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Multidisciplinary health professionals' assessments of risk: How are tools used to reach consensus about risk assessment and management?

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Abstract

Risk assessment and management are among the most important and complex tasks health professionals undertake in their practice to prevent harm to patients and ensure safe and effective treatment. The aim of this study was to examine how multidisciplinary team members use tools to assess and manage risk, through examination of how tools are used to gather, record and "score" risk information; and how this process impacts on the formulation of risk assessment and management plans, interaction with patients, and consensus with colleagues regarding patient care. Fourteen professionals completed an assessment for a hypothetical client using a risk assessment and management tool, and then discussed their assessment in semi-structured interviews. Professionals were in moderate agreement in their assessments of the client on the tool, and highlighted the complexity of their decision making. Clinical management decisions, such as the amelioration of particular risks, followed assessment of the patient in a consistent way. The tool was an important way to for clinicians to communicate their judgments to others and set plans to direct patient care. Implications for the use of clinical decision making tools and instruments in mental health care, and the need for a focus on multidisciplinary decision making, are highlighted.

Keywords: risk assessment, risk management, risk assessment tools, harm to others, multidisciplinary care team.

Introduction

Risk assessment and management (RAM) remain core aspects of the role of mental health nurses and other multidisciplinary professionals. It is a requirement in psychiatric settings that risks such as suicide and aggression be regularly assessed and documented. Within the research literature, the nature of this assessment is often framed in terms of *prediction* of adverse outcomes, particularly the strengths and weaknesses of actuarial

(statistical) measures and clinical judgement approaches (Dolan & Doyle 2000). However, *prevention* is also an important aspect of the clinician's work (Muir-Cochrane & Wand 2005). Risk assessment prediction methods have an important practical component, as assessment of a particular level of risk "will inevitably lead to some form of intervention to reduce, contain, or otherwise ameliorate the risk, thus changing the outcome" (Thomas *et al.* 2009, p. 3).

Clinicians use tools and measures to assist them in assessing risk, and these range from predictive actuarial instruments, to those which serve as more of "a checklist for clinicians to ensure that essential areas of inquiry are recalled and evaluated" (Borum 1996, p. 948). The training required, time to administer, and costs of standardised and actuarial instruments have seen the greater use of less-validated instruments in the clinical setting (Doyle & Dolan 2002; Murphy 2004), and such measures are often developed for use within a local service area (Hawley *et al.* 2006). While previous research has explored issues regarding approaches to risk assessment and management, and the validity and reliability of using standardised tools, very little research has explored, from the perspective of practitioners, how diverse tools (including those which are not standardised or extensively validated) are used in practice.

The aim of the present study was to explore the role of risk assessment tools in supporting multidisciplinary health professionals in reaching consensus about risk assessment and management. In particular, the study examined how professionals use tools to gather and record risk information; how the use of such tools impact on interaction between staff and patients; how the outcomes of the tools, such as risk "scores", are used by individual professionals to formulate their risk assessment and risk management care plans; and how the process of assessment and information gathered through using a tool inform consensus with multidisciplinary colleagues about patient care.

Methods

Participants

All health professionals in an acute care (located in a general hospital) and community psychiatric service for older persons (>65 years) were invited to participate in a semi-structured interview through a project information sheet. Fourteen health professionals (nine nurses, with the remainder from psychiatry, psychology, social work, and occupational therapy) volunteered. Since this was largely a qualitative study, the sample size was deemed appropriate. Participants worked in the acute care setting (n=9), community setting (n=1) or both (n=4), and were experienced in mental health service provision (*Mdn*=12; *Range*=0.5-35 years). Full ethical approval was granted. For further details of the service and sample, see Muir-Cochrane *et al.* (2011).

Materials

Risk assessment and management tool

Within the acute care service all patients are required to be regularly formally assessed (daily or weekly) using a Risk Assessment and Management Tool. Staff are required to undertake training (in-service training and training from the state mental health training services) in RAM, including completion of the tool. The tool consists of three sections: (a) Risk history, where previous risk events (e.g. self harm) and their dates are documented; (b) Risk assessment, where individual risks (see Table 1) are rated on 0-4 point scales (higher scores denote increased risk), with descriptive markers for each increment (e.g. a score of 1 for harm to self/suicidality is anchored with “Fleeting suicidal thoughts but no plans/current low substance misuse”). An overall risk rating based on clinical impression (not a summing

of individual risk items) is expressed as either Low, Medium, or High, and nursing observation required ("close" 15-minute, regular half-hourly, general regular hourly) is also documented; and (c) Risk management plan, where the professional sets goals and plans to achieve goals for identified risks.

