

# Effectiveness of Individualized Inter-Professional Care plans for Heavy Emergency Department Users

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- **Liz Waisberg (Social Work)**
- **Sally Carver (Research Assistant)**
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# Faculty/Presenter Disclosure

No COI relationships or financial/material support to disclose.

# Funding

- This project was funded by an Innovation Grant from the Mount Sinai Hospital-University Hospital Network Academic Medical Organization

# Background

- Heavy emergency department (ED) users consume a disproportionate amount of ED resources
- High prevalence of mental health and substance abuse
- Mismatch between needs and available resources
- Complexity and visit frequency lead to patient and staff frustration

# Objectives

- Interdisciplinary team to create “care plans” for heavy ED users with goals of:
  - Improved care
  - Reduced frequency of ED visits
  - Reducing length of stay in the ED
  - Supporting staff in provision of care under difficult circumstances

# Methods - Patient Selection

- **Original inclusion criteria:**
  - Age > 18
  - > 12 ED visits over the previous year, with ED visits in each of the last 4 quarters or
  - Mental health/psychosocial problems as the primary problem for > 6 visits/year
- **Modified inclusion criteria:**
  - Any patient identified by staff as having difficult/erratic visit behaviour with frequent visits

# Care Plan Development

- Interdisciplinary approach: Social Work, ED Nursing, Psychiatry, Emergency Medicine
- Chart review to identify all known care providers and create a comprehensive problem list of “typical” reasons for visiting the ED
- Focused on patient’s medical, psychological and social needs
- Provide as much continuity and consistency of care as possible



