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Predicting Death by Suicide with Administrative Health Care System Data

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Sanderson, M. (2020). Predicting Death by Suicide with Administrative Health Care System Data (Doctoral thesis, University of Calgary, Calgary, Canada). Retrieved from <https://prism.ucalgary.ca>.
<http://hdl.handle.net/1880/112134>

Downloaded from PRISM Repository, University of Calgary

Outcome	Data Class	Data Source	Population Class	Population	Analytic Approach	Predictive Performance	Utility	Key Components	Article
Ideation	Assessment	Clinical assessment tool: GHQ-12; SMS	Subpopulation	Clinic: mental health, inpatient and ED	Machine Learning: Natural Language Processing	Better than clinical	Methods	Prediction using response to SMS text messages.	Novel Use of Natural Language Processing (NLP) to Predict Suicidal Ideation and Psychiatric Symptoms in a Text-Based Mental Health Intervention in Madrid
Parasuicide, Ideation	Administrative	Survey	Population	General	Regression: Logistic	NA	Risk Factors	No prediction; evaluation of risk factors only.	Baseline factors predictive of serious suicidality at follow-up: findings focusing on age and gender from a community-based study

Parasuicide, Ideation	Assessment	Clinical assessment tool: battery	Subpopulation	Clinic: mental health, inpatient	Regression: Growth Curve	NA	Risk Factors	No prediction; evaluation of risk factors only.	Longitudinal Trajectories and Predictors of Adolescent Suicidal Ideation and Attempts Following Inpatient Hospitalization
Parasuicide	Assessment	Clinical assessment tool: article	Subpopulation	Clinic: mental health, inpatient	Regression, Bayesian Model	Solid	Methods	Early prediction article, 1981. Small subpopulation. Methods outdated.	A Comparison of Models for Predicting the Outcome of Suicide Attempts
Parasuicide	Assessment	Clinical assessment tool: battery	Subpopulation	Clinic: mental health, inpatient	Regression: Logistic	NA	Risk Factors	No prediction; evaluation of risk factors only.	Attitudes of acceptability and lack of condemnation toward suicide may be predictive of post-discharge suicide attempts

Parasuicide	Assessment	Clinical assessment tool: SAD; SAFE	Subpopulation	Clinic: mental health, ED	Regression: Logistic	Clinical	Risk Factors	Clinician predictions were better than Clinical assessment tool. Predictors limited to MH services. No ML comparison.	Clinician Prediction of Future Suicide Attempts
Parasuicide	Administrative	Clinical assessment tool: CSSRS; EMR	Subpopulation	Clinic: mental health, ED	Regression: Logistic	NA	Risk Factors	No prediction; evaluation of risk factors only.	Predicting Future Suicide Attempts Among Adolescent and Emerging Adult Psychiatric Emergency Patients
Parasuicide	Administrative	EMR	Subpopulation	Clinic: mental health	Stratification	Better than clinical	Risk Factors	Similar to proposed project. Physical predictors.	Predicting Risk of Suicide Attempt Using History of

								Predictors limited to hospital services. No broad ML comparison.	Physical Illnesses From Electronic Medical Records
Parasuicide	Administrative	Survey	Subpopulation	Adolescents Korea	Machine Learning: Trees	Solid	Methods	Survey data not useful for health care application. No broad ML comparison.	Prediction by data mining, of suicide attempts in Korean adolescents: a national study
Parasuicide	Assessment	Clinical assessment tool: STS-3	Subpopulation	Clinic: inpatient		Clinical	Risk Factors	Bimodal risk score distributions. Small subpopulation. Predictors limited to MH services. No ML comparison.	Predictive Validity of the Suicide Trigger Scale (STS-3) for Post-Discharge Suicide Attempt in High-Risk Psychiatric Inpatients

Parasuicide	Assessment	Trial	Subpopulation	Clinic: veterans	Stratification	NA	Risk Factors	No prediction; evaluation of risk factors only.	Predictors of Suicide-Related Hospitalization among U.S. Veterans Receiving Treatment for Comorbid Depression and Substance Dependence. Who is the Riskiest of the Risky?
Parasuicide	Administrative	EMR	Subpopulation	Clinic: mental health	Regression: Shrinkage	Better than clinical	Risk Factors	Similar to proposed project. Predictors limited to MH services. No broad ML comparison.	Risk stratification using data from electronic medical records better predicts suicide risks than clinician assessments
Parasuicide	Assessment	Clinical assessment tool: SNAP	Subpopulation	Clinic: mental health	Regression: Cox	NA	Risk Factors	No prediction; evaluation of risk factors only.	Self-Harm Subscale of the Schedule for Nonadaptive and Adaptive Personality

									(SNAP): Predicting Suicide Attempts Over 8 Years of Follow-Up
Suicide	Administrative	EMR	Subpopulation	Died by suicide	Stratification	NA	Risk Factors	No prediction; evaluation of risk factors only.	Patterns and predictors of help-seeking contacts with health services and general practitioner detection of suicidality prior to suicide: a cohort analysis of suicides occurring over a two-year period
Suicide	Assessment	Chart Review: Notes	Subpopulation	Clinic: veterans	Machine Learning: Genetic Programming	Solid	Methods	Small subpopulation. No broad ML comparison.	Predicting the Risk of Suicide by Analyzing the Text of Clinical Notes

								From CMAJ, 1969; perspective would be interesting. Can't find. Perspective likely interesting but outdated.	Prediction and prevention of suicide
Suicide	Summary	Review	Subpopulation	Clinic: mental health	NA	NA	Risk Factors	Review only.	Prediction and prevention of suicide in patients with unipolar depression and anxiety
Suicide	Administrative	Survey	Population	Military Conscripts	Regression: Cox	NA	Risk Factors	No prediction; evaluation of risk factors only.	Predictors of completed suicide in a cohort of 50,465 young men: role of personality and deviant behaviour.

Suicide	Summary	Review	Subpopulation	Clinic: mental health	NA	NA	Risk Factors	Review only. Concepts of risk status and risk state.	Reformulating Suicide Risk Formulation: From Prediction to Prevention
Suicide Screening	Assessment	Chart Review	Subpopulation	Clinic: ED	Regression: Logistic	NA	Risk Factors	Predicts screening for suicide. No prediction; evaluation of risk factors only.	Multicenter Study of Predictors of Suicide Screening in Emergency Departments
Suicide, Parasuicide	Summary	Review	Subpopulation	Youth	NA	NA	Risk Factors	Review only.	Improving the Prediction of Suicidal Behavior in Youth
Suicide, Parasuicide	Administrative	EMR	Population	General: sick say	Regression: Cox	NA	Risk Factors	No prediction; evaluation of risk factors only.	Predictors of suicidal behaviour in 36,304 individuals sickness absent due to stress-related mental

									disorders - a Swedish register linkage cohort study
Suicide, Parasuicide	Administrative	Ecologic	Population	General: transit	Regression: Poisson	NA	Risk Factors	Ecologic. No prediction; evaluation of risk factors only.	Predictors of Suicide and Suicide Attempt in Subway Stations: A Population-based Ecological Study