

Changes in patterns of coercion during a nine-year period in a Norwegian psychiatric service area

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Abstract

Objective: There is debate regarding the use of coercion in the psychiatric services and how to minimize its use. We examine changes in the use of coercion in one Norwegian psychiatric service area during a nine-year period.

Methods: All patients receiving psychiatric services during the periods 2003–2006 and 2008–2012 in the study area were identified, subsequently also only those who had been involuntarily admitted or subjected to involuntary outpatient treatment. Yearwise rates of patients admitted to coercion and coercive treatment-episodes throughout the study period were calculated.

Results: The overall number and the rate of coerced patients decreased to the total patient population. Most of the reduction were initially of the observational period. However, the number of coercive episodes per coerced patient increased. The pattern of outpatient versus inpatient modes of coercion both reflected this main trend.

Conclusion: The use of coercion seem to be reduced overall, although the increase in treatment-episodes per patient may indicate a complex pattern in use and registration of coercion. The results may be related to legislative changes, restructuring of psychiatric services, or/and modified attitudes of health-personnel to coercion following a range of efforts to reduce it.

KEYWORDS

coercion, involuntary treatment, psychiatric, psychiatry

1 | INTRODUCTION

The debate regarding the use of coercion in the psychiatric services and how to minimize it has been ongoing for centuries (Monahan et al., 1995; Wynn, 2006). Among the later contributions to the debate is Morandi et al. (2021) presenting findings from a study of mental health professionals' feelings and attitudes towards coercion. Rates of involuntary hospital admissions vary considerably between

countries. One study of involuntary admission in Europe in the year 2000 showed that rates varied from 6/100,000 inhabitants in Portugal to 218/100,000 inhabitants in Finland (Dressing & Salize, 2004). Some studies have suggested that there was an increase in the number and proportion of involuntary admissions in several European countries in the first part of the millennium, including in England and the Netherlands (Keown et al., 2008; Mulder et al., 2008; Priebe et al., 2005). Rates of involuntary admission in

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Norway have been described as among the highest in Europe (Fiorillo et al., 2011; Norwegian Directorate of Health, 2014). Prior studies have suggested that rates of different types of coercion also vary within countries and even between comparable hospitals (Fiorillo et al., 2011; Lay et al., 2011; Wynn, 2004). There might be different explanations for such findings, including differences in patient populations and hospital characteristics (types of wards, etc.) and differences in how coercion is measured (Fiorillo et al., 2011; Lay et al., 2011; Myklebust et al., 2012, 2014; Wynn, 2004). Direct comparison between countries may therefore prove difficult in the areas of health services research and coercion.

However, the staff's attitudes to coercion and how the law is interpreted may also vary within and between national institutions, and between different groups of staff (Diseth et al., 2011; Husum et al., 2011; Lepping et al., 2004; Luchins et al., 2004; Morandi et al., 2021; Swartz et al., 2003; Wynn, 2003; Wynn et al., 2006, 2007, 2011).

In Norway, as in several other countries, an effort has been made to reduce coercive practices and increase the use of voluntary services. A new amendment of the Mental Health Care Act was implemented in 2001, and later revised several times (Helse-og omsorgsdepartementet, 1999). While the new Act did involve some changes in the criteria for involuntary admission that could impact rates of coercion and increased emphasis on voluntary treatment, the overall framework remained largely unchanged. A patient may be involuntarily admitted to a limited time of observation when there is a suspicion that the patient is seriously mentally ill (i.e., suffering from a psychotic disorder or equivalent) and when the patient is considered to be a danger to him/herself or to others and/or to secure that the patient receives needed treatment (Helse-og omsorgsdepartementet, 1999). The patients are usually referred to the hospital by general practitioners (GPs) and examined on arrival by resident doctors. Consultant psychiatrists or clinical specialized psychologists are responsible for making the final decisions regarding the involuntary admission of patients, usually within 24 h of admission. These decisions are later reviewed by an independent supervisory commission, typically headed by a judge, and may also later be appealed through the legal system (Helse-og omsorgsdepartementet, 1999).