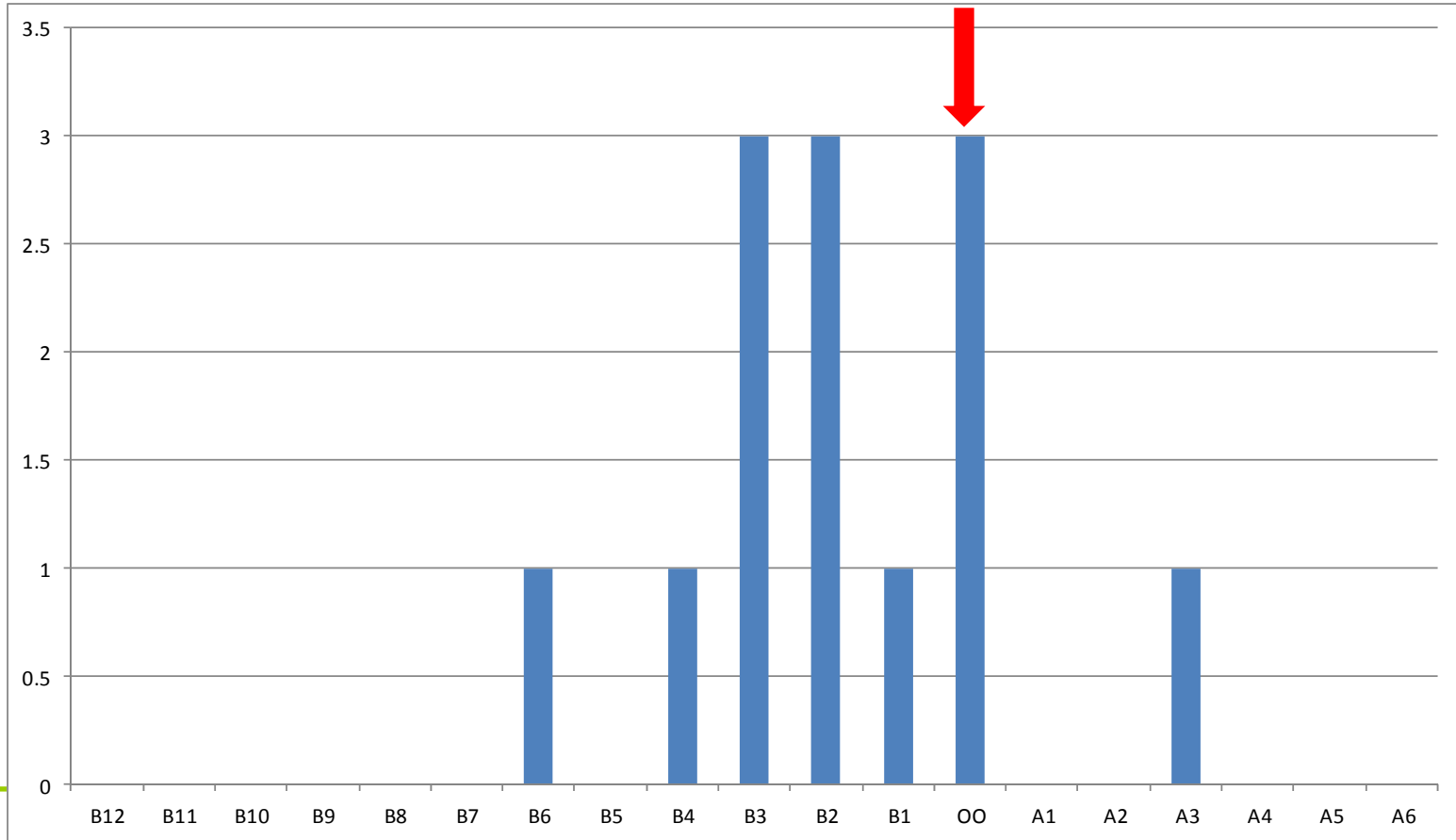
# Care Plan Implementation

- Front line staff alerted to the presence of a care plan using electronic flags incorporated into our patient tracking system
- Updated electronic copies of plans kept in convenient locations for easy access
- Paper copies appended to front of patient charts to alert attending staff of their presence

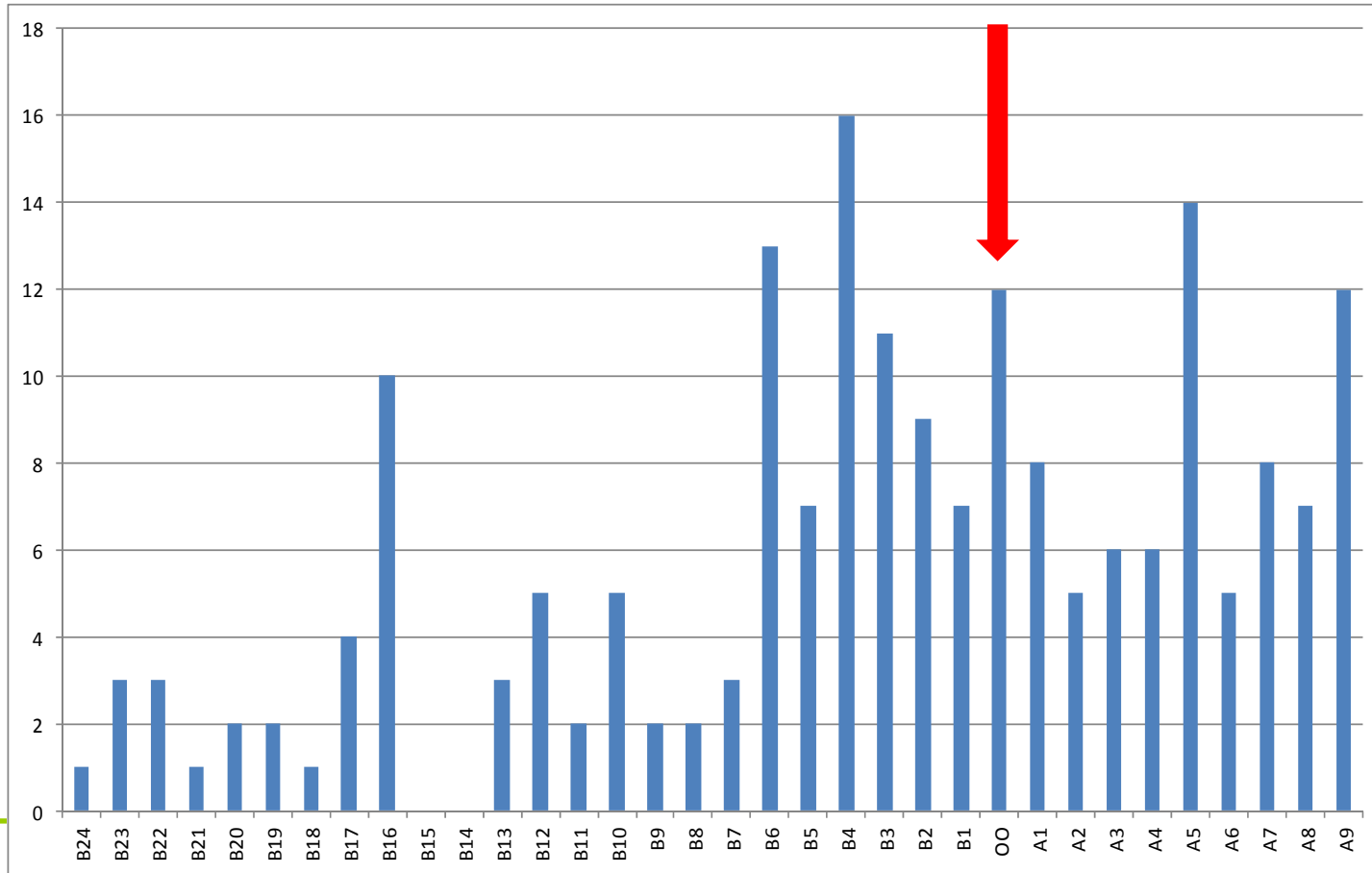
# Methods - Analysis

- 2 independent reviewers analyzed ED visit patterns for each patient before and after care plan implementation
- Categorized patients into four discrete categories of visit behaviour

