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The Impact of Mechanical vs Physical Restraints: A Call for Awareness

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The Impact of Mechanical vs Physical Restraints: A Call for Awareness

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Abstract- There are various illnesses and drug-induced medical conditions that can trigger violent behavior in individuals, directed towards others or even themselves. In such cases, the use of mechanical or physical restraints becomes necessary to manage the violence. This article sheds light on the ethical, psychological, and physical aspects associated with the utilization of restraints. It also discusses current practices, regulations, and proposes alternative approaches that prioritize the well-being, safety and dignity of individuals affected by these restraints and medical staff.

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I. Car Industry Needs in Restraints

Dear reader, have you ever noticed what is the first thing you do when you sit in the car when you are driving? It is *very strange* that you automatically, and unconsciously put the seat belt on. Without any external threat, you voluntarily give up your freedom and restraint yourself with the car seat belt. Why is that? There is a chain of events that lead you to do so. In 1855, an English engineer Claghorn got the first patent for a seat belt. "In 1959, NIlls Bohlin, an engineer at Volvo, created the familiar three-point seat belt that greets you in the car now" [1].

What is surprising is that civil liberties advocates fought against seat belts. The first ever seat belt law, globally was in Victoria, Australia in 1970. However, in North America the first seat belt mandate was in Ontario, Canada in 1976 [2]. In USA, though the fight for mandatory seat belt started in 1973 and ended only in 1977, when Regan administration decided to give, "freedom", lost the case in supreme court and USA had to regulate the industry and mandate the seat belts [3]. In Michigan, David Hollister, the representative hired to lead the mandatory seat belt legislation, received a letter comparing him with Hitler. As per Hollister, "We finally won the civil liberties argument by saying they're arguing for the right to go through the windshield" [2]. Today most of us have no problem putting the seat belt on while driving to be safe.

The use of seatbelts is directly linked to the comfortable and easy to use design. The more complex design which takes more effort to put on, the less chances there are that people will use them [4]. It was found that aging and increase in Body Mass Index, for example, impact the seat belt's comfort [5]. According to another research safety is the second main parameter that impacts sales [6]. As per John Kander's quote, "Money makes the world go around." [7]. Thus, we have the most comfortable and safe car seat belt designs possible.

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II. Mental Health Industry Needs in Restraints

As for safety in the car, in medicine it is also important to ensure safety for the patients as well as the staff. Hence, often we need to limit or *mechanically restraint* patient's body movements. Despite a constant improvement in what can be done to reduce the number, the duration and comfort of mechanical restraints, it is not possible to eliminate them totally. We can continue to try to improve the culture, physical comfort and education we provide for staff by teaching them advanced de-escalating techniques to ensure minimized use of mechanical restraints. Unfortunately, there are some extremely violent patients who are not responding to any de-escalation techniques.

Restraints should be used as a last resort, when we have exhausted all other ways to ensure safety and in emergency. For example, in certain cases and instances when the patient is extremely agitated, violent and aggressive, the use of mechanical restraint is warranted. From writer's experience, the typical cases requiring mechanical restraints are in emergency room department. For example, patients coming with drug induced psychosis, mania or patients suffering from schizophrenia and schizoaffective disorder who are either untreated or non-compliant with their treatment.

III. Zero Restraints Policy as a Freedom to Fight

In response to public criticism regarding the excessive use of mechanical restraints, many organizations have swung to the other extreme by adopting a "*zero restraint policy.*" Under this new approach, they have completely eliminated the use of any mechanical restraints in their practices.

Based on the writer's experience, the implementation of a "zero restraints policy" ultimately results in staff having to engage in physical altercations with patients to ensure their care and safety. Staff members are required to move patients from one location to another, administer acute care medications to address symptoms, search for dangerous objects among their belongings, and attend to their acute

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needs. These tasks become exceedingly challenging to carry out safely without the use of some form of restraints for patients who exhibit violent behavior due to severe psychosis and complete detachment from reality.

