

## Abstract

Universal suicide screening in Emergency Departments (EDs) can significantly improve risk detection, but some patients detected may not require a full mental health evaluation. For ED clinicians deciding the management and disposition of such patients, the ED-SAFE MD Secondary Screener tool may be useful. In a sample of 100 patients with positive suicide risk in the ED, 58 were identified by primary screening as being at imminent risk (Path 1) and 42 were at moderate risk (Path 2). Secondary Screener risk scores were higher in Path 1 patients, and Secondary Screener items on active SI and past attempt, suicide plan, and intent to act were more common. The Secondary Screener requires further development to determine cut-points and item weightings.

## Introduction

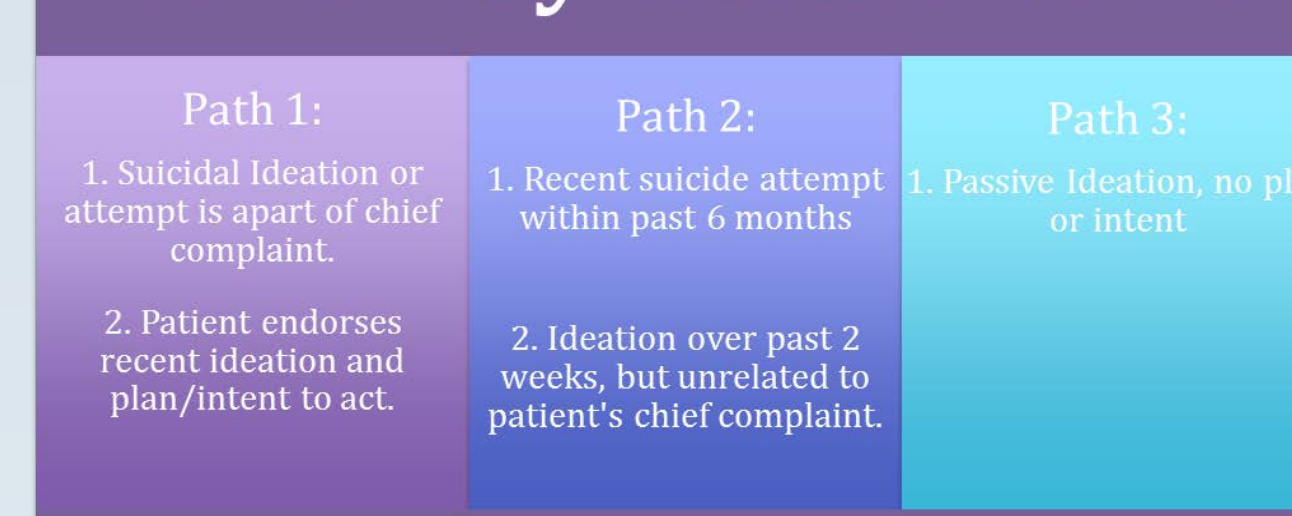
- Prevalence of suicidal ideation is about one in ten in all adult ED patients<sup>1,2,3</sup>.
- Universal suicide screening in Emergency Departments significantly increases detection rates<sup>4</sup>, but offers little guidance related to potentially increased workflow demands.
- As ED clinicians routinely decide the disposition of patients with suicidal ideation, with potential consequences for patient safety, liability, system costs and resources, a secondary screening tool may be useful to properly guide suicidal patient identification and care.
- The ED-SAFE MD Secondary Screener is a six-item decision support tool for patients with active suicidal ideation (score = 0, patient considered “low risk”, safe for discharge; score ≥ 1, consider further evaluation)<sup>5</sup>.
- The aim of the current analyses was to examine the tool’s utility in delineating risk categories among patients presenting to the ED with a primary suicide-related complaint and those who were incidentally detected.

## Methods

### Data Collection

- Retrospective chart reviews of the electronic health record (EHR) were completed for 100 patients with UMMHC ED from January through March 2017.
- Data were extracted from EHR included: patient MRN, triage date and time, encounter number, patient safety screener (PSS-3) responses, physician secondary screener responses, and disposition.
- Patient’s suicide care pathway (Path 1 imminent vs. Path 2 moderate) was determined based on chief complaint and PSS-3 responses.

