Level of Care Decisions: Predicting Service Utilization

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Theoretical Background: Level of Care

- System of care emphasizes "least restrictive, most normative" service and placement (Stroul & Friedman, 1986).
- Few would argue that finding the appropriate level of care is important, however. . . . . .
- Determining the appropriate level of care may be more of an art than a science
- Many questions remain regarding the reliability, validity, and utility of level of care protocols.

An Example – Bickman, Karver, & Schut (1997)

- 18 clinicians judged the profiles of 47 children using clinic written level of care standards.
  - Inter-judge reliability was close to 0
  - Correspondence between ratings and actual placement was very low
- "preestablished criteria may not be valid representations of appropriate care" (p. 518)
- Level of Care standards have not been linked to clinical and functional outcomes

Practical Background: Changing Measures

- Stark County was using the CAFAS but switching to the Ohio Scales to be consistent with the State Outcome System
- Clinicians liked the convenient connection between the CAFAS and Level of Care decisions
- Calibrating and testing the Ohio Scales – Worker with the CAFAS could assist in the transition.
- Gathering data beyond the calibration could examine the validity of level of care decisions.

Purpose of the Study

- Examine a level of care protocol in relationship to clinical and functional outcome measures
- Examine service utilization in relationship to level of care assignment and outcome measures

Methods-Subjects

- 206 child participants (86 girls, 119 boys)
- Average age 12.27 (3.07)
- 170 white, 31 African-American, 7 Native American, 1 Hispanic, 2 Asian, 12 other, 3 unknown (multiple groups could be endorsed)
- Mixed diagnoses (e.g., ODD-43, ADD-27, adjustment-57, anxiety-24)

Method-Design

- Obtained research consent
- Paid agency for getting data
- Completed OSW and CAFAS on the same day at regularly scheduled measurement interval
- Using the CAFAS level of care protocol available in the county, determined ideal and actual level of care assignment
- Gathered service utilization data for next 6 months

LOC Guidelines

	CAFAS Range	Other Necessary Indicators
Level 0	CAFAS 8 0 – 20	
Level 1	CAFAS 5 20 – 30 CAFAS 8 20 – 40	Diagnostic criteria Minimal impairment in role functioning No risk factors
Level 2	CAFAS 5 40 - 60 CAFAS 8 50 – 90	Diagnostic criteria Mild impairment in role functioning Low risk factors
Level 3	CAFAS 5 70 – 80 CAFAS 8 100 – 130	Diagnostic criteria Moderate impairment in role functioning Moderate to high risk factors
Level 4	CAFAS 5 90+ CAFAS 8 140+	Diagnostic criteria Severe impairment in role functioning Very high risk factors
Level 5	CAFAS 8 140+	See CCO LOC guide
Level 6	Safety Overrides	Threat of Harm to Self or Others

Results – Level of Care Assignment

Level of Care

	0	1	2	3	4	5	Total
#	17	31	71	54	30	3	206
%	8.3%	15.0%	34.5%	26.2%	14.6%	1.5%	100.0%

Results: Assigned vs Entry Level

Assigned Level of Care

Entry	0	1	2	3	4	5	Total
0	6	22	35	17	14	-	94
1	3	12	5	-	2	-	22
2	-	2	29	2	1	-	34
3	-	2	6	19	3	-	30
4	1	-	4	4	7	2	18
5	-	-	2	1	1	-	4
6	-	-	1	2	1	-	4
Total	10	38	82	45	29	2	206

0- No Service; 1 – Mild; 2 – Moderate; 3 – Severe; 4- Extreme; 5 – Residential Treatment; 6 - Hospitalization

