

Observational Study

## Audit study of the new hospitalization for assessment scheme for forensic mental health in Japan

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### Abstract

**AIM:** To clarify the components of hospitalization for assessment (HfA) and the management changes from the beginning of the scheme to the present.

**METHODS:** This study is composed of two surveys. In 2013 survey, we created two paper questionnaires (facility and case questionnaires) for psychiatrists working in psychiatric hospitals accepting HfA patients. Questionnaires were sent to 205 hospitals that were identified as accepting the HfA cases, and responses were requested *via* mail. The facility questionnaire was designed to clarify the following specifications and characteristics of each facility: the facility organizer (public sector or private hospital), and the number of beds, psychiatrists, psychiatric nurses, occupational therapists, psychiatric social workers, psychotherapists, public health nurses, and patients treated through HfA during the survey period. The case questionnaire was then used to collect data of the patients under HfA based on the Medical Treatment and Supervision (MTS) Act who were discharged between July 1, 2012 and June 30, 2013. Gathered information included: legal information of each case, demographic data, past history of the offenders, issued offense and the relationship to the victim, information regarding past psychiatric testimonies, psychiatric diagnoses, contents



of the treatment during HfA, information regarding seclusion and restraint during the HfA, the verdict of the District Court panel, and so forth. Next, we compared those results with relevant data obtained in 2007. The 2007 survey comprised data of HfA patients from July 15, 2005 (the date the MTS Act was enforced) to January 15, 2007.

**RESULTS:** We obtained 171 cases, approximately a half of whole contemporary cases of HfA, from 134 facilities, of which 46 were national, prefectural, or semi-official hospitals, and 88 were private hospitals, in 2013 survey. The majority of subjects were male, schizophrenic, and experienced previous psychiatric treatment. The most frequent type of the offense was injury, followed by arson. Most of the subjects were medicated, and a few cases took psychotropic injection during the HfA. The frequency of injection was decreased in 2013 ( $\chi^2 = 7.54$ ,  $df = 1$ ,  $P = 0.006$ ) than in 2007. Psychiatric testimony was more likely to be conducted in 2013 ( $\chi^2 = 8.56$ ,  $df = 1$ ,  $P = 0.004$ ). The examiner psychiatrist was more likely to belong to the HfA facility to which the patient was hospitalized ( $\chi^2 = 5.32$ ,  $df = 1$ ,  $P = 0.02$ ). Hospitalization orders were more frequently selected in 2013 ( $\chi^2 = 19.76$ ,  $df = 3$ ,  $P < 0.001$ ), although the characteristics of the subjects had not changed.

**CONCLUSION:** Although the management of HfA has improved in recent years, structural problems remain.

**Key words:** Medical treatment and supervision act; Hospitalization for assessment; Forensic mental health; Audit study

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**Core tip:** In 2005, the Medical Treatment and Supervision Act was enforced in Japan. In this scheme, offenders with mental disorders are hospitalized for assessment (HfA) to determine their treatment. We aimed to clarify the components of HfA and the management changes from the beginning of the scheme to the present. We obtained approximately a half of whole contemporary cases of HfA in the 2013 survey, and then compared the data to those in the 2007 study. The comparison revealed some changes in the HfA cases. This study clarified the improvement of HfA management, and remained some structural problems as well.

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## INTRODUCTION

Forensic mental health is a topic of great concern

and controversy<sup>[1]</sup>. Thanks to the global trend toward deinstitutionalizing patients with mental disorders, the need to develop sophisticated forensic mental health systems has increased<sup>[2]</sup>. Consequently, many countries have established their own forensic mental health systems, which link different disciplines according to their cultural backgrounds<sup>[3]</sup>.

For many years, Japan had no specific legal provision for offenders with mental disorders<sup>[4]</sup>. Such offenders were treated under the Mental Health and Welfare Act. Under that legislation, patients with mental disorders who were potentially dangerous, being capable of harming themselves or others, were hospitalized under a prefectural government order. This system of official involuntary hospitalization was completely independent of the criminal justice system<sup>[5]</sup>, which led some lawyers to argue that the human rights of these patients were not properly guaranteed. Similarly, some psychiatrists suggested the need for special hospitals with sufficient staff to provide appropriate care for offenders with mental disorders<sup>[6]</sup>.

