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Web-integration of PROAFTN methodology for suicide risk assessment Balacel, Nabil; Léger, Serge; Cormier, Diane; Fournier, Helene; Robichaud, Suzanne

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https://doi.org/10.4224/23001837

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Web-Integration of PROAFTN Methodology for Suicide Risk Assessment



National Research Conseil national Council Canada de recherches Canada

Background

Web-based decision support systems have an important role to play in mental health practice.

Current situations in mental health practice

The amount of expert knowledge has increased so that no mental health professional can memorize all the necessary information for his or her daily practice.

General practitioners, physicians, psychiatrists, nurses, and social workers may not have enough knowledge or experience to deal with certain litigious cases. Global insufficient supply of specialists will never be overcome. There are significant waiting time for specialist consultations.

Advantages of modern technologies

Computer-based decision support systems can enhance clinical performances and patients' outcomes.

Objectives

This web-based clinical decision support system will help to:

• Support frontline and second line mental health professionals in dealing with litigious cases of suicide risk;

• Exchange suicide risk assessment information between multidisciplinary teams at independent times and locations;

• Facilitate online learning and simulate cases for training mental health professionals;

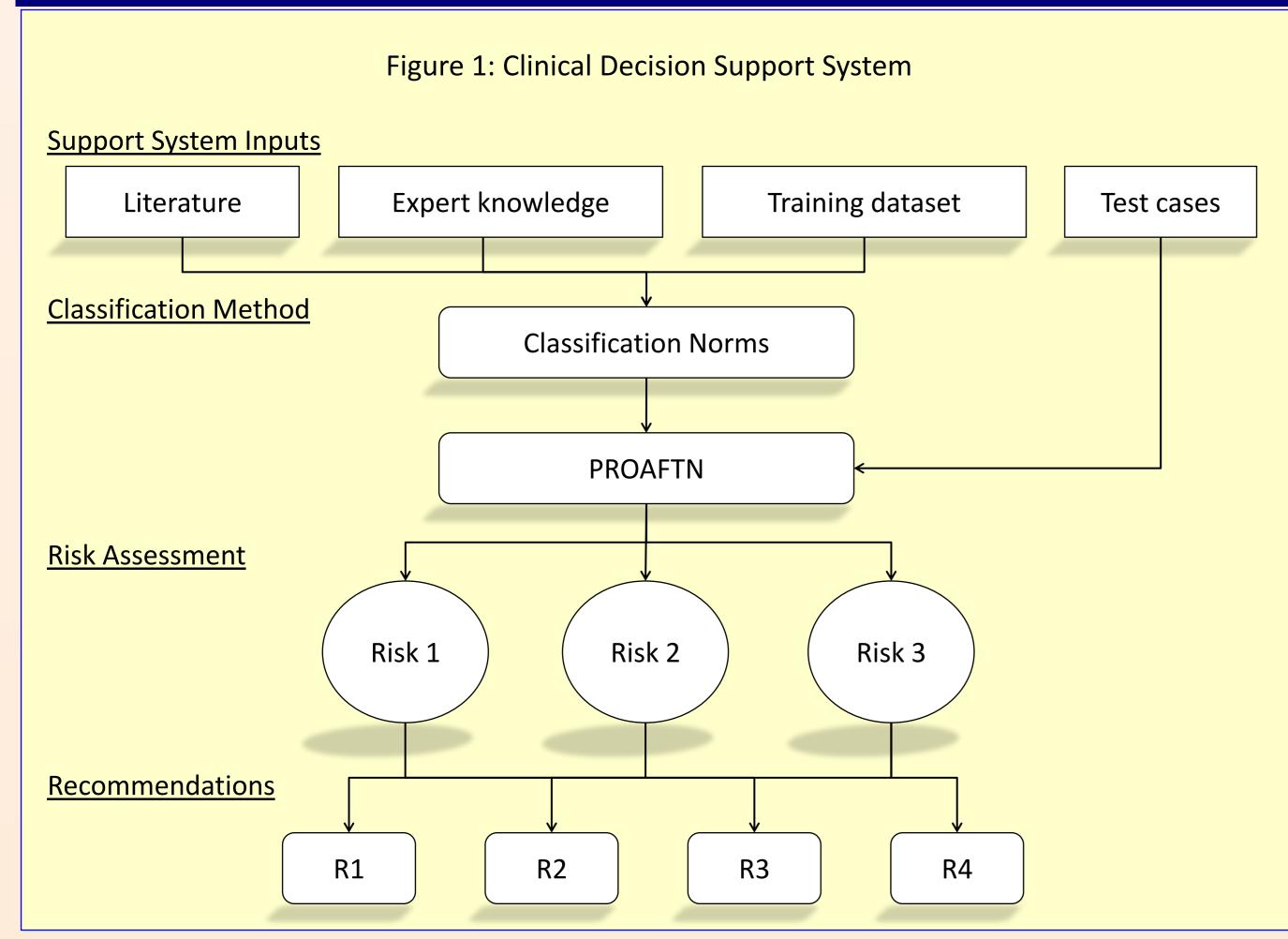
Web-based decision support systems use advanced networking, telecommunications, database, and web-based technologies to improve mental health care services by offering clinical decision support, treatment, education and consultation across space and time.