At the beginning of the millennium, several agencies, including the Norwegian Ministry of Health and Care Services (Regjeringen, 1996–1997, 1998–1998), the Norwegian Directorate of Health (Larsen et al., 2006), a range of Norwegian hospitals in collaboration with the Norwegian Medical Association (Høie, 2001; Mathisen & Føyn, 2002), and other interest groups, were involved in a range of efforts to reduce rates of coercion in the Norwegian specialist psychiatric services. These efforts involved different interventions and projects, ranging from policy statements to the systematic measurement of various types of coercion, various educational programmes, campaigns focusing on attitudes, and the revision of clinical procedures involving coercion (Høie, 2001; Larsen et al., 2006; Mathisen & Føyn, 2002; Regjeringen, 1996–1997, 1998–1998). There is a dearth of knowledge regarding the effects these changes to policy and training of professionals had. Therefore, based on these

efforts of reform, we find it pertinent to examine coercion rates in the time period immediately following. Using the areas of Vesterålen and Lofoten, in the County of Nordland, Northern Norway as study site, the aim of the study is to examine the use of coercion, defined as involuntary admission and involuntary outpatient treatment by legal status, in one Norwegian psychiatric service area during a nine-year period. Moreover, we discuss possible effects of the changes in the legal framework and the efforts to reduce coercion might have had in this area.

2 | MATERIAL AND METHODS

Drawing on the Norwegian Patient Register (NPR), we identified all patients having received specialized psychiatric treatment in the areas of Vesterålen and Lofoten, in the County of Nordland, Northern Norway. The study area was chosen because it had no private providers of psychiatric services and because its location on islands in Northern Norway made it unlikely that patients received care elsewhere. This means that we were able to obtain a complete overview of the specialized psychiatric treatment given to the patients in the study area. Patients in the study area could receive specialized treatment at one of several District Psychiatric Centres in the region, including three outpatient specialist clinics and three inpatient units, and/or at the area's Central Mental Hospital (CMH) in the town of Bodø.

The areas are characterised by small towns and communities along the coast. The majority of people work in fisheries, agriculture, tourism, small-scale industry, and public service. Communications to the county capital of Bodø are good, and local administrative institutions and educational facilities are in line with modern Norwegian standards.

The total population of the areas in 2012 was 53,918, of which 61.7% were in the age group 18–66. Coercion for patients under 18 are extremely rare in Norway, and the records at hand do not encompass children. For the age group over 66, the medical conditions are often complex with an increasing element of somatic conditions and dementias. The psychiatric conditions of these patients are therefore less clear and are often treated by somatic health services. Due to the aim of the study, the study population was therefore limited to the age group of 18–66. Compared to Norway as a whole, where the group 18–66 accounted for 64.4% of the population, the age composition is slightly different (SSB.no, 2021). Travel time by air to the county capital Bodø and the CMH is 30 and 25 min respectively from Vesterålen and Lofoten (Wideroe.no/en).

The NPR contains routinely collected information on all patients treated in the specialized psychiatric services. The reporting of data, including on the use of different types of coercion, to the NPR is standardized. Annual validation and completeness analyses have shown that the NPR data have a high level of completeness, but that deficiencies exist in reporting of legal status (Bremnes & Indergård, 2020). Following approval by the Regional Medical Ethics Committee, the Norwegian Data Protection Agency, and the

Norwegian Directorate for Health, we were able to analyse data on the level of single treatment-episodes as well as aggregated to individual patients. The NPR contains different types of routinely reported data, including information on patients' demography (gender, age, home-address), administrative information including where the services have been given (inpatient treatment, outpatient specialist treatment, information about relevant treating institutions), medical information including types of services that have been used, the clinical status of the patients (ICD-10 diagnoses, level of functioning), and about the types of procedures that have been used (including any use of coercion) (Helsedirektoratet, 2019). Although personal identification number is part of the registration, data are anonymous to researchers, hence no individual can be identified. The information for the observational period of 2003–2012 stems from one data set, with data from 2007 missing due to a technical change in reporting procedures. Episodes of coercion were identified through recorded formal decisions to coerce, that is involuntary admit, and encompassed involuntary inpatient and outpatient treatment as well as changes between these modes.

These episodes were then assigned to individual patients by the individual patients identification numbers. From this we dispersed the episodes of coercion over the different years of the observational period. This gave the possibility to disentangle different episodes of coercion and individual patients, and thereby avoid re-counting of episodes over years or individual patients. Both in- and outpatients modes of coercion are registered, also if the coercion is in the form of initial formal observation or a following decision to coercive treatment.

Due to the main aim of the study the data are aggregated per year to better illustrate the general development for the health services over a longer period, rather than to follow individual patients more closely by survival analyses or the like.

For the same reason, the different types of coercion were aggregated per patient. We considered the sheer act of coercion as more interesting to illustrate the attitude and culture towards coercion per se than the different modes of involuntary treatment.

