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Seclusion and enforced medication in dealing with aggression: A prospective dynamic cohort study

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ABSTRACT

Background: In the Netherlands, seclusion is historically the measure of first choice in dealing with aggressive incidents. In 2010, the Mediant Mental Health Trust in Eastern Netherlands introduced a policy prioritising the use of enforced medication to manage aggressive incidents over seclusion. The main goal of the study was to investigate whether prioritising enforced medication over seclusion leads to a change of aggressive incidents and coercive measures.
Methods: The study was carried out with data from 2764 patients admitted between 2007 and 2013 to the hospital locations of the Mediant Mental Health Trust in Eastern Netherlands, with a catchment area of 500,000 inhabitants. Seclusion, restraint and enforced medications as well as other coercive measures were gathered systematically. Aggressive incidents were assessed with the SOAS-R. An event sequence analysis was preformed, to assess the whether seclusion, restraint or enforced medication were used or not before or after aggressive incidents.
Results: Enforced medication use went up by 363% from a very low baseline. There was a marked reduction of overall coercive measures by 44%. Seclusion hours went down by 62%. Aggression against staff or patients was reduced by 40%.
Conclusions: When dealing with aggression, prioritising medication significantly reduces other coercive measures and aggression against staff, while within principles of subsidiarity, proportionality and expediency.

1. Introduction

The use of seclusion in dealing with aggression is increasingly perceived as an undesirable measure in dealing with aggression. From 2005 onwards, the Dutch government spent more than 30 million euros in projects designed to reduce seclusion [1]. In several evaluations of Dutch mental health legislation and services [2–4] as well as in the opinion of policy makers [5], seclusion use was too abundant in dealing with aggression. In 2012, the Dutch government stated that any reduction of seclusion should not lead to substitution of seclusion by other measures [6]. At the same time, studies showed that Dutch psychiatric patients do not have any particular preference for seclusion or enforced medication on average [7]. Recently, the UN special rapporteur on torture stated treatment against a patient's consent in psychiatry may be seen as torture [8], adding to the controversy and leading to political discussions and changes of law over Europe.

In Dutch law, a doctor is required to evaluate the necessity of using coercive measures case by case and to carefully weigh the impact of measures taken against the background of three major principles: subsidiarity, proportionality and expediency [9]:

- subsidiarity: a more intrusive measure is only allowed when a lesser intrusive measure is insufficient to prevent danger;

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- proportionality: the measure needs to be proportionate to the extent of the danger. The infringement on autonomy or the bodily integrity of the patient should not exceed the danger the patient may pose to others. Safety of the measure should be weighed against the risks if no action is taken. The psychiatrist must document which efforts were taken to ensure patients' rights.
- expediency: the treatment or measure must have proven efficacy in dealing with the danger the patient poses.

In Dutch Law, a patient may be involuntary admitted, but may object treatment. In acute emergency circumstances, in case of immediate danger, the doctor is by law obliged to decide immediately, and may choose between any coercive measure, such as seclusion, physical or mechanical restraint or enforced medication (10). After introduction of the Dutch Mental Health Act in 1994, several evaluations proved a substantial increase in number and duration of seclusion time and incidents [2,10]. Primarily due to the law prioritising the protection of a patient's bodily integrity over his or her mental integrity, the Mental Health Act led to seclusion becoming the measure of first choice in dealing with aggression in the Netherlands [11]. Nevertheless, no evidence underpins the therapeutic effect of seclusion [12]. In general, medication is offered to the patient, but commonly refused. During an admission, weeks can therefore pass without medication treatment despite clear symptomatology and a sometimes dormant danger level. Only article 39 of the Dutch Mental Health Act allows short acting enforced medication in case of immediate danger. To deal with danger, seclusion was increasingly used in psychiatry and included up to 87% of all coercive measures in Dutch psychiatry [3,10]. This had only reduced to 82% by 2013 [13]. Enforced medication covered approximately 12% of the measures [14,15]. At the same time, a substantial increase in involuntary admissions was observed [1]. Over the past few years, seclusion figures have reduced in line with international consensus in a minority of Dutch mental health institutes, however, the major trends showed increasing differences of seclusion use amongst Dutch psychiatric hospitals [15]. Dutch national data show 75% of enforced medication is administered before, during or just after seclusion. Enforced medication is given in connection of only 20% of seclusion episodes, although the combination of seclusion with enforced medication nearly halves seclusion duration [14].