To address these problems, the Medical Treatment and Supervision (MTS) Act (the Act on Medical Care and Treatment for the Persons Who Had Caused Serious Cases under the Condition of Insanity) was enforced in 2005<sup>[7]</sup>, and the Japanese forensic mental health system underwent reform. Under this new scheme, individuals committing a serious criminal offense in a state of insanity or diminished responsibility would be dealt with in a judicial, administrative framework. The public prosecutor is responsible for making allegations to the District Court to render judgment. The offender is sent to a hospital, usually soon after the public prosecutor makes an allegation to the court. In the term of hospitalization for 2 to 3 mo, psychiatric examination and treatment are implemented; this assessment period is known as hospitalization for assessment (HfA, *kantei-nyuin*)<sup>[8]</sup>. The District Court forms a judgment panel consist of one judge and one mental health reviewer (*seishin-hoken-shinpan-in*), with the latter being selected from a group of psychiatrists who hold a judgment physician license (*seishin-hoken-hantei-i*), which is a national license for forensic mental health specialists. A second psychiatrist with a judgment physician license is then appointed by the panel of the District Court to be an examiner psychiatrist (*kantei-i*), who is required to write a report on the psychiatric evaluation of the patient. At the end of HfA, the panel makes a final decision based on the reports written by the examiner psychiatrist and the rehabilitation coordinator (*shakai-fukki-chousei-kan*) working in a probation office, with reference to the opinion of the mental health advisor (*seishinhoken-sanyo-in*) who is a discretionary member of the panel. The panel can arrive at three possible verdicts: hospitalization orders, community treatment orders, or no treatment/release. In the case of a hospitalization order, the offender is sent to a designated inpatient



facility by the government officials. If either of the first two options is selected, the offender is then obliged to submit to continuous supervision by a rehabilitation coordinator<sup>[9]</sup>. When the offender cannot adhere to treatment in the community, the probation office can make an allegation for a recall order, based on the deliberate assessment regarding the risk of recommitting.

In 2008, the Japanese Government published a list of 239 Japanese psychiatric hospitals for the purpose of HfA of mentally disordered offenders<sup>[10]</sup>. According to an official report, this has now increased to 286 hospitals<sup>[11]</sup>. However, the criteria used to elect these facilities are vague. The MTS Act provides little information on the regulation for even the minimum requirements these facilities must meet, which has led to marked variations in conditions<sup>[12]</sup>. To minimize this variation and improve the quality of assessments, we previously conducted a written mail survey of leading Japanese forensic mental health experts. This resulted in the development of expert consensus for many HfA treatment standards. We therefore concluded that these consensus statements should be widely publicized among practitioners to ensure better management during HfA<sup>[9]</sup>.

Since the MTS Act was enforced some 9 years ago, several papers have been published on subsequent outcomes<sup>[13,14]</sup>. In contrast, the status of HfA is rarely reported, either officially or unofficially. Therefore, we have conducted an annual, national audit study to monitor HfA facilities and subjects.

This study aims to clarify the current situation of HfA and to examine the changes in the contents of HfA from the past to now. We first present the data obtained in the 2013 survey, and then compare the results of the obtained data in 2007.

## MATERIALS AND METHODS

### 2013 survey

We created two paper questionnaires (facility and case questionnaires) for psychiatrists working in psychiatric hospitals accepting HfA patients. Questionnaires were sent to 205 hospitals that were identified as accepting the HfA cases by the previous study, and responses were requested *via* mail. The survey was conducted between July 2013 and February 2014.