It may possibly also be more significant for individual patients if they are or are not being under coercion rather than whether it was in the form of an inpatient or outpatient setting.

Statistical analyses were performed with standard test of differences between rates, the *prtest* procedure in STATA, at both ends of the observational period and between succeeding years. Statistical significance at the 95% level is reported.

3 | RESULTS

We identified a total of 72,209 single treatment-episodes (outpatient consultations and courses, days in day-hospitals, inpatient hospitalizations–days/nights) for 6691 individual patients in the 9 years covering 2003–2006 and 2008–2012. From this we identified a total of 641 single episodes of involuntary admission/treatment during the study period.

The populations of the study on both ends of the observational period are presented in Table 1. The overall patient populations increased from 2003 to 2012, but the sub-population of patients experiencing coercion decreased markedly in the same period both in relative and total numbers. Moreover, the indications to coercive treatment seemed to narrow from a broader spectrum of diagnoses in 2003 to mainly psychosis and affective disorders in 2012 (see Table 1).

The main findings of the study are presented in Table 2, which shows the total number of patients being treated, the total number of patients being coerced, that is involuntary admitted/treated, the number of decisions to coerce per treated patient, and the number of decisions to coerce per patient subjected to coercion.

The total number of patients being treated in the study area increased from 886 in 2003 to 1347 in 2012, while the total number of patients being coerced in the study area decreased from 110 in 2003 to 30 in 2012 (see Table 2 and Figure 1). The latter, by test of proportions, represents a statistically significant decline ($p < 0.01$) from first year of period to all subsequent years. Starting 2005, there is no statistically significant difference between succeeding years.

The number of decisions to coerce per treated patient fell from 0.15 in 2003 to 0.05 in 2012. Starting 2005, due to the unusual decline in the initial 2 years, there is no statistically significant difference between succeeding years in number of coercions. However, the rate of decisions to coerce per patient increased from 1.19 in 2003 to 2.33 in 2012 ($p < 0.01$) (see Table 2 and Figure 2). Thus, the threshold to subject patients to involuntary treatment seems higher over the period, but when subjected the number of coercive episodes seem to increase.

The pattern of outpatient versus inpatient modes of coercive treatment did reveal that the initial decrease in coercion were mostly due to reduction in outpatient involuntary observations of patients. From 2005 and on both modes of coercion followed the same pattern with no obvious interactions (Figure 3).

The rate of patients that were coerced fell from nearly 350/100,000 in the population ages 18–66 in 2003 to approximately 100/100,000 in the population ages 18–66 in 2012. The main fall came in the period from 2003 to 2005, and since 2005 the rate varied around 100/100,000 in the population ages 18–66, with a peak in 2006 and a low in 2011 (Figure 4).

4 | DISCUSSION

The main finding in our study was the large fall in the number of patients under coercion, that is involuntary admission/treatment, and the abrupt fall in rate of coercive episodes at the beginning of the study period, from 2003 to 2005. Several factors may be of importance to this finding.

One may be that a new Mental Health Care Act (Helse-og omsorgsdepartementet, 1999) was implemented in 2001 and later revised several times. It is possible that these changes in the legal framework contributed to a change in clinical practice with respect to

the use of coercion (Shao & Xie, 2015). The actual effects of such legislative changes on clinical practice have been debated (Bagby & Atkinson, 1988). At the early part of the millennium, an effort was made by the Norwegian government, national health authorities as well as by hospitals and professionals and other stakeholders, to reduce the use of coercion in the psychiatric services (Brofoss & Larsen, 2009; Høie, 2001; Larsen et al., 2006; Regjeringen, 1996–1997, 1998–1998; Shao & Xie, 2015).

In any case, in our opinion, this cannot fully explain the sharp drop in rates from 2003 to 2005. If the legislative changes were the major cause, then we would expect similar changes in general. However, Norwegian statistics do not reveal a similar fall on a national level (Brofoss & Larsen, 2009). During the latter part of the

study period, there were smaller variations in the rate of coercion in the study area. The national statistics for the involuntary admissions of patients was relatively stable at around 140/100,000 for the correspondent age group in the period from 2008 to 2012 (Norwegian Directorate of Health, 2014). SINTEF (2008) reports a fairly flat level of involuntary admissions during the initial phase of our study period. In the study area in the same period, the rates have been comparable—and possibly somewhat lower than the national average at the end of the period. Moreover, based on SAMDATA for the period 2001–2006, the years 2003 and 2004 were not outliers in terms of use of coercion regionally or nationally (SINTEF, 2002, 2004, 2006) (SAMDATA contains analyses and management data on development and variation in the specialist health service in Norway).

