

# Knowledge and compliance use of coercive means in paramedics work

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## Summary

**Purpose.** The aim of this study is to identify the frequency and types of violence occurring in the work of paramedical practitioners and to identify knowledge documentation and use of coercive measures by the professional group.

**Methods.** The study was conducted in 220 paramedics working in emergency medical teams and emergency departments. As a research tool used proprietary questionnaire.

**Results.** 98% of respondents declared aggressive contact with patients. The most common form of aggression on the part of patients is verbal aggression, and the most common form of restraint immobilization (75%). Knowledge of documentation of restraint was twice as high in the group with higher than post-secondary education (46% vs. 24%). 8% of respondents have received training from the application of restraint.

**Conclusion.** There is a need for training of paramedics in dealing with aggressive patients with mental disorders. The main reason for the aggressive behavior of patients were psychotic disorders.

**Key words:** aggression, paramedic, treatment, coercive measures, patient.

## Introduction

Paramedics as a new occupational group, organized and existing under the Act of 8 September 2006 on the National Emergency Medical Services [1] for the first year of its operation was helpless in the face of aggressive psychiatric patients, as emergency workers had no rights to the use of coercive measures against these people. This situation changed last amendment to the Act on the Protection of Mental Health in December 2010 [2], which introduced a number of legislative changes concerning, inter alia, the ap-

plication and the documentation of the applied direct coercion. In addition to doctors and nurses, people entitled to the use of coercive measures became the head of the medical action of rescue operations – the paramedics.

Often a big problem in the course of rescue may be difficulty in establishing contact and lack of cooperation with the person who lived because of the emotions can not be logically understood. If in addition the person requires immediate medical

activities in order to save lives, should be treated the situation as a direct threat to life, in which a person is unable to respond adequately to the situation because of psychotic disorders [3]. Then the paramedic may apply coercive measures. Another example of a condition requiring the paramedic quickly take action to protect both the patient's immediate environment, as well as the medical staff is aggression on the part of the patient.

These situations create the need for education of medical personnel, including emergency medical technicians in the field of document and application of coercive measures. The rule of law, thereby eliminating situations where direct coercion transformed to violence, and the person rescued or paramedic would have suffered injury.

Unfortunately, the literature does not meet the reports dealing with the use of coercive measures in the work of paramedics. Therefore, it seems appropriate to conduct work for measuring the level of knowledge of emergency medical aforementioned range. The study aimed to evaluate the prevalence of aggressive behavior towards paramedics and knowledge of the application and documentation by the professional group of coercive measures.

## Methods

The research was conducted in the period 07.2012-12.2012. Randomised group consisted of 220 paramedics working in emergency departments and emergency medical teams throughout the Polish. 158 paramedics working in emergency medical teams away, 62 people in hospital emergency departments.

Polled by education were divided into two test groups. Group I are paramedics who have completed post-secondary vocational study (n=120) and group II – persons with higher education training in the specialty paramedic. Age of respondents ranged from 22 to 42 years (mean 29 years) and with work experience in the profession from 1 to 21 years (mean 4.5 years). The majority of respondents worked in the emergency medical teams away (76%).

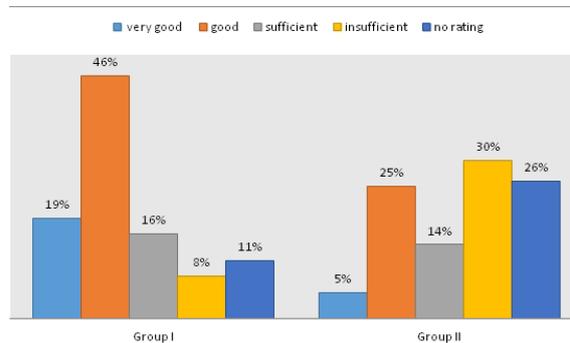
Applied research tool is the original anonymous interview questionnaire consisting of 14 questions.

The research material was coded in Excel and developed using the statistical package STATISTICA 8.0. In the assessment of the differences between the groups using a non-parametric test. Statistically significant differences between groups were calculated non-parametric test for two independent samples – Kolmogorov-Smirnov test. Results were considered statistically significant at  $p < 0.05$ .

## Results

When analyzing the study, the results for both the entire population, as well as the results for a group division level of education.