In the pursuit of reporting a "zero restraints" policy, organizations may seemingly achieve this goal by eliminating mechanical restraints. However, in practice, the absence of mechanical restraints often leads to the implementation of *physical restraints*. This means that staff members are required to physically hold patients, resorting to various techniques that involve exerting control often through the use of pain. This substitution of mechanical restraints with manual restraint techniques highlights the reality that the "zero restraints" claim is misleading and fails to address the underlying the underlying challenges. And that challenge is violence.

In essence, to paraphrase Holister, “zero restraints policy” fights for the patients and staff “freedom” to clash and be injured physically and emotionally. The writer personally visited several establishments in Israel and one in Canada that proudly embraced this new policy as a significant step forward. However, none of these places shared any statistics regarding the frequency of staff and patient injuries, levels of satisfaction among staff and patients, or any tangible outcomes associated with this approach. One hospital manager in Israel has explained me: “We have no financial concerns for staff injury. This is because it is not the hospital and even not the Ministry of Health who pays for the disabilities following staff injury. It is the Ministry of Welfare”.

Frontline nurses working in "zero restraints" hospitals candidly expressed their experiences to the writer, sharing phrases such as "we are left with no choice but to endure physical abuse," "there are no other nursing job opportunities available around here," and "it feels like nobody cares about us." In Great Britain, since 2015, there have been significant restrictions on the use of mechanical restraints due to a complex "restraint guide" [8]. As a result, the number of mechanical restraints has decreased. However, conversations with a nurse working in Mental Health in England reveal a disturbing job practice: "When we have a violent psychotic patient, we are unable to use mechanical restraints to administer an injection due to complicated paperwork. Consequently, it takes six to eight staff members to physically restrain the patient, pin the patient to the floor, administer the injection, and then hold down for approximately 45 minutes until the medication takes effect." According to an article published in The Guardian in 2017, two out of five workers in the British National Health System experienced abuse or attacks "in the past year." Additionally, one-third of mental health nurses believe that violence has become more prevalent in the past year [9].

The writer was unable to ascertain the patients' perspective on the matter. As a reader, consider the following scenario: if you were a patient exhibiting violent behavior, would you prefer being restrained to a bed within a minute while retaining freedom of movement for your limbs, and having the restraints removed as soon as medication assists in gaining control? Alternatively, would you opt to physically engage in a fight with staff members, being held down until medication takes effect? Similarly, as a nurse facing a violent patient, would you prefer a mechanical restraint tool that safely immobilizes the patient within a minute, or engaging in physical altercations until medication helps regain control?

IV. Bad Restraint Design

Unlike the car industry, the restraints are not chosen by the people who use them. The hospital’s leadership team decides which restraints would be used. Typically, neither front line staff nor patients have had the opportunity to influence the decision of the type of restraints used. This explains the lack of progress in restrains design. In my experience poor restraints design is uncomfortable and risky. It also forces staff to restrain patients in physiologically dangerous positions such as prone (face down) or with one arm above the head. In 2015 in England 16.5% of all restraints were applied in a prone position [10].

In Israel the restraint tool has not changed for at least the last 60 years. They use the same, hard, non-ergonomic, inflexible belts attached to the bed frame with a metal bolts and nuts. This is extremely uncomfortable and emotionally traumatic to the patients. It also requires a long time to apply and may cause problems with blood supply to patient’s extremities. Moreover, the long application process while pt is physically violent poses higher risk for staff as well as patient’s physical and emotional wellbeing. On the other hand, long removal time is a threat to patient’s safety during an external emergency, such as in case of fire. One more thing that should be taken into consideration is trauma history while applying mechanical restraints. More than 50% of female patients suffering from mental health issues has sexual trauma history [11]. So, if the restrains are designed when the legs must be apart is more traumatizing to the females with such history.

If you think about police handcuffs, they are easy to apply, but are also extremely uncomfortable and can cause psychical and psychological harm [12].