The number of coercive episodes per patient being subjected to coercion increased during the study period (Table 2 and Figure 4). We believe that this increase in coercion, experienced by a small and steadily decreasing group of patients, could be a result of this group of patients experiencing gradually shorter but more frequent involuntary admissions and/or involuntary outpatient treatment. The mean duration of acute admissions has fallen in recent years, which might have resulted in some patients being admitted involuntarily more frequently. This may depend on changes in national legislations or guidelines that require increasingly more often points of assessments for the use of coercion during a course of treatment for an individual patient.

This may also be an important issue for further research. Our material shows a decreasing trend of individual patients having been subjected to coercion, but at the same time an increased trend in single episodes of formal decisions to coerce. The differences in rates of coercion may depend on whether analyses are from single episodes of admission or from individual patients that may account for several of these episodes. The interpretation of trends in the use of coercion in European psychiatry may depend on the data and level of analyses and calls for cautious interpretation. This is an inherent and long withstanding issue in all health services research (Brofoss & Larsen, 2009; Hjemås, 2011; Mulder et al., 2008).

TABLE 1 Patient populations in the study area 2003–2012, total and patients under coercion

	2003		2012	
	All	Coercion	All	Coercion
Gender	M: 362 F: 519	M: 56 F: 54	M: 526 F: 823	M: 15 F: 15
Age	(M):38,6 (R):18–65	(M):41,0 (R):18–65	(M):38,6 (R):18–65	(M):42,3 (R):18–65
Diagnosis				
Substance abuse	70	5	68	-
Psychosis	57	20	96	18
Affective d.	219	27	460	7
Anxiety d.	258	25	505	2
Personality d.	26	6	36	-
Anorexia	22	-	42	1
ADHD	-	-	105	-
Others	234	27	35	2
Sum	886	110	1347	30

Abbreviation: ADHD, attention deficit hyperactivity disorder.

TABLE 2 Coercion in the study area 2003–2012

Year	Total number of patients	Number of patients being coerced	Rate of patients being coerced	Number of decisions to coerce	Number of decisions per patient	Rate of decisions per coerced patient
2003	886	110	0.12	131	0.15	1.19
2004	964	77	0.07	84	0.09	1.09
2005	979	36	0.04	56	0.06	1.56
2006	1029	43	0.04	62	0.06	1.44
2008	1197	39	0.03	79	0.07	2.03
2009	1300	32	0.02	55	0.04	1.72
2010	1289	33	0.03	61	0.05	1.85
2011	1350	26	0.02	43	0.03	1.65
2012	1347	30	0.02	70	0.05	2.33

FIGURE 1 Number of patients and number of involuntary patients in the study area. Total number of patients on primary axis, number of patients being coerced on secondary axis