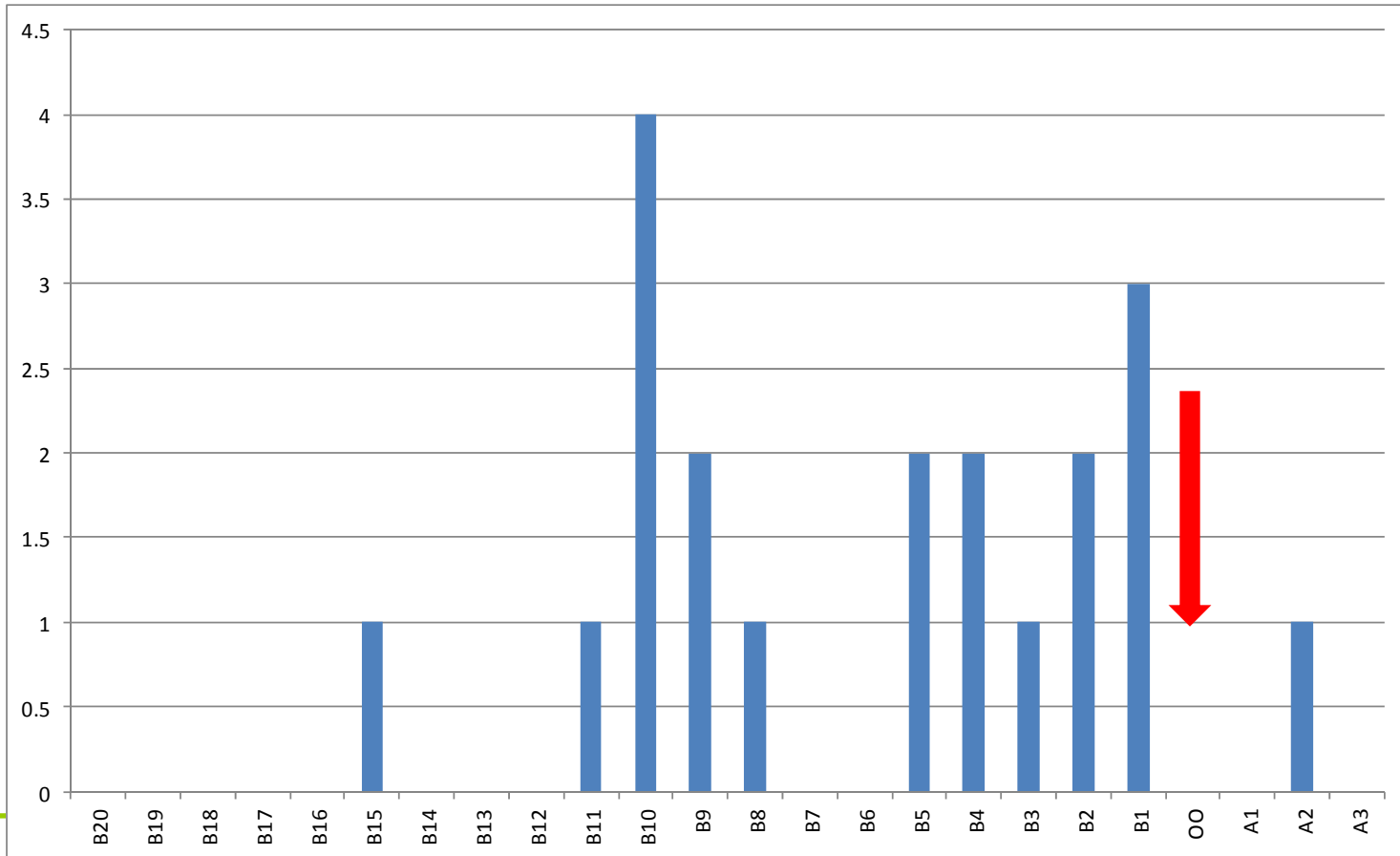
# Results – “Reduced”



