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Inappropriate Boarding: Cost and Quality Issues of Incapacitated Patients Requiring Guardianship

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Introduction

- Hospitalized patients who are deemed mentally incapacitated during their stay cannot be discharged without involvement of a legal guardian.
- If no one will take responsibility for the patient, a guardian must be legally appointed.
- In general, resolution of guardianship legal issues requires a minimum 20-day waiting period in Pennsylvania. Guardianship processes vary by county and generally involve county government.
- Patients who obtain a guardian by traditional legal means are unnecessarily boarded in the hospital, which is costly to hospitals and payors, and exposes patients to risks of adverse events and complications.
- To address this issue, Lehigh County, Pennsylvania, developed an expedited temporary guardianship process.

Study Objectives

- To describe the population requiring the legally-appointed temporary guardians.
- To evaluate the expedited temporary guardianship process (“expedited process”) relative to the traditional guardianship process (“traditional process”) with regard to patient length of stay (LOS), costs, and adverse events experienced.

Methods

Design

- Retrospective cohort study by chart review*.

Sample and Setting

- Patients who were treated in a multi-hospital network in Northeast Pennsylvania between 1999 and 2011, and who required a guardian were identified (n=92).
 - 29 were excluded due to death or inability to easily obtain their medical records.
 - 3 were excluded because they received guardians during stays in a non-acute setting, and 1 was excluded because she was admitted with a guardian.
 - 59 patients are included in the analysis.

Analysis

- Frequencies of demographic and other patient characteristics, as well as adverse events, were tallied.
- Mann-Whitney non-parametric tests and log-linear regression analyses were used to compare various LOS and cost measures between the groups.

*This study was approved by the Network’s IRB. Funding was provided by the Dorothy Rider Pool Health Care Trust.

Principle Findings

Population Description: General Demographics

- Patients requiring guardianship tended to be ≥75 years old.
- There were no statistically significant differences for any of the demographic variables.
- Our patient population exhibited little racial diversity.
- Most of these patients came from the home setting; the majority was discharged to a skilled nursing facility.

Table 1. Demographics by Process Type

Characteristic	Traditional Process		Expedited Process	
	n	%	n	%
Female	10	53	14	35
Age				
<65	6	32	15	38
65-74	2	11	6	15
75-84	8	42	15	38
>84	3	16	4	10
Caucasian	18	95	35	88

Table 2. Referral Sources by Process Type

Referral Source	Traditional Process		Expedited Process	
	n	%	n	%
Home alone	9	47	14	35
Home with someone	3	16	10	25
Other	0	0	6	15
Hospital	3	16	2	5
Skilled Nursing Facility	2	11	3	8
Homeless	1	5	3	8
Group Home	1	5	2	5

Table 3. Discharge Disposition by Process Type

Discharge Disposition	Traditional Process		Expedited Process	
	n	%	n	%
Skilled Nursing Facility	14	74	32	80
Supervised Residential Facility	2	11	4	10
Home	3	16	2	5
Rehab Facility	0	0	1	3
Other	0	0	1	3

- The dominant Major Diagnostic Categories (MDC) were nervous system and mental health disorders, which included substance abuse/addiction.

Table 4. MDC by Process Type

Major Diagnostic Category	Traditional Process		Expedited Process	
	n	%	n	%
Nervous System	8	42	13	33
Mental Diseases & Disorders	3	16	3	7
Kidney and Urinary Tract	2	11	4	10
Respiratory System	0	0	5	13
Digestive System	0	0	3	7
Skin Subcutaneous Tissue and Breast	2	11	1	3
Infectious & Parasitic Diseases Systemic or Unspecified Sites	1	5	2	5
Circulatory System	0	0	2	5
Injuries Poisonings & Toxic Effects of Drugs	2	11	0	0
Myeloproliferative & Poorly Differentiated Neoplasm	0	0	2	5
Musculoskeletal System & Connective Tissue	0	0	2	5
Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders	1	5	0	0
Other & Ungroupable	0	0	3	7

Population Description: Payor

- Medicare was the primary payor for 3/4 of patients, with almost 1/4 of these Dual Eligible for Medicaid.