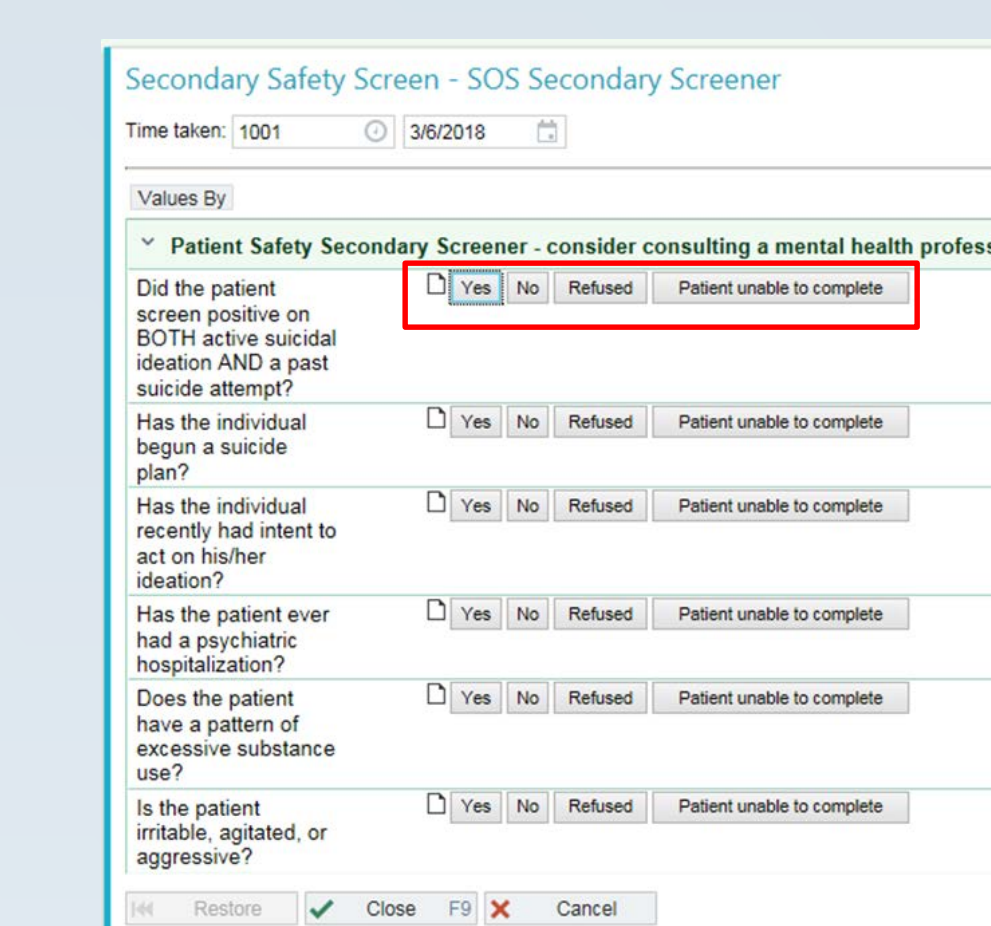
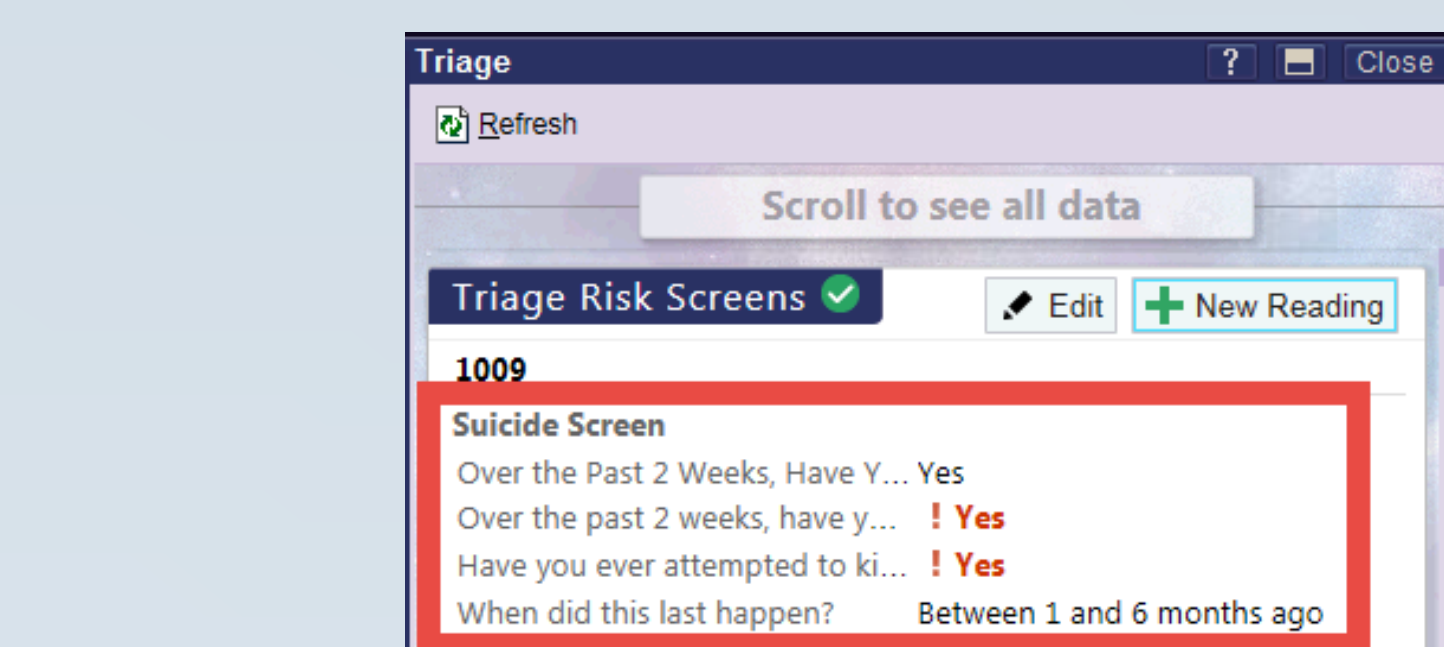
## Pathway Distinction