The facility questionnaire was designed to clarify the following specifications and characteristics of each facility: the facility organizer (public sector or private hospital), and the number of beds, psychiatrists, psychiatric nurses, occupational therapists, psychiatric social workers, psychotherapists, public health nurses, and patients treated through HfA during the survey period. The case questionnaire was then used to collect data of the patients under HfA based on the MTS Act who were discharged between July 1, 2012 and June 30, 2013. The following information was collected: article number for the case, gender, age,

family members, marital history, occupational history, therapeutic history, issued offense, relationship to the victim, relationship to the owner of the property (exclusive in arson cases), whether psychiatric testimonies (committed examination and/or public trial examination) were conducted before the allegation, decision by the prosecutor or the court preceding the allegation, psychiatric diagnosis, dual diagnosis (if applicable), physical complications (if applicable), treatment during HfA (medication, psychotropic drug injections, long-acting injections (LAI), or electroconvulsive therapy), term of seclusion and restraint, whether the examiner psychiatrist belonged to the facility where the patient was hospitalized, and the verdict of the District Court panel.

### Comparison analysis

Next, we compared those results with similar data obtained in 2007. The 2007 survey comprised data of HfA patients from July 15, 2005 (the date the MTS Act was enforced) to January 15, 2007. The following common contents were collected: gender, age, issued offense, whether psychiatric testimonies (committed examination and/or public trial examination) were conducted before the allegation, decision by the prosecutor or the court preceding the allegation, psychiatric diagnosis, treatment during HfA, term of seclusion, whether restraint was performed, whether the examiner psychiatrist belonged to the facility where the patient was hospitalized, and the verdict of the District Court panel. The components of each questionnaire are summarized in Table 1.

### Statistical analysis

The collected data were analyzed using IBM SPSS Statistics for Windows, Version 22.0 (IBM Corp., Armonk, NY). Values of  $P < 0.05$  were considered statistically significant in each analysis. We adopted either  $\chi^2$  test, Fischer's exact test, or Unpaired  $t$ -test, following each character of the data, for statistical evaluation. Data are expressed as mean  $\pm$  SD unless otherwise stated. The statistical methods of this study were reviewed by Dr. Kensuke Yoshimura in Department of Mental Health/Psychiatric Nursing, Graduate School of Medicine, The University of Tokyo.

## RESULTS

### 2013 survey

**Response rate:** We received responses from 134 facilities (response rate: 65.4%) covering 171 patient records. According to an official report, 388 cases were decided by court panels based on the MTS Act in 2012<sup>[15]</sup>. Estimating that all of these cases required HfA, the capture rate was approximately 44.1%.

**Facility questionnaire responses:** Of the facilities, 46 were national, prefectural, or semi-official hospitals, and 88 were private hospitals. The mean number



**Table 1** Items on the questionnaires in the 2013 survey

Facility questionnaire	Case questionnaire
Facility organizer	Article number
Number of beds	Gender <sup>1</sup>
Psychiatric beds	Age <sup>1</sup>
Other types of beds	Family members
Number of staffs	Marital history
Psychiatrists	Occupational history
Psychiatric nurses	Therapeutic history
Occupational therapists	Issued offense <sup>1</sup>
Psychiatric social workers	The victim
Psychotherapists	The owner of the damaged property (if applicable)
Public health nurses	Psychiatric testimonies <sup>1</sup>
Number of the accepted HfA cases <sup>1</sup>	Preceding Decision by the prosecutor or the court <sup>1</sup>
	Psychiatric diagnosis <sup>1</sup>
	Dual diagnosis (if applicable)
	Physical complications (if applicable)
	Treatment during HfA
	Medication
	Psychotropic drug injections <sup>1</sup>
	Long-acting injections <sup>1</sup>
	Electro-convulsive therapy <sup>1</sup>
	Seclusion and restraint <sup>1</sup>
	Belonging of the examiner psychiatrist <sup>1</sup>
	Verdict of the District Court panel <sup>1</sup>

<sup>1</sup>Collected also in the 2007 survey.