In addition, the pain, stress, and fear caused by the struggle between staff and patient during lengthy process of application of restraints. Further discomfort aggravates the patient’s brain area called Amygdala. Amygdala in the case of acute stress helps to diminish

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the physical pain for the patient but ignites patient's emotional response – violence. Interestingly, while dealing with chronic pain Amygdala is responsible for increasing sensation of pain and provides different emotional response – anxiety [13].

Due to this biological phenomenon any usage of physical restraints i.e., manually holding with elements of, "control by pain" or use of police tasers is not effective. Amygdala diminishes pain and increases anger and violence, which is our basic instinct for better chances to survive. In our hospitals and detention centers increased violence increases the risk for patient, detainee and staff injuries as well as causes physical trauma. Hence, mechanical restraints are better choices than physical (manual) restraints.

In individuals with Post Traumatic Stress Disorder (PTSD), the amygdala tends to be hyperactive. Given that many mental health patients have PTSD as either a primary or secondary diagnosis, this particular group is prone to increased violence in response to pain, lengthy discomfort, and stress.

The process of applying mechanical restraints can worsen the distress of an already violent individual. Hence, it is preferable to utilize fast and comfortable mechanical restraints rather than slow and uncomfortable ones.

This violence not only prolongs patients' suffering but also contributes to staff burnout and low staff retention [14]. Consequently, poor staff retention significantly escalates operational costs, as each staff replacement on average incurs 6 to 9 monthly payments [15].

As evident, the outdated and poorly designed approach to restraining patients and detainees, or the implementation of a "zero restraints policy," results in a cascade of issues.

Regrettably, individuals in mental health care, both patients and detainees, have limited socio-economic influence. Unlike car buyers, they lack the power to impact the design and selection of restraints used for their own care. Consequently, as Kander laconically puts it, there is no money "to go around" to provide these vulnerable individuals with fair and humane treatment. Furthermore, doctors prescribe various medications based on different side effect profiles and varying levels of effectiveness, influenced by aggressive pharmaceutical marketing. However, these same doctors have no option to choose the type of restraints to be utilized. The lack of marketing or public attention regarding different restraints systems further exacerbates the situation.

V. Good Restraints Design

Fortunately, there has been a notable shift in recent decades. Over the past 30 years, the writer has observed a significant transition in Ontario's hospitals, as the majority have abandoned old restraint systems in favor of a new, Canadian-developed alternative. This new system boasts several advantages, including comfort, flexibility to adapt to various situations, absence of physical harm, ergonomic design, swift application and removal, close leg positioning, and the elimination of the need for prone or overhead arm positions. Most importantly, this system prioritizes safety, preventing further escalation of violence by minimizing irritations to the amygdala.

Initially, Toronto downtown hospitals with a higher socio-economic patient population were the first to adopt the new body movement control system. Subsequently, many peripheral hospitals followed suit. This shift was primarily driven by restraint damages and the growing socio-economic level of patients. Slowly but decisively, management decisions have been directing financial resources towards acquiring the safest possible body movement control systems. The Canadian system, now widely used in hospitals across Ontario, is gradually replacing outdated systems throughout Canada and the United States. It has also been implemented in the Emergency Medical Services (EMS) of British Columbia, Orange helicopter service, Correction Canada, and even some police departments. Moreover, the system has gained traction in various countries worldwide, including the UK, Japan, Italy, Hong Kong, France, Switzerland, and the Benelux Union. Notably, at least one hospital in Israel is currently exploring the possibility of purchasing it. Similar competitive systems are also utilized in the majority of other European countries.

VI. Call for Action

It is indeed *very strange* that the information mentioned above is not a hidden truth. Despite being aware of these issues, we continue to let the most marginalized individuals in our society—mental health patients and detainees—endure their suffering in silence. We leave them, along with the struggling staff, on the front lines of the battle for mental health. It is high time for a transformation! Humanity must take action to rectify this situation. Implementing the appropriate restraint system is crucial to ensuring the safety, security, and well-being of both staff and patients. Let us prioritize compassion and make a positive change.

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