### Data Analysis

- Frequencies of each suicide care pathway in our sample was tabulated, and a general sum of the patient’s total risk score (Range 0-6) was generated based on their responses to the six questions in the ED-SAFE MD Secondary Screener.
- As our two sub-groups were non-normally distributed, a Mann-Whitney U test was conducted to compare risk score medians between the pathway groups.
- Chi-square tests were then completed to compare pathway groups on the basis of proportion of each of the six risk items, and of disposition.

## Suicide-Related Tools in Epic

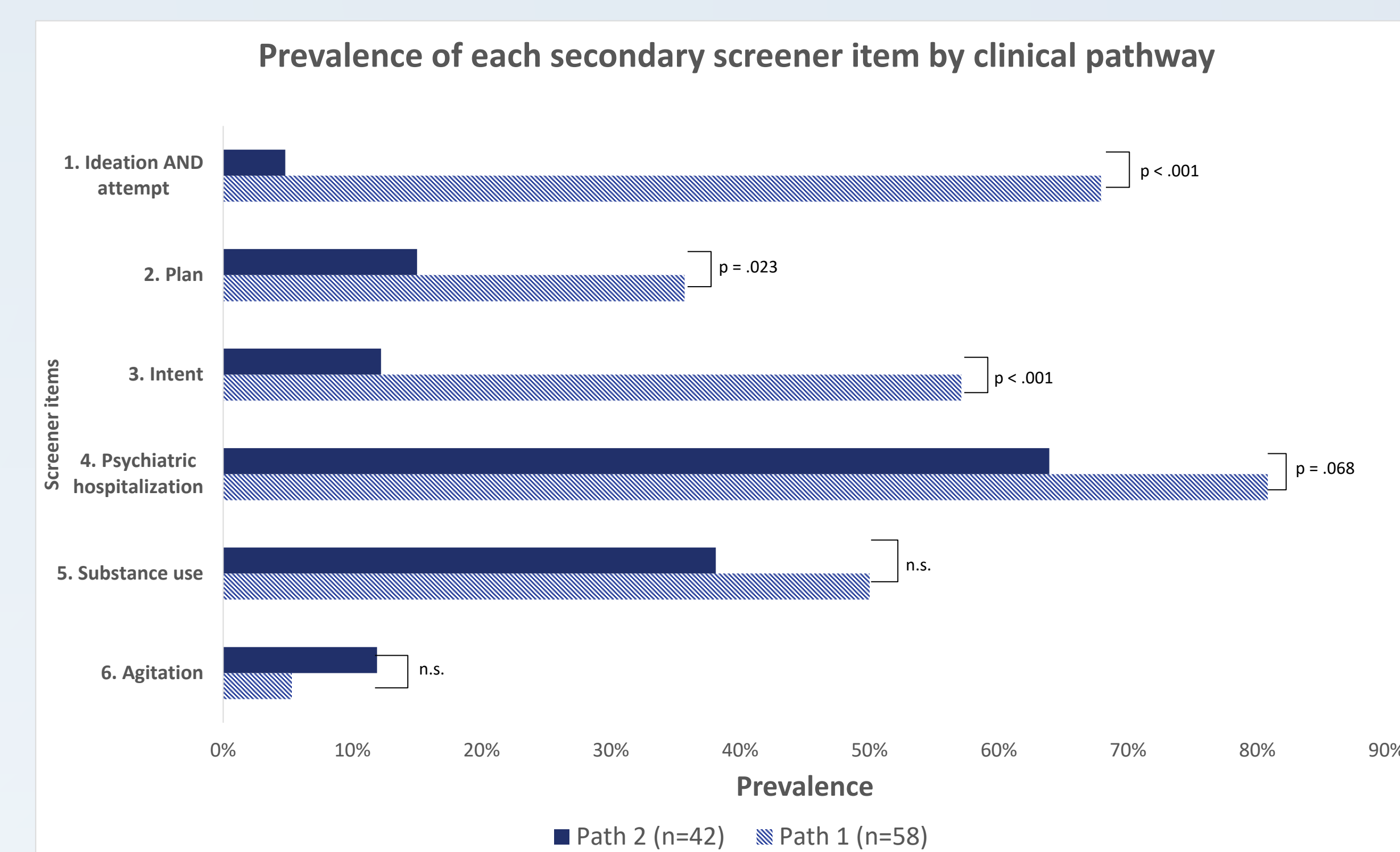
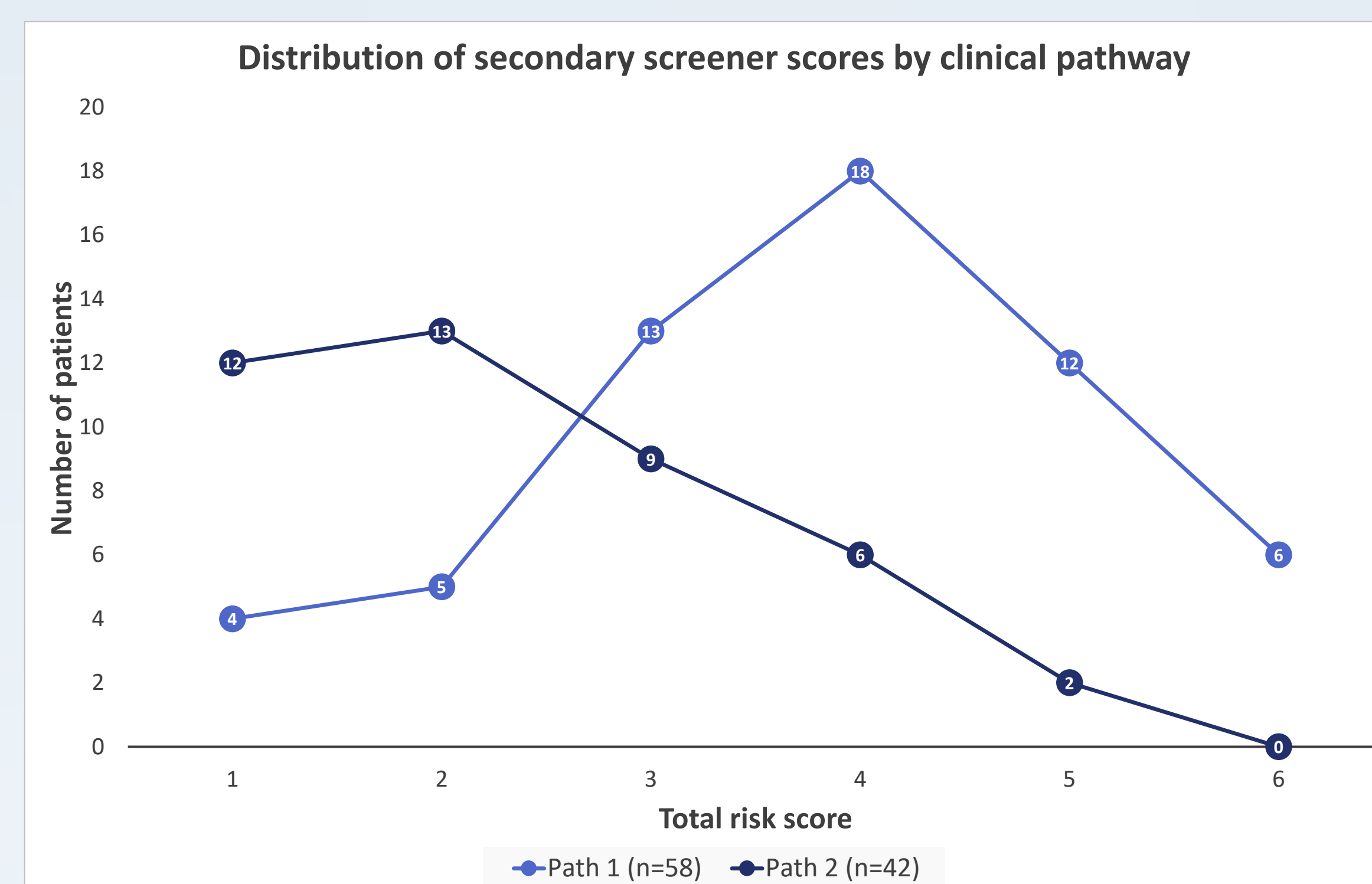