of psychiatric beds was  $284 \pm 136$ , and 27 facilities were equipped with beds for non-psychiatric patients. The average staffing levels were as follows:  $10.4 \pm 5.9$  psychiatrists ( $7.4 \pm 3.9$  designated physicians,  $1.9 \pm 2.0$  judgment physicians),  $113.1 \pm 51.3$  psychiatric nurses,  $8.0 \pm 5.1$  occupational therapists,  $8.3 \pm 5.5$  psychiatric social workers ( $0.6 \pm 1.0$  were mental health advisor candidates), and  $3.8 \pm 3.2$  psychotherapists. Only 13 facilities employed public health nurses. Sixty-nine facilities (51.5%) accepted at least one HfA patient during the survey period (Table 2). The facilities that accepted HfA cases had higher proportions of judgment physicians ( $1.30$  vs  $0.48$ ,  $df = 122$ ,  $t = 3.4$ ;  $P = 0.0009$ ) and mental health advisor candidates ( $0.37$  vs  $0.17$ ,  $df = 116$ ,  $t = 2.3$ ;  $P = 0.02$ ) per 100 psychiatric beds compared with facilities that did not accept HfA cases (unpaired  $t$ -test).

**Case questionnaire:** Of the 171 cases, 168 were subject to HfA by Article 34 of the MTS Act (initial assessment), and 3 were subject to Article 60 (assessment for recall). In total, 123 were men and 48 were women, and the mean age was  $46.6 \pm 16.4$  years; 125 patients lived with their family and 40 lived alone at the time of the offense (unknown = 6). Furthermore, 93 had never been married, 38 were currently married, 21 were divorced, and 5 were widowed (unknown = 14 cases). We also found that 97 had at least one prior job and 25 had no work experience (unknown = 49 cases). Regarding their therapeutic history, 35 patients had no experience of

**Table 2** Characteristics of facilities in the 2013 survey

Item	Options	<i>n</i>
Organization	National, prefectural, or semi-official	46
	Private sector	88
Number of beds <sup>1</sup>	Psychiatric beds	$284 \pm 136$
Other types of beds	Equipped	27
	Unequipped	107
Number of staffs <sup>1</sup>	Psychiatrist	$10.4 \pm 5.9$
	Designated Physician	$7.4 \pm 3.9$
	Judgment Physician	$1.9 \pm 2.0$
	Psychiatric nurse	$113.1 \pm 51.3$
	Occupational therapist	$8.0 \pm 5.1$
	Psychiatric social worker	$8.3 \pm 5.5$
	Candidate of Mental Health Advisor	$0.6 \pm 1.0$
	Psychotherapist	$3.8 \pm 3.2$
Experience of accepting HfA case	Yes	69
	No	64
	Unknown	1

<sup>1</sup>Data expressed as mean  $\pm$  SD. HfA: Hospitalization for assessment.

past psychiatric treatment until the issued offense, whereas 62 were being withdrawn from treatment, 63 were under ongoing outpatient care, and 7 were hospitalized (unknown = 4 cases); 100 patients had been hospitalization before the issued offense.

The issued offenses were: homicide ( $n = 24$ ), attempted homicide ( $n = 34$ ), arson (including attempted arson;  $n = 41$ ), robbery (including attempted robbery and robbery with injury;  $n = 7$ ), injury leading to death ( $n = 5$ ), rape (including attempted rape;  $n = 1$ ), injury ( $n = 64$ ), sexual coercion ( $n = 2$ ), "other" ( $n = 18$ ). This distribution was no different from that in the official report<sup>[16]</sup>. The victims were family members ( $n = 71$ ), friends ( $n = 13$ ), strangers ( $n = 31$ ), and "others" ( $n = 25$ ). In the arson cases, the damaged property was owned by self ( $n = 37$ ), family ( $n = 3$ ), friend ( $n = 1$ ), stranger ( $n = 1$ ), and "other" ( $n = 8$ ).

In 59 cases (34.5%), at least one psychiatric testimony (committed examination and/or public trial examination) occurred before the allegation. The decisions prior to the HfA submission were as follows: no prosecution by reason of insanity (prosecutor;  $n = 105$ ), suspended prosecution by reason of diminished responsibility (prosecutor;  $n = 33$ ), not guilty by reason of insanity (court;  $n = 3$ ), suspended imprisonment with diminished responsibility ( $n = 16$ ), and "other" ( $n = 14$ ).