At the outset, the respondents were asked to self-knowledge of the provisions dealing with the method of use of direct coercion in the Regulation of the Minister of Health on 28 June 2012,



**Figure 1:** Self-knowledge of paramedics from the Regulation of the Minister of Health on 28 June 2012. on how to use and document the use of restraint and to assess the merits of the application (Group I – paramedical practitioners after post-secondary study; Group II – paramedical practitioners after graduation).

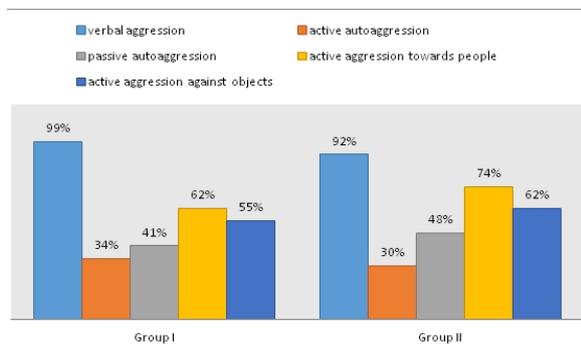
on the method of application and documentation of the use of direct coercion and assessing the appropriateness of its use. The answers given by paramedics illustrates the Fig. 1.

The vast majority of respondents pointed to the aggressive contact with the patient during operation. In group I, the proportion of people declaring contact with the aggression of the pa-

tient was 98%, while in group II – 99%. The results showed no statistical significant differences ( $p < 0.05$ ). 90% of group I and 96% of the group II indicated that contact with the patient aggressive affects more than night duty daily ( $p < 0.05$ ).

The question “ how often during Ms. (Mr.) work, there are cases of aggressive behavior among patients?” 72% of respondents declared that the frequent meeting with aggression. The teams away emergency medical staff meets, on average, with more types of aggression rather than in hospital emergency departments ( $p < 0.001$ ).

Verbal abuse was the most common type of aggression by all respondents. The occurrence of this form of aggression reported by 96% of respondents. The next most common forms of aggression were active against human aggression (67%), aggression towards the active objects (58%), autoimmune reactive (44%) and autoimmune ingredient (32%) ( $p < 0.001$ ). The analysis of the test material showed no statistically significant differences in the individual groups (group I and II) with respect to the frequency indicated various types of aggression ( $H = 1.3582$   $p > 0.05$ ). A detailed schedule provided by the respondents answer has been illustrated in Fig. 2.



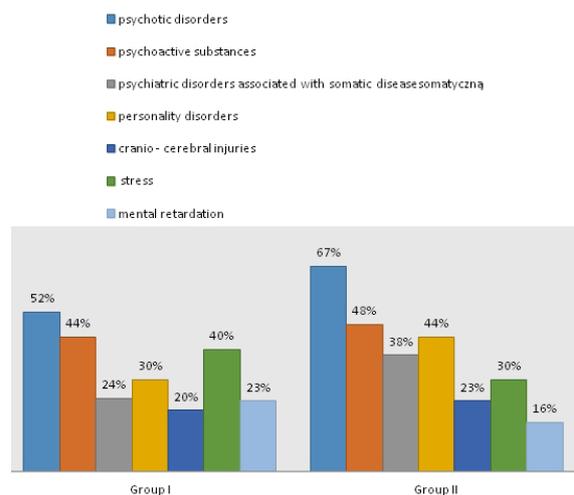
**Figure 2:** Prevalence prevalence of various forms of aggression by rescuers from Group I and Group II (Group I – paramedical practitioners after post-secondary study; Group II – paramedical practitioners after graduation).

The most common form of aggression in the emergency medical teams is verbal aggression and aggression open to the people, and in hospital emergency departments – verbal aggression. There is a relationship between the type of system unit of the State Emergency Medical Services (mobile team of emergency medical, emergency

department), and the type occurring forms of aggression ( $H = 78.4281$ ;  $p = 0.023$ ). 34% of respondents in the performance of medical procedures has been hit by the patient, while 90% has known of him verbal aggression.

In another question, respondents were asked to identify the causes of aggressive behaviour among patients.

Respondents served an average of three causes of aggressive behaviour among patients. 59% of respondents believe that aggression is most often associated with psychotic disorders, while less frequently with mental retardation ( $p < 0.001$ ). Fig. 3 summarizes the answers given by the respondents in each group. The resulting differences were not statistically significant ( $H = 1.1421$ ;  $p > 0.05$ ).



**Figure 3:** Psychiatric respondents believed to be most frequently connected with aggressive behavior (Group I – paramedical practitioners after post-secondary study; Group II – paramedical practitioners after graduation).