Table 5. Primary Payor/Insurance Status of Patients by Process Type

Payor	Traditional Process		Expedited Process	
	n	%	n	%
Medicare	15	79	28	70
Medicaid (all Dual Eligible)	3	16	7	8
Commercial	0	0	3	8
Auto Insurance	1	5	2	5

Outcomes Analysis: Length of Stay

- All patients requiring court-appointed guardians had LOS of 10 or more days.
- 85% stayed more than a month and 19% stayed more than 3 months.
- Several measures of LOS were analyzed, because the expedited process only affects the portion of a patient’s LOS that occurs after the need for a guardian is determined.
- The data show a shorter LOS for expedited process patients for all LOS measures.
- However, overall LOS, days between completion of treatment and discharge date, and days between assignment of guardian and discharge date, were not significantly different between groups.
- When controlling for combinations of case severity, age, and time the guardianship program had been in place, logged overall LOS does not differ significantly between groups (no models were significant).
- Days between date of first competency hearing and discharge date were significantly different between groups (p=0.004); however when controlling for time that the expedited program was in place, the difference in LOS between the groups is insignificant.
 - Traditional process cases tended to be early in the study period and expedited process cases late in the study period; and LOS of guardianship patients was decreasing over time (perhaps due to process improvement).

Length of Stay in Days

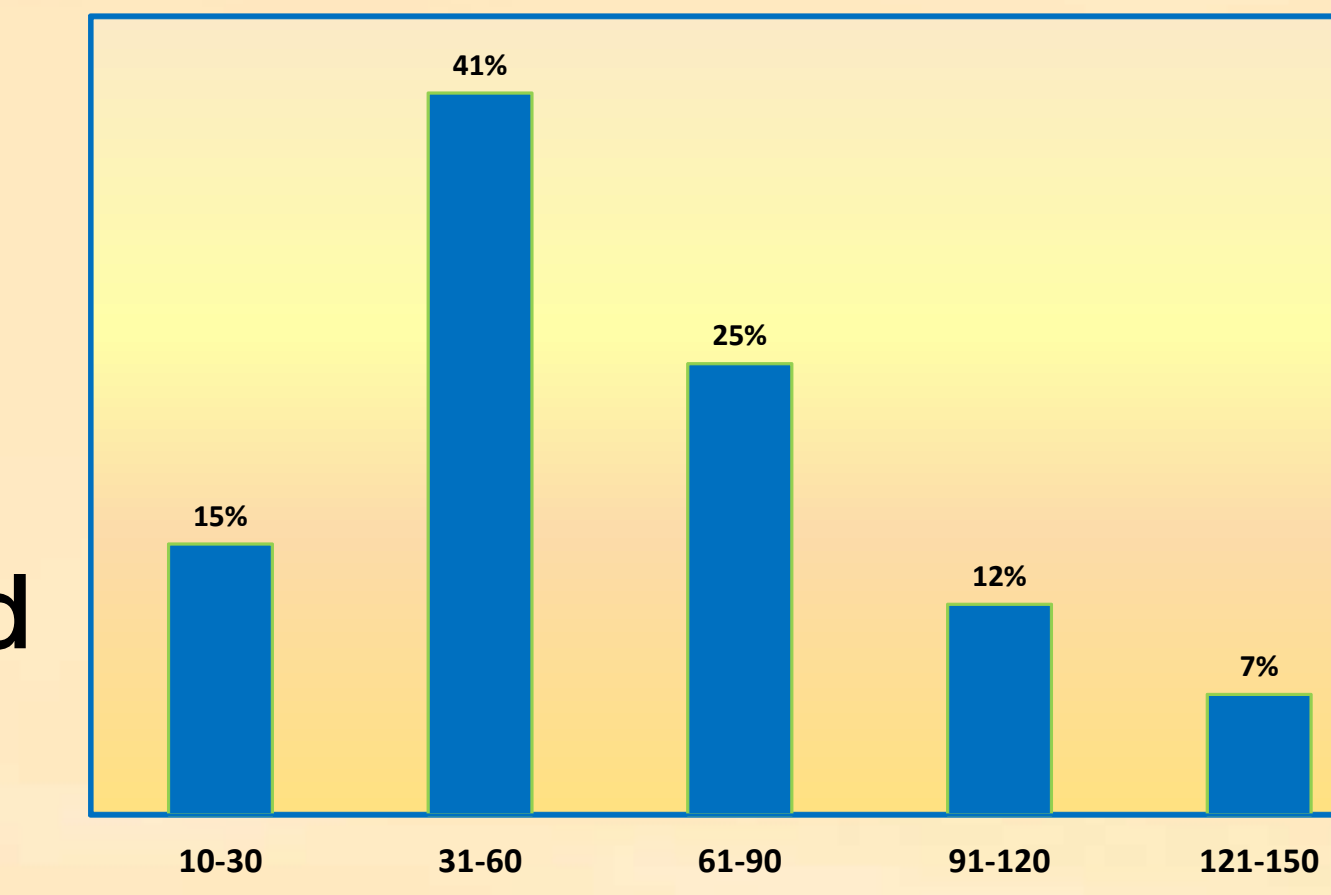


Table 6. Various LOS Measures by Process Type

Group	Mean	Median	n
Overall LOS			
Traditional Process	70	74	19
Expedited Process	60	54	40
Days Between Completion of Treatment and Discharge Date			
Traditional Process	49	43	19
Expedited Process	34	28	40
Days Between Assignment of Guardian and Discharge Date			
Traditional Process	13	13	18*
Expedited Process	15	7	40*
Days Between Date of First Competency Hearing and Discharge Date			
Traditional Process	30	21	16*
Expedited Process	15	7	40*

*Numbers dropped as a result of the second expedited process identified half way through the study.

