Restraint Prevalence in Patients Referred for Psychiatric Consultation: Identifying Opportunities for Quality Improvement

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BACKGROUND

- Physical restraint use is associated with increased rates of delirium, PTSD, agitation, patient injuries, and death.
- Restraint reduction is a priority of U.S. hospital regulatory and accrediting agencies.
- Little is known about the prevalence or outcomes of restraint use in inpatients referred for psychiatric consultation.

PROJECT AIMS

- Determine the prevalence of restraints in patients referred to our inpatient CL psychiatry service.
- Explore time to referral, restraint duration, and length of stay to identify areas of potential quality improvement.

METHODS

- Exempt from IRB review.
- Retrospective chart analysis of adult inpatients referred to our inpatient CL psychiatry service over a period of 3 months.
- Reports were generated by the EHR in 30-day increments and included: demographic data, time to psychiatric referral (TTR), length of stay (LOS), number of completed restraint orders, and duration of restraint orders.
- Restraints = any physical devices used to restrict movement or access to one's body.

RESULTS

Table 1. Characteristics of the sample

Characteristic	No Restraints	Restraints
Sample size, *n* (%)	110 (69.2)	49 (30.8)
Sex, *n* (%)		
Male	56 (50.9)	32 (65.3)*
Female	54 (49.1)	17 (34.7)
Age in years, average	50.4	55.7*
Race, *n* (%)		
White	78 (70.9)	41 (83.7)
Black	15 (13.6)	1 (2.0)
Asian	5 (4.5)	1 (2.0)
American Indian	3 (2.7)	2 (4.1)
Multiple	4 (3.6)	2 (4.1)
Other	5 (4.5)	2 (4.1)
Service, *n* (%)		
Medical	84 (76.4)	34 (69.4)
Surgical	26 (23.6)	15 (30.6)
Time to consult, days		
Average	12.4	14.0
Median	3	8

*$p < 0.10$

- Trended toward male sex, $X^2(1, N = 159) = 2.84$, $p = .09$, and older age, $t(157) = 1.83$, $p = .07$.

Table 2. Characteristics of restraint group

Restraint events, *n*	
Average	3.89
Median	2
Range	1 – 32
Duration, hr	
Average	118.2
Median	61.5
Range	0.5 – 456.2
Diagnosis, *n* (%)	
Delirium	23 (46.9)
Non-delirium	26 (53.1)

Table 3. Average length of stay (portion of sample with full length of stay information)

	No restraints	Restraints
Length of stay in days, average	19.9	31.0**

**$p < 0.05$

- Average LOS longer in patients with restraints, $t(139) = 2.32$, $p = .02$.

Figure 1.

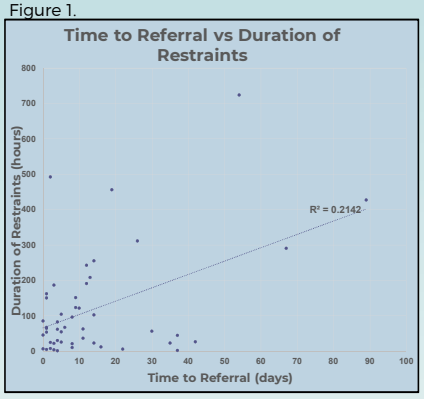
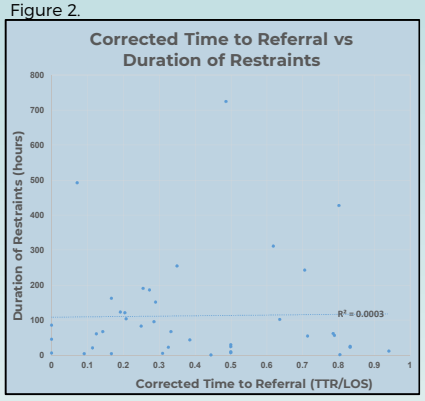


Figure 2.



- Positive correlation found between TTR and duration of restraints, $r(38) = .49$, $p = .001$. Correlation lost significance after using a corrected TTR (TTR/LOS) that has been identified in prior studies to account for length of stay when measuring time to psychiatric referral.

- 30% of CL psychiatry referrals were placed in restraints during hospitalization
- Patients with restraint orders were referred later to psychiatry and had increased LOS.
- Earlier psychiatric referral correlated with decreased duration of restraints (likely confounded by LOS).

DISCUSSION

- Data consistent with prior studies showing older age and delirium are risk factors for delayed psychiatric referral and that restraints can increase LOS.
- Correlation between time to psychiatric referral and duration of restraints may be explained by earlier referral decreasing the overall LOS. More exploration is needed.

IMPLICATIONS

- Understanding factors impacting time to referral and if specific psychiatric interventions affect restraint use could eventually provide incentives for proactive models of care.
- Real-time regular reports or visible dashboards within the EMR may help psychiatry CL teams increase awareness of restraint prevalence and practices.

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