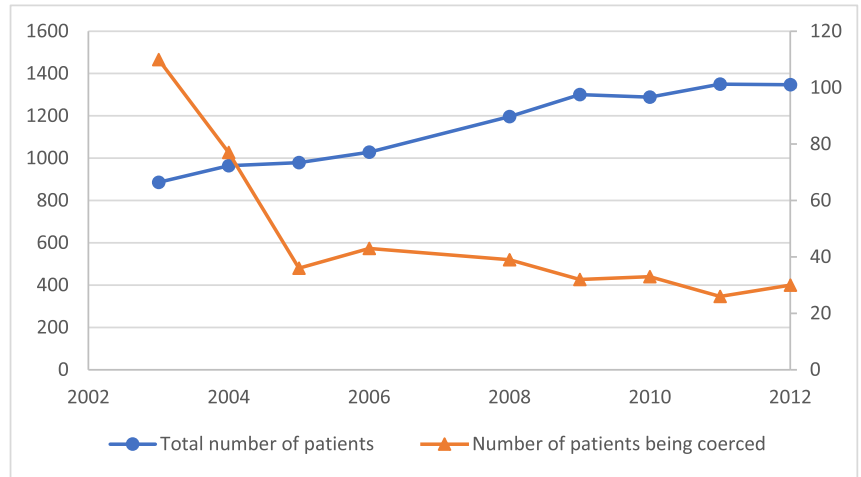


FIGURE 2 Mean number of decisions to coerce, per coerced patient

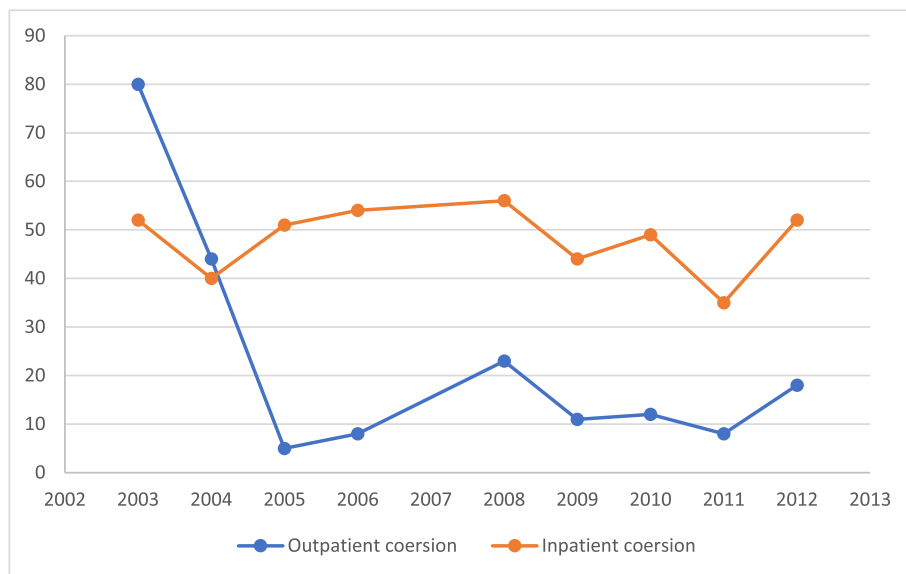
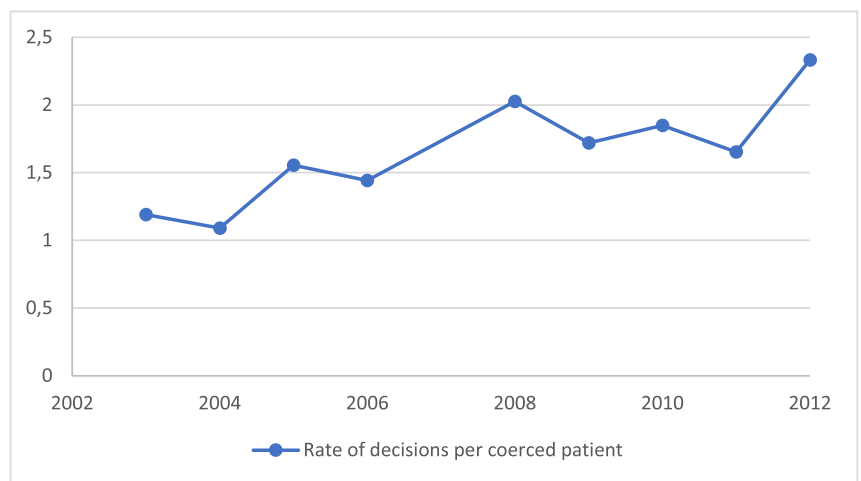


