consultation/prescription level. Significance testing in Tables 2 and 3 refers to the consultation/prescription level (column 'diagnoses' in Table 2 and 'prescription' in Table 3), with the aim to describe differences between prescriptions issued and type of problems seen by general practitioners versus forensic physicians. All analyses were performed using SPSS 17.0 for Windows.

## 3. Results

Between July 2008 and June 2009, 28% of detainees were attended by a physician or nurse during custody (24% of all arrests in the police cell). During their stay at the police cell, 1609 patients were diagnosed at least once with an ICPC code from the chapter 'Psychological problems' (49.8% of 3232 detainees with health care contacts during custody), whereas 1356 patients received at least one prescription belonging to the ATC-category 'Nervous system' (42.0% of 3232 detainees with health care contacts during custody; Table 1). In general practice, in contrast, only 16.8% of patients consulting their GP were diagnosed with a mental problem. Nervous system medications were issued to 22.1% of GP patients.

A comparison between the reasons for consultations observed in the detainee sample and the general practice sample shows numerous differences between the two settings of care (Table 2). Several problems are significantly more frequent in custody than in general practice. For example, the leading reason for consultation for male detainees in police custody is drug abuse (ICPC code P19;

**Table 1**  
Characteristics of the detainee and the general practice (GP) sample.<sup>a</sup>

	Detainee sample ( $n = 3232$ )	GP sample ( $n = 78,975$ )
Men (%)	2762 (86.3)	35,597 (45.1)***
Age in years (SD)	37.2 (12.1)	40.6 (11.8)***
Patients (%) diagnosed with mental problem(s) <sup>b</sup>	1609 (49.8)	13,279 (16.8)***
Patients (%) receiving nervous system medication(s) <sup>c</sup>	1356 (42.0)	17,416 (22.1)***

\*:  $P < 0.05$ , \*\*:  $P < 0.01$ ; \*\*\*:  $P < 0.001$  (chi-square test for categorical data or *t*-test for continuous data).

<sup>a</sup> Both samples exclusively comprise persons with health care contacts.

<sup>b</sup> Defined as any problem belonging to the ICPC-chapter 'Psychological'.

<sup>c</sup> Defined as any prescription belonging to the ATC-category 'Nervous System'.

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