Outcomes Analysis: Costs

- No differences in total hospital costs were found between the two groups.
- The log of costs incurred after treatment was significantly lower for expedited process patients, when controlling for age; but it was insignificant when controlling for time the expedited program was in place.

Outcomes Analysis: Adverse Events

- In general, comparable complication rates were observed between groups.

Table 7. Adverse Events by Process Type*

Group	# with any adverse event (%)	# with hospital-acquired infection (%)	# with fall (%)	# with pressure ulcer (%)	# other complications (%)
Traditional Process	13 (68)	7 (37)	1 (5)	6 (32)	6 (32)
Expedited Process	28 (70)	17 (43)	8 (20)	10 (25)	12 (30)

*Some patients had more than one adverse event.

Conclusions

- Patients requiring court-appointed guardians are typically elderly and thus Medicare-insured. They often have nervous system and mental health disorders, and come from home.
- There is no “typical” patient, thus increasing the need for expedited processes to resolve the matter once detected.
- A major limitation is the small sample size.
- Due to sample size and the idiosyncrasies of the cases, there were no statistically significant differences between the groups with regard to LOS, adverse events, and costs.
- From the raw data, and to those involved with guardianship in our Network, it is clear that the expedited process is positively affecting patients and the Network.

Implications for Policy, Delivery & Practice

- With the aging population and decreasing family and social ties, the need for court-appointed guardians is likely to increase.
- In addition to the judicial approach taken by Lehigh County, an alternative is to use a local Area Agency on Aging to intervene on a temporary basis as was done in a neighboring county.
- A research agenda and national dialogue on the issues surrounding guardianship appointment processes could bring together healthcare and legal professionals committed to sharing knowledge to address this problem.

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