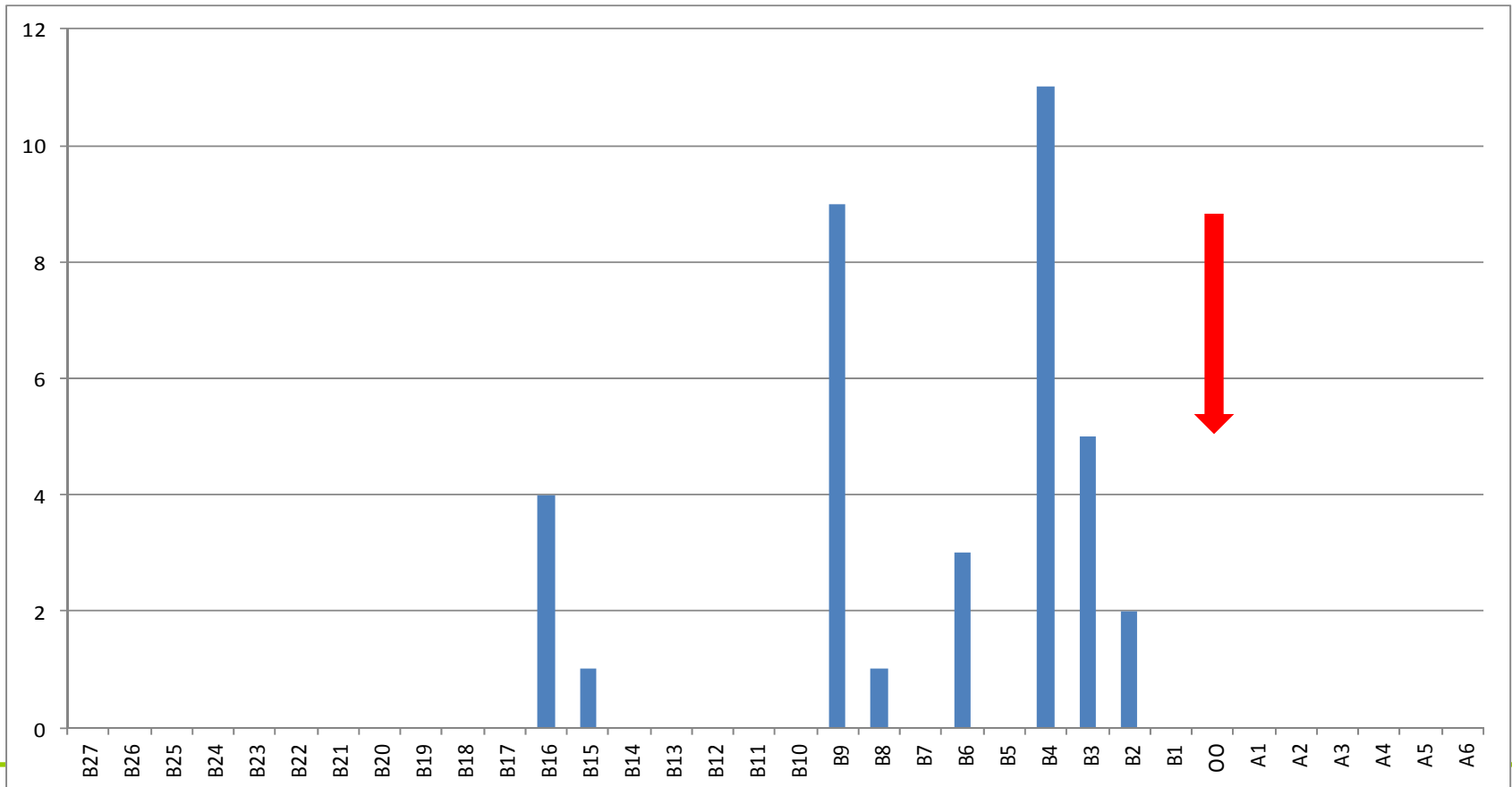
# Results – “Not Reduced”