The main psychiatric diagnoses, categorized according to the International Classification of Disease, 10<sup>th</sup> edition, were F0 (Organic, including symptomatic, mental disorders) 18, F1 (Mental and behavioral disorders due to psychoactive substance use) 13, F2 (Schizophrenia, schizotypal and delusional disorders) 111, F3 [Mood (affective) disorders] 14, F4 (Neurotic, stress-related and somatoform disorders) 2, F5 (Behavioral syndromes associated with physiological disturbances and physical factors) 0, F6 (Disorders of adult personality and behavior) 2, F7 (Mental



retardation) 9, F8 (Disorders of psychological development) 2, and F9 (Behavioral and emotional disorders with onset usually occurring in childhood and adolescence) 0. Dual diagnoses were present in 32 cases (18.7%), and recorded as F0 1, F1 7, F2 1, F3 1, F4 2, F6 3, F7 14, and F8 3. During the HfA period, 9 patients required consultations with physicians from other hospitals, and 3 patients were transported to another hospital for the treatment of physical complications.

In terms of treatment strategies, 161 patients were prescribed medication and 10 received no medication. Five patients received a psychotropic injection, and one received LAI. No patient received electro-convulsive therapy. However, 116 patients were secluded for a mean of  $32.2 \pm 27.1$  d (not secluded = 32; unknown = 23 cases), and 10 patients required physical restraint for periods from 3 to 67 d (no restraint = 148; unknown = 13).

In 142 cases, the examiner psychiatrist originated from the HfA facility, whereas a psychiatrist from another hospital took the role of the examiner psychiatrist in 20 cases (unknown = 9). The verdicts determined by the panel were hospitalization order ( $n = 120$ ), community treatment order ( $n = 12$ ), no treatment/release ( $n = 57$ ), and allegation rejected or withdrawn ( $n = 6$ ; unknown = 6).

### Comparison to the results in the 2007 survey

**Response rate:** In the 2007 survey, we gathered data for 284 cases covering one-and-a-half years, from July 15, 2005 (the date of enforcement) to January 15, 2007. Based on the assumption that 388 cases of HfA occur annually, the capture rate was estimated to be 48.8%. No statistically significant differences existed in the capture rate between the two surveys ( $\chi^2 = 2.09$ ,  $df = 1$ ,  $P = 0.15$ ).

**Demographic data:** Of the 284 cases, 196 were men and 76 were women (unknown = 12), which did not significantly differ from the 2013 survey ( $\chi^2 = 0.00087$ ,  $df = 1$ ,  $P = 0.98$ ). The mean age of the patients was  $43.2 \pm 13.9$ , which was slightly lower than that of the 2013 survey (unpaired  $t$ -test without the assumption of equality of the variance,  $t = -2.22$ ,  $df = 280.507$ ,  $P = 0.027$ ).

The issued offenses were homicide ( $n = 41$ ), attempted homicide ( $n = 33$ ), arson (including attempted arson;  $n = 74$ ), robbery (including attempted robbery and robbery with injury;  $n = 14$ ), injury leading to death ( $n = 6$ ), rape (including attempted rape;  $n = 5$ ), injury ( $n = 91$ ), sexual coercion ( $n = 7$ ), and unknown ( $n = 13$ ). In 61 cases (21.5%), at least one psychiatric testimony was performed before the allegation, and this testimony was more likely to be conducted in 2013 ( $\chi^2 = 8.56$ ,  $df = 1$ ,  $P = 0.004$ ). The decisions prior to the HfA submission were as follows: no prosecution by reason of insanity (prosecutor;  $n = 220$ ), suspended prosecution

by reason of diminished responsibility (prosecutor;  $n = 10$ ), not guilty by reason of insanity (court;  $n = 2$ ), suspended imprisonment with diminished responsibility ( $n = 23$ ), and "other" ( $n = 29$ ).

For the 2007 data, the dominant psychiatric diagnoses were as follows: F0 17, F1 15, F2 204, F3 29, F4 4, F5 1, F6 3, F7 10, F8 1, and F9 0. 33 patients received psychotropic injections, 6 patients started LAI, and 2 patients received electro-convulsive therapy. Injections were less common during HfA in 2013 ( $\chi^2 = 7.54$ ,  $df = 1$ ,  $P = 0.006$ ). Some 194 patients were secluded for a mean of  $37.1 \pm 26.5$  d and 57 were not secluded (unknown = 33), while 15 patients required physical restraint during HfA.