36% of people in work are often used direct coercion. 49% of the medical acts performed direct coercion is used rarely, and 15% had never used a direct coercion ( $p < 0.001$ ). Frequency of use of direct coercion is related to the education of the respondents. People often use it in group I ( $H = 143.435$ ;  $p = 0.031$ ).

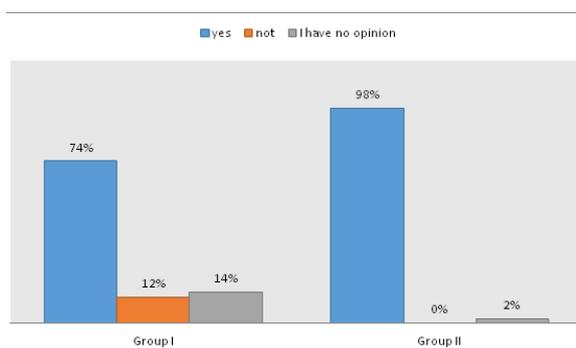
Seniority has an impact on the use of direct coercion. Emergency workers with longer work experience (over 5 years), less likely to use coercion to the patient than those working shorter ( $H = 95.4582$ ;  $p > 0.001$ ).

The most common form of direct coercion was immobilization (75%) and holding (36%) as well as the use of pharmacotherapy in the form Relanium (52%).

Respondents were also asked about the knowledge of the records kept for the use of coercive measures. In group I – 24% of respondents indicated that the use of direct coercion must complete notice of the use of direct coercion. In group II, the percentage of people aware of the fulfillment of this notice was 46%. These differences were statistically significant ( $H=67.4281$ ;  $p<0.05$ ). There was also a significant relationship between the workplace and the observance of the rule of keeping of records which deals with the application of coercive measures. The law was observed more frequently in emergency departments than in the emergency medical teams away ( $H=154.6739$ ;  $p<0.001$ ).

Only 8% of respondents participated in training on the use of direct coercion. There were no differences in terms of participation in the above training, and a group from which respondents were recruited ( $H=0.8931$ ;  $p>0.05$ ).

In another question, respondents had to tell whether they believe training in the use of techniques of direct coercion are justified. 85% of respondents indicated the need for such training. There is a statistically significant difference in the responses given by individuals from group I and group II (Fig. 4) ( $H=34.3276$ ;  $p<0.05$ ).



**Figure 4:** The need to conduct training on the use of restraint in the opinion of the respondents (Group I – paramedical practitioners after post-secondary study; Group II – paramedical practitioners after graduation).

100% of respondents in order to improve the safety of emergency medical personnel pointed

to the need to broaden the range of pharmacological agents used against aggressive patients.

## Discussion

The term “direct coercion” refers to the possibility of dealing with people with mental disorders contained in the Act of 19 August 1994 on the protection of mental health [4]. The use of direct coercion applies in the same way people with mental disorders, mental disabilities, as well as those pointing to other mental dysfunction, including neurotic disorders or personality [2].

Direct coercion is a violation of physical integrity and bodily patient, and therefore in accordance with Art. Paragraph 18. 1 of the Act on the Protection of mental health can only be used when a person with a mental disorder may be the attempt against his own life or health, life or health of another person, public safety or violently destroy or damage objects in its environment or seriously interferes with or prevents the operation of the entity providing therapeutic health services in the field of mental health care and social assistance organizational unit [4]. In the event of an incident of aggression to the most important activities is to ensure patient safety and the safety of personnel. During medical procedures must above all preserve the dignity of the patient, and keep in mind that coercion is not escalated into violence [5].

Research conducted by Kupś *et al* “Direct coercion – implementation of the objectives of the Act on the Protection of the mental health of a patient behaves aggressively in selected health facilities in the region West” showed that aggressive behaviour on the part of patients do not relate only to the field of psychiatric institutions. 98% of respondents confirmed contact with aggressive behaviour, while 55% declared frequent contact with the patient aggressive [6]. These results confirm our study, in which 98.6% of respondents reported contact with various forms of aggression on the part of the patient, and frequent contact with aggressive behaviour’s declared by 72% of paramedics examined. In studies Markiewicz all nurses experienced in their professional aggressive behaviour on the part of patients [7]. Similar results were obtained by Berent *et al*, who in his work analysed the aggressive behaviour of patients to medical

personnel. According to the results of its study of the 30 respondents employed in the Admissions, up to 20 people experienced aggressive behaviour on the part of patients [8].