# Results – “Unclear”



# Results – “Care plan not used”

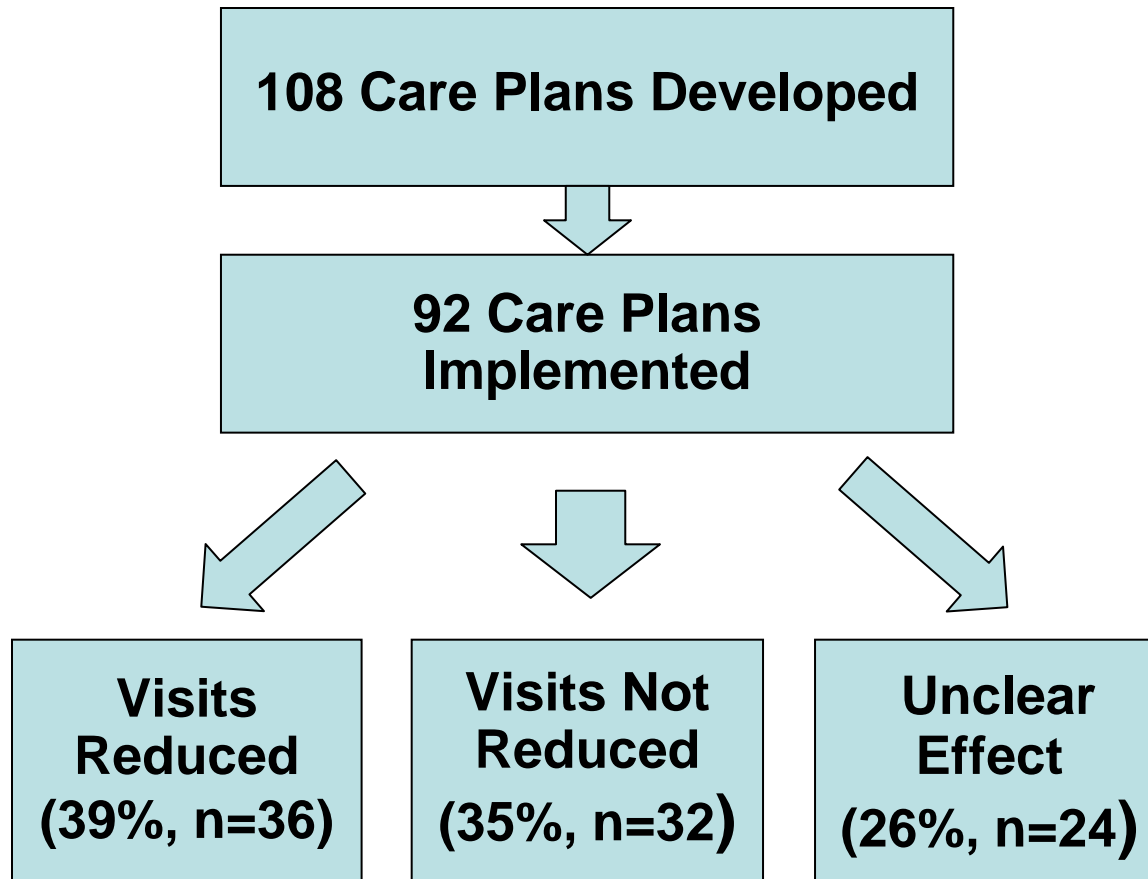


# Results

Table 1. Baseline characteristics of patients for whom care plans were developed (N=108)

Age	<i>Mean (SD; years)</i>	42.2 (15.9)
	<i>Range (years)</i>	20-99
	<i>≤ 30 years</i>	18.5%
	<i>31-50 years</i>	48.1%
	<i>51-70 years</i>	27.8%
	<i>70+ years</i>	5.6%
Sex (%)	<i>Male</i>	62
	<i>Female</i>	38
Living Situation (%)	<i>Housed</i>	61.1
	<i>No Fixed Address</i>	31.5
	<i>Supportive/Community Housing</i>	7.4
Psychiatric Diagnosis (%)		62
Substance Abuse/ Dependence Issues (%)		51.8

# Results





# Results

- Reduced overall ED visit frequency from mean 9.58 (SD=9.74) to 5.98 (SD=6.46;  $p < 0.0001$ ) during study period
- Significant reduction in ED visits from mean 11.08 (SD=9.0) visits to 3.94 (SD=3.99) for those deemed to have had “reduced visits”  $p < 0.0001$
- Cumulative LOS reduced overall from a mean 2930 min/pt (SD 3787) to 1617 (SD 2319)  $p < 0.0001$

# Results

- 45% reduction in cumulative LOS driven by *fewer* visits rather than shorter visits
- Care plans extremely well received by all ED staff who felt they were able to deal with these patients needs more effectively

# Limitations

- Our process of characterizing individuals as having reduced visits was somewhat subjective, though done by consensus
- No way of determining if patients simply went elsewhere

# Conclusions

- Interdisciplinary approach to care plan development led to a significant reduction in ED visits and overall LOS for a segment of this very challenging patient group
- Care plans very well received by ED staff
- Future directions:
  - Define patient/plan characteristics that predict success
  - Follow impact beyond our ED