In 221 cases, the examiner psychiatrist was from the HfA facility to which the patient was hospitalized, whereas a psychiatrist from another hospital took up that role in 59 cases (unknown = 4 cases). The examiner psychiatrist was more likely to belong to the HfA facility to which the patient was hospitalized ( $\chi^2 = 5.32$ ,  $df = 1$ ,  $P = 0.02$ ). The panel verdicts were hospitalization order ( $n = 137$ ), community treatment order ( $n = 57$ ), no treatment/release ( $n = 44$ ), allegation rejected or withdrawn ( $n = 7$ ; unknown = 39). Hospitalization orders were more likely to be provided in the 2013 data than that in the 2007 data ( $\chi^2 = 19.76$ ,  $df = 3$ ,  $P < 0.001$ ). The results of the comparison are summarized in Table 3.

## DISCUSSION

In this study, we attempted to clarify the current focus of HfA as well as the changes in its operation. We gathered data for almost half of all cases subject to HfA in 2012-2013 and compared it with the data in 2005-2007. This revealed several important considerations for the proper management of patients under HfA.

Approximately one-third of the facilities accepting HfA cases were administered by an official state organization. Considering that more than 90% of psychiatric hospital care is administered by the private sector in Japan, and that the majority of private hospitals accept official involuntary hospitalization cases<sup>[16]</sup>, private hospitals appear reluctant to participate in HfA. Moreover, there tended to be higher staffing levels in facilities accepting the HfA cases; that is, only hospitals with adequate staff could cope with the offenders with mental disorders.

In our study, men were 2.5 times more likely to be subject to HfA than women. Men are known to commit crimes 5-10 times more often than women, particularly homicide<sup>[17,18]</sup>, yet a higher proportion of women (19/76 = 25%) committed homicide in our study (21/196 = 10.7%) ( $\chi^2 = 6.23$ ,  $df = 1$ ,  $P = 0.01$ ). This may have been due to the considerable amount of infanticide cases by mothers, which is common in Japan<sup>[19,20]</sup>.

The mean age of offenders in the 2013 survey was significantly higher than that in the 2007 survey.



**Table 3** Comparison between the datasets obtained in 2007 and 2013

Year		2007	2013	P value
<i>n</i>		284	171	
Gender	Male	196	123	0.98 <sup>1</sup>
	Female	76	48	
Mean age		43.2 ± 13.9	46.6 ± 16.4	0.027 <sup>2</sup>
Psychiatric testimony	No	223	112	0.004 <sup>1</sup>
	Yes	61	59	
Psychiatric diagnosis (ICD-10)	F0	17	18	NA
	F1	15	13	
	F2	204	111	
	F3	29	14	
	F4	4	1	
	F5	1	0	
	F6	3	2	
	F7	10	9	
	F8	1	2	
	F9	0	0	
Injection	No	251	166	0.006 <sup>1</sup>
	Yes	33	5	
Depot	No	278	170	0.26 <sup>3</sup>
	Yes	6	1	
Electroconvulsive therapy	No	282	171	0.53 <sup>3</sup>
	Yes	2	0	
Seclusion	No	57	32	0.8 <sup>1</sup>
	Yes	194	116	
Restraint	mean term (d)	37.1 ± 26.5	32.2 ± 27.1	0.12 <sup>2</sup>
	No	269	148	0.83 <sup>1</sup>
Examiner Psychiatrist belongs to the hospital where the patient was hospitalized	Yes	15	10	0.002 <sup>1</sup>
	No	59	20	
Verdict	Yes	221	142	< 0.001 <sup>1</sup>
	Hospitalization	137	120	
	Community treatment	57	12	
	No-treatment	44	57	
	Rejected or withdrawn	7	6	

<sup>1</sup>χ<sup>2</sup> test; <sup>2</sup>Unpaired *t*-test (data shown by mean ± SD); <sup>3</sup>Fischer's exact test. NA: Not available.