Suicide Risk Assessment

Suicide risk can be quantified and assigned to different classes and levels (high, medium, low) with targeted recommendations as output. Since the prognosis and treatment modalities depend on proper classification, it is very important to classify suicide risk precisely.

- Encourage timely and targeted interventions, and minimize inappropriate referrals;
- Improved dissemination of risk knowledge and expertise across disciplines and services.

PROAFTN Methodology



System Functionalities

This Web Integration of PROAFTN methodology for Clinical Decision Support System is implemented based on a client/server paradigm. HTTP provides a primary protocol to allow data transmission between web server and web browsers. In this system, the web server maintains the whole system, including system and database management as indicated in Figure 1.

System Management

• Service Section consists of modules for "Case Submission" and "Case Evaluation". Modules for Case Submission are designed according to system input data. Users generate case data by filling out web forms and submitting information to the database via web interfaces (see Figure 2). Modules for Case Evaluation are designed to display the output results to users.

• The PROAFTN section is coded in Java. The analysis procedure will follow the flow as indicated in Figure 1.

Database Management

• The Clinical Database provides the services for users to access and update case data instantly, as well as to perform system authentication and authorization.

Case Submission Module

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Reference Information

1. Reference:

lotes:

Current Suicidal Thoughts, Intent, and Plan

a) Unknown b) Very low c) Low d) Low/moderate e) Moderate/high
2. Does the client have a specific plan?
a) Unknown b) No c) Yes

Does the client have detailed suicide methods?

a) Unknownb) Nonec) Hangingd) Use of firearme) Sharp instrumentf) Drug overdoseg) Medication overdoseh) CO2i) Jumpingj) Drowningk) Others

f) High

g) Very high

Notes:

4. What is the degree of lethality?

Conclusions

• Prototype system is currently being used by a mental health professional to provide training sets of input data for the three levels of risk along with targeted recommendations;

• Continued use of training set input data to complete the definition of the classification criteria (norms);

• Next steps include web-based implementation and broader access to support learning and training for frontline and second line mental health professionals;

4. What is the degree of	lethality?						
a) Unknown	b) Low	c) Moderate	d) High				
5. Intent to commit suici	de?						
a) Unknown	b) Very lov	w c) Low	d) Low/moderate	e) Moderate/high	n f) High	g) Very high	
6. Are the detailed meth	ods available?	•					
a) Unknown	b) No	c) Yes					
7. Has the client already	set up the det	tailed plan?					
a) Unknown	b) No	c) Yes					
8. How long has the clier	nt had this pla	m ?					
a) Unknown	b) None	c) < 2 weeks	d) 2 weeks - 2 mon	ths $e > 2 mc$	onths		
9. Does the client have a	suicide date?						
a) Unknown	b) No	c) Yes					
10. Uncompleted suicide	e attempt/rehe	earsal?					
a) Unknown	b) No	c) Yes					
11. How long has the cli	ent had these	suicidal thoughts?	?				
a) Unknown	b) None	c) < 1 week	d) 1 - 2 weeks	e) < 1 month	f) 1 - 3 months	g) 4 - 6 months	h) 6 + months

• Potential application for assessing other mental health problems (e.g., depression, addiction).

Research team and coordinates

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