Mediant is a Mental Health Trust in the Eastern part of the Netherlands at the German border. It provides services for a population of around 500,000. It includes urban and rural areas. In 2010, Mediant changed their policy with regard to the use of coercive measure from the use of seclusion as first choice in the management of aggression to a prioritization of enforced medication as coercive measure of first choice. With this policy, Mediant Mental Health Trust differed completely from other institutes in the Netherlands who continued to use seclusion as first choice and rare use of enforced medication [9,14]. The policy was based on the principles of subsidiarity, proportionality and expediency, with an emphasis on providing evidence-based treatments to patient. Whilst seclusion may reduce danger for the time being, it does not treat the cause of danger, which may include the psychiatric disorder of the patient. Enforced medication has some impact on the bodily integrity of the patient, but will often treat the underlying cause of danger. By starting with medication as coercive measure of first choice, seclusion may not be necessary or substantially shortened [14].

Both in the Netherlands and internationally, evidence is increasing showing interventions in dealing with aggression as seclusion, restraint or enforced medication vary largely between Mental Health Trusts [4,14–18], and most certainly more than between countries [13]. In the Netherlands, such figures vary 10- to 20-fold between hospitals, a difference that cannot be explained by variation in the severity of patients admitted [15]. In general, in the Netherlands, seclusion is used five times more often than enforced medication. Only a few Trusts follow international guidelines preferring enforced medication above seclusion, even though neither Dutch law nor Dutch guidelines prescribe a measure of first choice.

Ward policy in dealing with aggression may be supported by continuous assessment by means of the staff observation and aggression scale (SOAS-R) [19]. This instrument is internationally used to document aggressive incidents. It is used to assess both the nature and severity of aggression. Severe aggressive incidents have an important negative impact on staff health and disrupt patient-staff interaction for some time.

No data exists with regard to the effect of a complete policy change in favour of enforced medication over seclusion. Our study examines the effect of the application of enforced medication as a measure of first choice on the number of aggression incidents as well as on the use of coercive measures.

2. Methods

The current study describes 7-year follow-up data of a single Mental Health Trust. From 2007 onwards, coercive measures have been documented by using the Argus scale [10], which comprehensively covers all coercive measures. Aggressive incidents were assessed by means of the SOAS-R. The policy change happened in 2010, near to a year after a change of hospital directors. If a patient's presentation implied that medication would probably be inevitable, enforced medication was the measure of first choice. We identify two treatment approaches, one in unknown and a second in known patients. In unknown patients, sedation was used and enforced antipsychotic medication continued to be given reluctantly. In known patients, haloperidol was the medication of first choice, when necessary accompanied by promethazine or lorazepam [20].

2.1. Setting

The study was carried out across two hospital locations in the east of the Netherlands, with a total of 217 beds. Seventy-five of these beds are admission ward beds, 62 beds are long stay and 80 are for specialized treatment such as non-congenital brain disorders and psychiatry for elderly adults.

2.2. Argus dataset

The Argus dataset covers coercive measures as counters and patient background data as denominators [14,21]. For this study, the database covered all available Argus data from this hospital from January 1st 2007 up till December 31st, 2013, leaving out admission days of patients admitted before or after these dates. The Argus coercive measures scale defines three main measures [10]:

- seclusion is defined as bringing the patient into a locked room where he/she is alone and able to move around. The patient is unable to leave due to a locked door;
- mechanical and manual restraint is defined as immobilizing the patient with external mechanical devices or physical force;
- enforced medication is defined as the application of intramuscular medication by force against the patient's will. In addition, medication administered under psychological pressure is registered, allowing comparisons with international data [17,22–24].

Aggression was measured with SOAS-R [19]. The SOAS allows a differentiated view of the severity of aggression. The inter-observer