Scoring:  
Yes = 1,  
No/Refused/Unable = 0

Total Score =  
Number of affirmative responses  
Interpretation:  
0 = low risk, discharge  
>1 = moderate risk, consider behavioral health consult

## Results

- The final sample included 100 patients, of whom 58 were deemed to be Path 1 patients with imminent suicide risk, and 42 were Path 2 with moderate suicide risk.
- Path 1 patients had a median risk score of 3.5 and an interquartile range of 2.0-4.0, while moderate risk patients had a median risk score of 1.0 and interquartile range of 0-2.0.
- Path 1 and Path 2 patients differed significantly in the proportion of risk-item responses for three items: active SI and past attempt, suicide plan, and intent to act.
- Disposition also varied greatly between the two sub-groups, with 73.8% of path 2 patients being discharged home versus 22.4% of path 1 patients.



## Discussion

- Although the ED-SAFE MD Secondary Screening tool is useful for differentiating path 1 and path 2 patients, it is unable to provide sound decision making regarding which path 2 patients could benefit from a mental health evaluation, and there does not seem to be an obvious cut-point under which no mental health evaluation is needed.
- We would expect path 1 patients to endorse active ideation and past attempt, to have developed a suicide plan, and express intent to act on said plan when compared to their lower-acuity counterparts.
- Thus, without further development and validation especially around cut-offs and item weighting, the MD Suicide Secondary Screening tool may not provide much utility or guidance for physician decision-making.
- It is common in the ED setting to use a “Clinical Decision Rule” (CDR), which is rigorously developed and allows for categorical decision-making<sup>6</sup>; the suicide research field would benefit from a CDR that provides sound decision making around which moderate risk patients would require a behavioral health evaluation, and which patients can be confidently discharged.
- Such interventions would include safety planning intervention, means reduction counseling, and other interventions that align with the current suicide best care practices based on the *Zero Suicide Model*<sup>7</sup>. By developing a CDR to help enhance physician decisions, we will be ensuring that no patients with suicide risk “fall through the cracks” of the UMass Healthcare System.

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## References

- Allen, M. H., Abar, B. W., McCormick, M., Barnes, D. H., Haukoos, J., Garmel, G. M., & Boudreaux, E. D. (2013). Screening for suicidal ideation and attempts among emergency department medical patients: Instrument and results from the Psychiatric Emergency Research Collaboration. *Suicide and Life-Threatening Behavior*, 43(3), 313-323. doi:10.1111/sltb.12018
- Claassen, C. A., & Larkin, G. L. (2005). Occult suicidality in an emergency department population. *British Journal of Psychiatry*, 186, 352-353. doi:10.1192/bjp.186.4.352
- Ilgel, M. A., Walton, M. A., Cunningham, R. M., Barry, K. L., Chermack, S. T., De Chavez, P., & Blow, F. C. (2009). Recent suicidal ideation among patients in an inner city emergency department. *Suicide and Life-Threatening Behavior*, 39(5), 508-517. doi:10.1521/suli.2009.39.5.508
- Boudreaux, E. D., Camargo, C. A., Jr., Arias, S. A., Sullivan, A. F., Allen, M. H., Goldstein, A. B., . . . Miller, I. W. (2016). Improving suicide risk screening and detection in the emergency department. *American Journal of Preventive Medicine*, 50(4), 445-453. doi:10.1016/j.amepre.2015.09.029
- SPRC. (2015). Development of Caring for Adult Patients with Suicide Risk: A Consensus Guide for Emergency Departments– Technical report. Waltham, MA: Suicide Prevention Resource Center.
- Stiell, I. (1996). Ottawa ankle rules. *Canadian Family Physician*, 42, 478-480.
- Brodsky, B. S., Spruch-Feiner, A., & Stanley, B. (2018). The Zero Suicide Model: Applying evidence-based suicide prevention practices to clinical care. *Frontiers in Psychiatry*, 9, 33.