Considering that the mean age in Japan increased from 43.7 in 2007 to 45.5 in 2013<sup>[21]</sup>, this difference may be consistent with societal trends. Furthermore, most offenders had no history of marriage, which is also consistent with a questionnaire survey of mental health care users in which just 13.0% (132/1016) of the participants lived with a spouse<sup>[22]</sup>. In contrast, 80% of the responders had an occupational history. In another survey of psychiatric outpatients, we reported that 40% of patients had no current occupation<sup>[23]</sup>, while a survey of mental healthcare users revealed that one-fourth earned enough money for daily living<sup>[24]</sup>. Even after accepting the limitations of combining these findings, it appears that forensic patients have superior occupational performance to standard psychiatric outpatients. The relationship between executive function and offending in patients with mental disorders remains controversial<sup>[25]</sup>, and further analyses with sophisticated datasets will be required to investigate the association between occupational history and serious offending.

Almost half of all offenders in these surveys were under ongoing psychiatric treatment, and relatively few were therapy naïve. This is much different from

that reported in other countries<sup>[26]</sup>. It may therefore be essential to enrich the care for patients already attached to medical practitioners, rather than to introduce a new treatment pathway for patients without a therapeutic history. This approach could reduce serious crimes by patients with mental disorders in Japan.

The percentage of HfA cases implementing the use of psychiatric testimony increased between the survey periods, suggesting that prosecutors have come to consider the criminal responsibility of offenders deliberately. This tendency is consistent with the establishment of the Lay Judge Act (2009). According to this new legislation, in the case of serious crimes where the defendant can be subjected to the MTS Act, a lay judge system is used; since its enforcement, psychiatric testimony has been more common in Japan<sup>[27,28]</sup>. Prosecutors appear to require psychiatric testimony in any cases of questionable criminal responsibility, subject to the lay judge system, leading to a higher proportion of psychiatric testimony in HfA cases. This is advantageous in terms of clarifying diagnoses, but can delay medical treatment that tends to be withheld during psychiatric testimony, which may



cause the offender's mental state to deteriorate.

Most offenders subjected to the HfA in these surveys had schizophrenia or some other psychotic disorders. This is expected considering only those considered to be irresponsible or to have diminished responsibility were subject to HfA. In contrast, dual diagnoses were identified in approximately one-fifth of the cases, which is less than that previously reported in other countries<sup>[26,29]</sup>. It was reported that 23.3% of inpatients treated under the MTS Act in designated hospitals had dual diagnosis, including intellectual disability, developmental disorders, and substance misuse<sup>[30]</sup>. This discrepancy suggests that dual diagnoses were overlooked in some cases at the HfA stage. Deeper investigation is necessary to make a precise diagnosis during HfA to determine the best treatment strategy for the subjects.

The majority of the offenders were prescribed medication, which is rational considering the fact that most of them were diagnosed with schizophrenia. Facilities accepting HfA cases seem to be disciplined in prescribing medications for the offenders in the same way as they would for other patients with mental disorders, as recommended by expert consensus<sup>[9]</sup>. However, fewer offenders received injectable psychotropic drugs during HfA in the 2013 data than that in the 2007 data. This could suggest that recent offenders were adequately treated with oral medication and did not need injections. A solid knowledge base and sophisticated HfA procedures probably help in minimizing the reliance on invasive treatment. On the other hand, accumulating evidence suggest the efficacy of LAI of antipsychotics upon patients with psychosis<sup>[31,32]</sup>. It is highly estimated that offenders with psychotic disorders are adaptable to LAI in terms of maintaining compliance and stabilizing their mental state. However, the term of HfA is limited to 2 or 3 mo. Introduction of LAI at the initial stage of HfA has some difficulties, such as the risk of misdiagnosis and acquiring informed consent. Forced LAI induction is not recommended by experts in the HfA<sup>[9]</sup>. An appropriate strategy of using LAI in the HfA should be established.