Analysis of the research material presented in this article indicates that the most common form of aggression was verbal aggression (95.9%), followed by open aggression towards people (67%) and active aggression against objects (58%), self-injury reactive (50%) and indicated the least likely auto-immunity active (41%). A similar level of verbal aggression in their studies registered Kupś *et al* (97.1%) [6]. Ciszewski in their study reported acts of verbal aggression against the people of the patient's environment and active aggression against persons and objects. Verbal aggression manifested in his studies, 30.8% of patients [9]. In studies Markiewicz, 35% of nurses often experienced verbal aggression, while 78% of respondents also experienced physical aggression on the part of the patient [7]. Drabek *et al* in "Occupational Medicine" in his article demonstrated the existence of the problem of physical aggression compared to one out of three of health workers [10].

Of the 220 paramedics, 79 persons are often used coercive measures. Direct coercion is used mainly in the form of immobilisation (75%) and holding (36%). Dabrowski in his research showed that immobilization as a form of direct coercion was used in 96.3% of cases, while holding in 3.7% of cases [11].

Dabrowski expressed the view that there is likely a high employment relationship of nurses with a low rate of use of immobilization [11]. Kostecka and Żardecka [12] believe, however, that the experience of the staff creates an opportunity to learn more aggression and coercion

in the gentlest possible way – which would support the thesis Dabrowski [11] and the results obtained in this article, which shows that people with higher education professional use almost twice less direct coercion than those with post-secondary education.

It was also shown that seniority has an impact on the frequency of use of direct coercion. Studies have shown that persons with longer work experience rarely use direct coercion. Similar conclusions found Kupś *et al* [6].

Study groups paramedics also differed in terms of knowledge of the documentation associated with the use of direct coercion. Holders of education at the undergraduate level compared to those with post-secondary education almost twice as likely to declare knowledge of the documents kept in the case of direct coercion.

The authors of this article conducted a survey of paramedics. More than 85% of the study population indicates the need for training in the use of coercive measures against persons with mental disorders behaving aggressively. This training should include both external factors (environmental) and internal (individual variables), as those that occur in interpersonal relationships and may have an impact on reducing aggression among patients [7].

## Conclusions

- 1) There is need for training of paramedics in dealing with aggressive patients with mental disorders.
- 2) Main reason for aggressive behavior of patients were psychotic disorders.

## References:

1. Setup of 8 September 2006 on the National Emergency Medical Services (OJ 2006 No. 191, item. 1410).
2. Act of 3 December 2010 amending the Act on the Protection of Mental Health (Journal of Laws of 2011. No. 6, pos. 19).
3. Furgał M., J. Heitzman United sudden in psychiatry Janusz Heitzman, Mariusz Furgał, Maciej Pilecki (ed.) Psychiatry. Handbook for medical studies. PZWL, 2007: 243-249.
4. Act of 19 August 1994 on the protection of mental health (OJ 1994 No. 111, item. 535).
5. Karkowska D. : The use of direct coercion to patients with psychotic disorders [www.prawoizdrowie.pl](http://www.prawoizdrowie.pl) (online : 12.01.2013r.).
6. Kupś I., Pelka - Wysińska J., Samochowiec J. Direct coercion - implementation of the objectives of the Act on the Protection of the mental health of a patient behaves aggressively in selected health facilities in Western Pomerania. Psychiatry 2007, 4 (3): 87-96.

7. Markiewicz R.: Aggressive behavior of patients to nursing staff working in psychiatric wards. *Curr Probl Psychiatry* 2012, 13 (2): 93-97.
8. Berent D., Pierchala O., Florkowski A. : Aggression patients to medical psychiatric hospital admissions. *Psychiatry and Psychotherapy*. 2009 ; 5:1-2.
9. Ciszewski L.: Dangerous for the environment preservation hospitalized patients on a preventive measure. *Advances in Psychiatry and Neurology*. 1996, 5 (4): 421-428.
10. Drabek M., Mercz D., Mościcka A. : Scale of exposure to aggression in the workplace health workers and the service sector. *Occupational Medicine*. 2007, 58 (4): 299,-306.
11. Dąbrowski S. : Direct coercion used in some therapeutic activities. *Psychiatry Poland*. 2002, 2 : 193-200.
12. Kostecka M., Żardecka M. : Aggression patients in psychiatric institutions. *Advances in Psychiatry and Neurology*. 1999, 5 (4): 421-428.