FIGURE 3 Number of outpatient versus inpatient coercive treatments

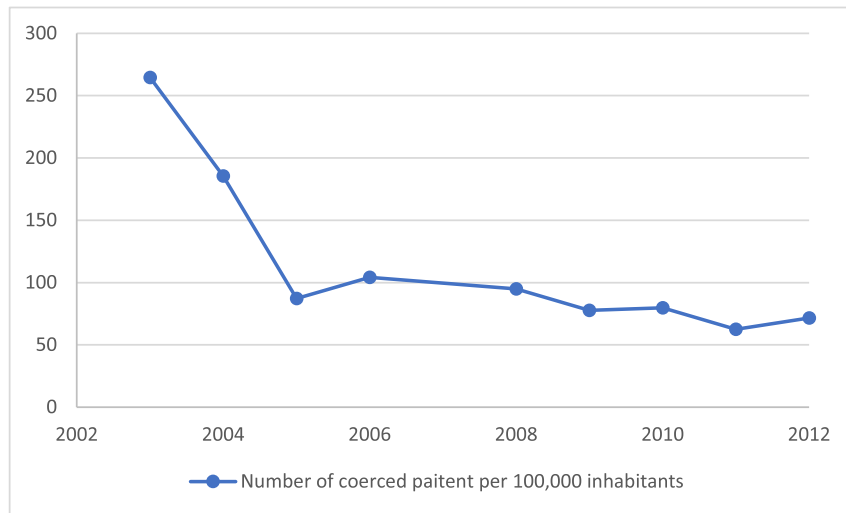


FIGURE 4 Number of coerced patients, per 100,000 inhabitants, age 18–65

It may also be that characteristics of the psychiatric services had an impact in the rate of coercion. The national restructuring towards more local-community based services began in Norway from 1997. More outpatient services and interaction between psychiatric services, GPs and local primary care may provide continual effective care of individual patients before the conditions become too grave and involuntary treatment may be necessary (Myklebust et al., 2012, 2014). The psychiatric services at hand are local-community based, were the only access to inpatient coercion are at the county's CMH about 30 min by airplane away. This may also count for some of the reduction, but the reduction of outpatient modes of coercion suggests that also other factors may be pertinent.

While some issues have been raised regarding the quality of the national statistics for coercion for the early part of the millennium, the data are probably of sufficient quality to give an indication of especially changes in rates of coercion within catchment areas (Brofoss & Larsen, 2009). When the national statistics are broken down to the level of regional hospital areas, it can be observed that some other areas had a drop in rates during the first part of the study period, especially some hospitals outside the South-Eastern capitol area, that is in the West, South and North of Norway, although other hospitals actually had an increase (Hjemås, 2011). Riley et al. (2019) report on incidence and point prevalence of outpatient commitment orders in 2008–2012 from six catchment areas in Norway. They unveil large variations between areas and over time, with no clear patterns.

As the population of these areas is relatively stable, we suspect that the observed changes in use of coercion may also be attitudinal or cultural, that is how the legal criteria are interpreted and enforced by referring GPs as well as by psychiatrists and clinical specialist psychologists at the admitting hospitals (Feiring & Ugstad, 2014; Røtvold & Wynn, 2015).

Studies have suggested that attitudes to the use of coercion vary according to a range of different factors of the health professionals, including age, gender, professional role, work experience,

own experiences with mental illness, personality, and values (Diseth et al., 2011; Husum et al., 2011; Morandi et al., 2021; Steinert, 2007; Wynn et al., 2011). It is possible that this effort paid off especially in some regional health areas and in some hospitals where staff were particularly aligned to the goal of reduced coercion or where the prior rates were relatively high, as they were in our study area. It might be that smaller health services units or systems may be more sensitive to individual professionals' attitudes or modes of experience than more central or larger services. The results may highlight the need to target individual professionals in any effort to change or standardise the use of coercion by the national health authorities.

4.1 | Limitations

While the total number of patients in the study area was quite high, the number and proportion of patients subjected to coercion was relatively low. This means that a relatively small number of patients had an important bearing on the reported changes, possibly also involving a small number of clinicians. As the purpose of our study is to examine possible changes in the use of coercion (following legislative changes and efforts to reduce coercion), the small number of coerced patients in the study area forces us to be cautious in appraising the strength of our results. One should also bear in mind that the data represents a panel, and not independent cross-sections. This entails that some fraction of the patients in succeeding years likely are identical to some fraction of patients in earlier years. More frequent and shorter spells of coercion may be a natural progression of treatment. Starting 2008 the data are personally identifiable, that is, we can follow patients over years. This was not the case in the first part of our study period.

The data regarding use of coercion in the Norwegian specialist psychiatric services has been noted to be of varying quality. Especially some data included in the national Norwegian statistics have been regarded less reliable because some service areas have been

inconsistent in their reporting (Bremnes & Indergård, 2020; Brofoss & Larsen, 2009; Iversen et al., 2009). While we believe the data from the study area presents a correct picture of the development in the use of coercion in this area, the issue of data quality should be kept in mind while interpreting the results.

To conclude, the overall rates of patients on coercion fell markedly in the study area, especially during the first part of the study period. At the same time, the rates of single treatment-episodes of coercion were increased. A gradually smaller group of patients experience shorter but more frequent involuntary admissions.

The changes in rates of coercion could be related to both legislative changes, restructuring of psychiatric services, and to changes in attitudes of professionals to coercion following a range of efforts to reduce it.

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CONFLICT OF INTEREST

None.

ETHICS STATEMENT

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. The study was approved by all relevant agencies, including the Regional Medical Ethics Committee, the Norwegian Data Protection Agency, and the Norwegian Patient Register.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the Norwegian Directorate of Health. Restrictions apply to the availability of these data, which were used under license for this study. Data are available for research projects approved by the registries and that meets the requirements of the Health Research Act and the Personal Data Act.

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