Most offenders were secluded during the HfA process, although the precise term of seclusion varied. Therefore, the likelihood of seclusion was much higher than that in acute psychiatric units in the US<sup>[33]</sup>. In Japan, the standard management of patients with schizophrenia, and therefore risk for harm to others, tends to involve physical seclusion<sup>[34]</sup>. Our surveys revealed that the proportions of secluded offenders have not changed since the MTS Act was enforced. One of the reasons for frequent seclusion in Japan seems to be a small number of nursing staff, as experts recommended rich human resource in the HfA setting<sup>[9]</sup>. The fact that the seclusion rate per bed in a year is only 0.1-0.2 in designated inpatient facilities<sup>[35]</sup> is consistent with the estimation above. Although restraint was less frequent than seclusion, it continues to be used at similar rates in 2013.

Reductions are necessary in both these areas, when possible.

While this is a controversial topic, it is recommended that the examiner psychiatrist should be selected from among the psychiatrists at the hospital where the offender is hospitalized because this brings practical advantages<sup>[36]</sup>. In almost 90% of respondents in the 2013 survey, the examiner psychiatrist met this criterion, which had increased from the 2007 data. This result suggests improved processes for selecting the examiner psychiatrist.

In terms of the panel decisions, hospitalization orders were more common in the 2013 data than in the 2007 data, and community treatment orders were less frequently adopted. We assume that the panel has become more defensive over recent years. In July 2007, the Supreme Court made a verdict that it is inappropriate to withhold treatment orders for offenders who need psychiatric care as part of the MTS Act simply because adequate care can be provided through the Mental Health and Welfare Act<sup>[37]</sup>. After this verdict, offenders requiring any inpatient care were to be hospitalized in designated inpatient hospitals under the MTS Act, regardless of the severity of their mental disorders. Another possible explanation is more practical; some years after the MTS Act was brought into law, several hospitals opened new wards to accept the cases of MTS act. It is possible that bed shortages initially suppressed the decision to hospitalize patients early after the introduction of the MTS Act.

In conclusion, the characteristics of offenders with mental disorders did not change between the two survey periods. In contrast, treatment and administration of subjects under the HfA has improved to some extent. Nevertheless, several challenges must still be overcome to ensure proper treatment in the HfA setting.

The main limitation of this study is its inherent selection bias. All respondents of our survey voluntarily returned the questionnaires we sent. Therefore, it is possible that only those facilities in which the staff was willing to participate in the HfA responded to our survey. Even after confirming that the proportion of cases was consistent with that in official reports, care should be taken when generalizing our results to the broader HfA landscape.

## COMMENTS

### Background

There had been broad controversy regarding the treatment of offenders with mental disorders. Some major associations around mental health practitioners were opposing to establishment of forensic mental health scheme, insisting such a policy would strengthen the discrimination against the patients with mental disorders. Even now some people including mental health experts are involved in the movement aiming the repeal of the Medical Treatment and Supervision (MTS) act. There was also a broad argument which were responsible for the administration of the hospitalization for assessment (HfA) scheme. Neither the Ministry of Justice, Ministry of Health, Labour and Welfare, or the Supreme Court are willing to handle the HfA management. The authors are strongly concerned about the risk that some patients are inappropriately treated in the HfA because their situation has not been clarified by the



authorities. It is the motive of conducting this study.

### Research frontiers

There are several topics around the MTS act. Besides the HfA scheme, decision making for the patients with developmental disorder, substance misuse, and/or personality disorder are often discussed. Although inpatients treatment strategy has been established, outpatient care is still inadequate in terms of social resource. How to deal with the patients who hardly respond to the treatment is another issue, as the same in foreign countries.

### Innovations and breakthroughs

This article is the first paper reported in English about the current situation and challenges of the HfA scheme in Japan, as far as we know. This scheme was started only eight years ago. Therefore, the authors considered the importance of recording the concurrent situation, perhaps valuable for further reference in the future.

### Applications

Medical practitioners and lawyers engaging in the MTS act management should know the fact described in this article. This study itself is quite domestic, but the authors are planning to conduct some international comparison studies about this region, to improve the forensic mental health systems in each country.

### Terminology

The authors have described some essential words to understand the MTS act in the main article.

### Peer-review

One of the reviewers assessed this article as a paper aimed to investigate the components of HfA and the management changes from 2005 (when a new forensic mental health legislation has been introduced) to the present using mailing questionnaire surveys between 2005 and 2013. The authors are thankful for good understanding of our work to the reviewers.

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