Investigating pathway patterns of patients with alcohol use disorders: A process mining approach

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INTRODUCTION AND AIM

- Process mining can be used to discover patient pathways and improve resource allocation and clinical outcomes.
- This study aimed to investigate pathway patterns of patients with alcohol use disorders who had interactions with a community-based Drug and Alcohol (D&A) Service.

DATA AND METHODS

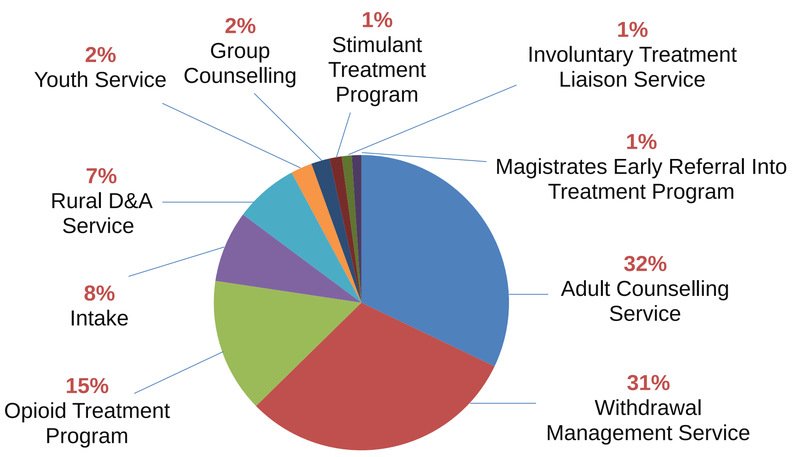
Electronic health records of 613 patients were organised into event logs for conducting process mining using the DISCO software:

- 14,126 interactions with the D&A Service
- 7,862 emergency department presentations
- 4,079 inpatient admissions

FINDINGS

Female 32% Male 68%

Polysubstance user 15%

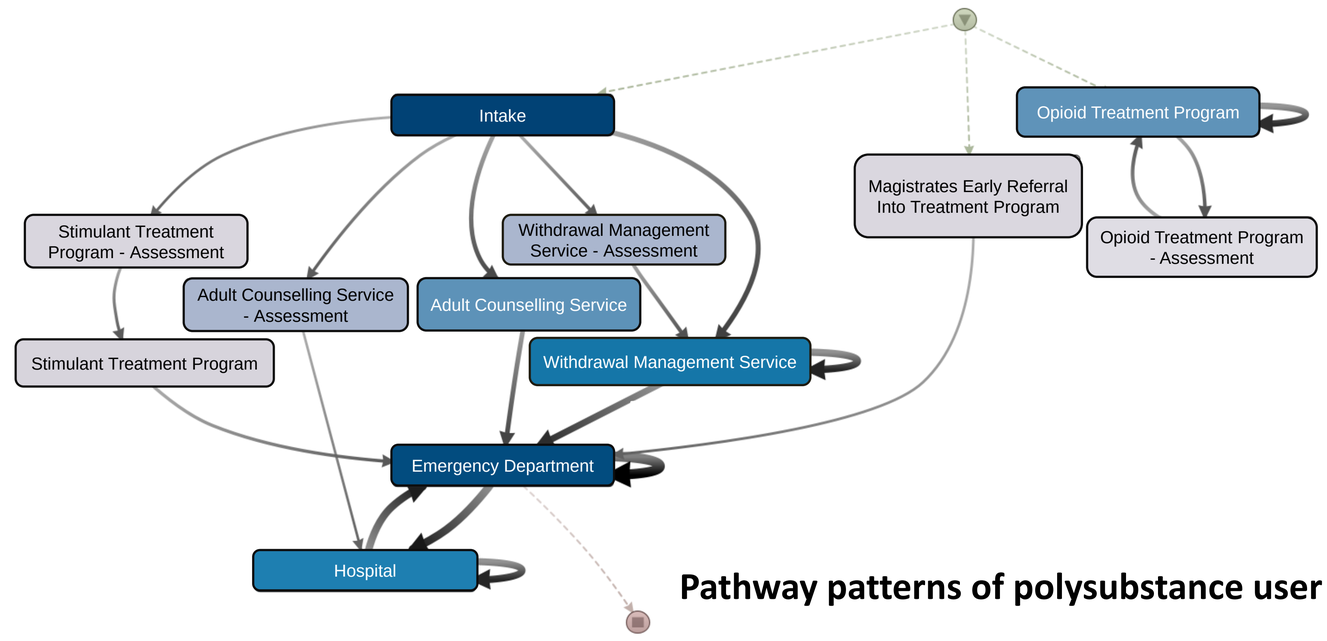


Adult Counselling Duration (median)