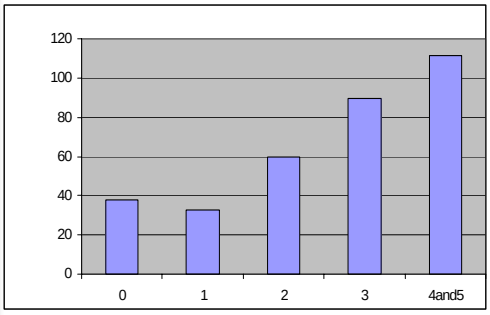
Results- Assigned vs Ideal Level

Ideal Level of Care

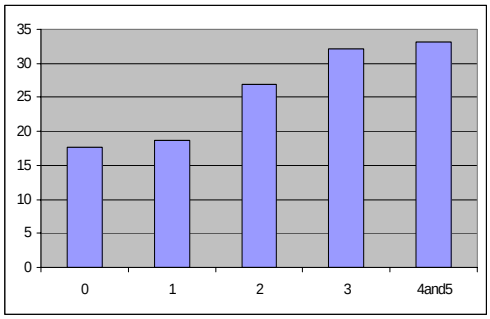
Assig.	0	1	2	3	4	5	Total
0	7	2		1			10
1	6	27	4	1			38
2	2	2	65	10	3		82
3	1		2	40	1	1	45
4	1			2	25	1	29
5					1	1	2
6							
Total	17	31	71	54	30	3	206

0- No Service; 1 – Mild; 2 – Moderate; 3 – Severe; 4- Extreme; 5 – Residential Treatment; 6 - Hospitalization

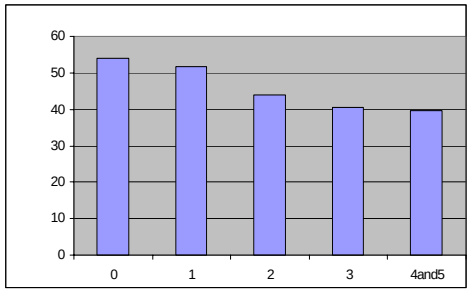
Results-Level of Care with CAFAS



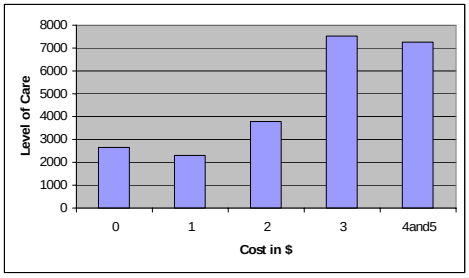
Results- Level of Care with Problem Severity



Results-Level of Care with OS Functioning



Results-Level of Care with Service Costs



Pattern of Comparisons

- Levels 0 & 1 not different
- Levels 3, 4/5 not different
- Level 2 sometimes higher than 1, but not 0
- Level 2 sometimes lower than 3, 4/5
- In general, 2 maybe 3 categories at most.

Level of Care: No Service or Intense Service (>$8,000)

Group	Level 0	Level 1	Level 2	Level 3	Level 4
No services	2	5	12	5	13
>$8,000	1	0	3	7	6

Results-Correlation of Scales with Dollars Expended

- CAFAS - r (169) = .24, $p < .002$
- Ohio Scales - r (169) = .20, $p < .01$

Discussion

- Youth assigned to higher Levels of Care using the CAFAS plus diagnostic and role functioning data have:
  - more problems (Ohio Scales)
  - more impaired functioning (Ohio Scales & CAFAS)
  - receive more services

Discussion - continued

- Although youth in the various levels of care are different overall, the distinction among five groups is not well maintained using any variable (CAFAS, Ohio Scales, services).
  - 0 & 1 appear very similar
  - 2 is somewhat different but not always significantly so when compared to 0/1 or 3/4/5
  - 3, 4/5 are similar

Discussion – continued

- Measures predict service utilization independent of the level of care, but only modestly
  - CAFAS *r* = .24
  - Ohio Scales *r* = .20

Discussion - continued

- Overall some support for the notion that Levels of Care can be used effectively, but . . . . . .

  not with the level of detail that is assumed to be part of the rating scale.

Discussion - continued

- Perhaps Level of Care protocols should consider limiting themselves to three categories:
  - Mild
  - Moderate
  - Severe