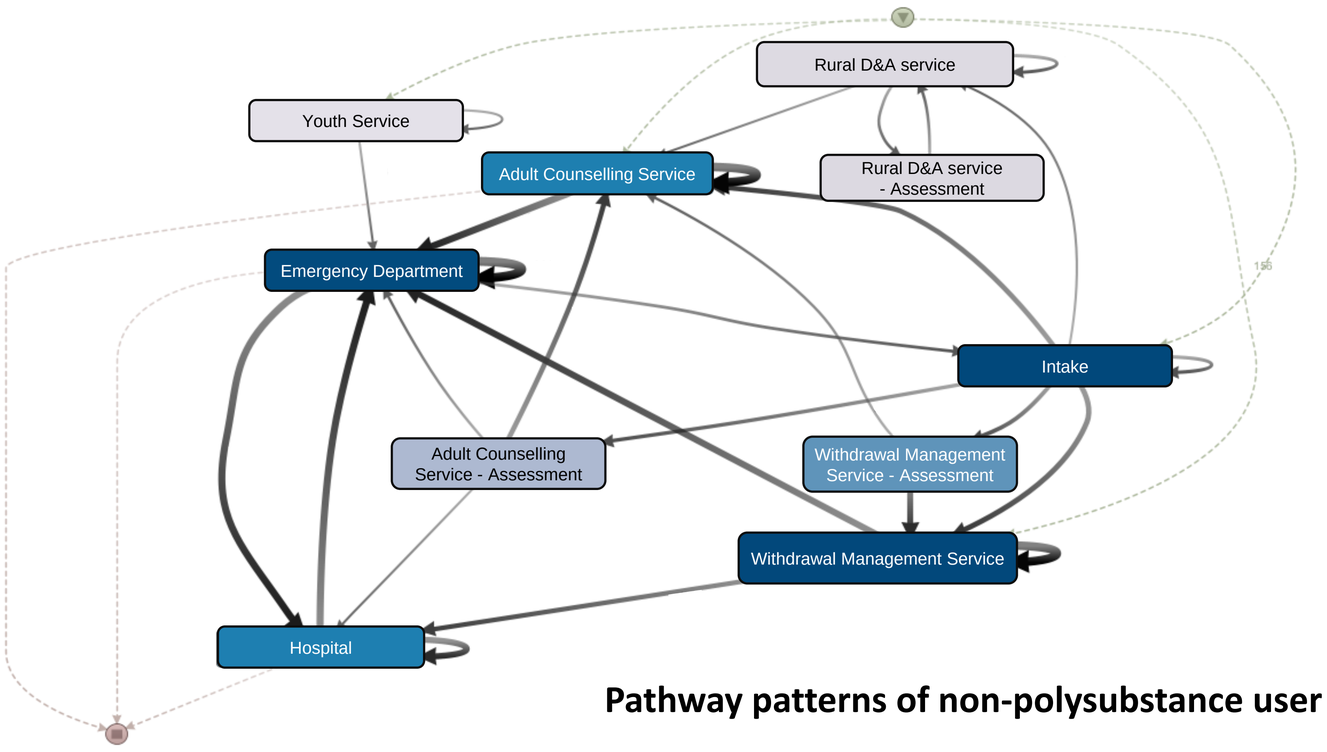
Polysubstance User 30 mins
Non-polysubstance User 32.5 mins
P-value: 0.021

Withdrawal Management Duration (median)

Polysubstance User 12 mins
Non-polysubstance User 15 mins
P-value: 0.044



Pathway patterns of polysubstance user



Pathway patterns of non-polysubstance user

CONCLUSION

- Compared with polysubstance users, non-polysubstance users were more likely to bounce from withdrawal management service to inpatient admission. Further research will investigate if inherent sequences exist in service usage.

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