The tool was adapted from one developed by the state's Department of Human Services, Mental Health Services and Programs (2002) to be used in acute mental health inpatient units. Validation data was not reported by the Department of Human Services. Added to the tool for use in the service were Risk History and Risk Management sections (sections (a) and (c)), and the Risk Assessment section was re-designed so that scores from each subsequent assessment of each risk were next to one another. Risk of absconding was also added to the tool. At the time of the study, the tool had been used in the service for close to three years. The community service makes use of a similar tool (some layout differences). A copy of the ward's tool can be obtained from the authors.

Participants were asked to complete the tool on a hypothetical patient. A written hypothetical scenario (Appendix A) described a patient, "Jim", detained under mental health legislation. The scenario focused on information important to assessing risk in key areas, as well as therapeutic and client-care considerations. The scenario was written by the research team, based on aspects of cases of patients who had been admitted to the ward (see Muir-Cochrane *et al.*, 2011). While it is important to explore real-life scenarios and examine ward practices, vignettes are useful for description and understanding of processes (Holzworth & Wills, 1999).

Interview schedule

Once the tool had been completed, the interview schedule explored how the tool was completed and the perceptions and knowledge of RAM more generally. Example questions

include: “Can you walk me through your thinking behind your risk assessment?”; “What information did you use to make your assessment?”; and “What were the most challenging aspects of this risk assessment?” Participants could refer to their completed RAM tool during the interview, and many participants used it to discuss how they examined history, scored each particular risk, and formulated a management plan.

Analysis

A content and descriptive analysis was undertaken on participants’ completed RAM tools, with interview data analysed using a thematic approach (see Muir-Cochrane *et al.* 2011). In what follows we present participants’ risk assessment and risk management decisions for the vignette, focusing in particular on similarities and differences between health professionals.

Results

Participants took approximately 30 minutes to complete the assessment. They reported that they could complete a RAM plan with the information provided, although more detailed family and medical history, information on behavioural aspects (e.g. whether aggression/violence was a more recent behaviour), and assessments of daily functioning would have been beneficial. One participant saw the process as involving “both what is explicit [in the vignette] and drawing on my clinical judgement to bring out some of the implications” (P14). Overall, participants were in some agreement regarding the aspects of risk history that they considered important, Jim’s current level of risk, and participants formulated plans for his care that stressed similar goals and interventions. Numbers reported are based on participants who completed a particular rating/section of the tool. Despite being

asked to complete the tool in its entirety for the presented patient, some participants indicated that they reflected on an aspect of the case (e.g. history) when assessing risk and formulating a management plan, but did not document this on the relevant section of the tool.

Risk history

Professionals documented a number of factors pertaining to Jim's *risk history.* The most commonly documented factors were history of domestic violence (10/11 participants) and threats of physical violence (9/11), diagnosis and implications of diagnosis (aggression, psychotic features, impulsivity, confusion) (7/11), obsession with and access to weapons (7/11), and alcohol misuse, medication non-compliance and threats to staff (all 6/11). Risk to social support due to carer burnout was infrequently (2/11) documented. History *and* context of the present admission emerged in interviews as particularly important to consider, where changes due to dementia could occur even between a recent and current admission.

Risk assessment

Professionals judged Jim to be a particular risk to others (staff, other patients, his wife/family), at risk of absconding, and as having minimal engagement with his treatment (see Table 1). The assessment of risk to others as being significant or extreme involved the consideration of multiple factors, *"Risk of harm to others is extreme for all of those reasons, domestic violence, frontal lobe dementia, access to weapons, previous threats to shoot her, alcohol use"* (P13). One participant, who was moderate in their ratings of most risks, nonetheless suggested, *"...you can't say the fact that a person's quick-tempered is a risk in itself. When it's mixed with a couple of other things…it contributes to the risk* (P1)*"*. There was agreement that absconding could be a significant risk due to Jim having been brought in by the police (instead of voluntarily), being in a high dependency unit and only being able to engage in usual activity (walking) under supervision, as well as his diagnosis and issues such

as impulsivity. Engagement with treatment was seen to be a potential problem, particularly through Jim's need to be detained for treatment, and medication non-compliance. This had implications for Jim accepting his diagnosis and treatment plan, although participants differed in how they weighed this information, *"...it doesn't say he's not or he's refusing, he's just reluctant but it is an issue that you can't assume you can medicate him and send him home and everything will be fine, medication is obviously an issue"* (P4). Some participants also suggested that Jim's physical fitness and his regular walking regime (considered a strength by the clinicians) could interact with risks posed by alcohol withdrawal or the use of new medication, with an increased risk of falls.

Judgements for self-harm were lower, and professionals differed more in their assessment of this risk. In many cases, participants spoke of a lower risk of deliberate self-harm, but for the potential of harm through other features of Jim's presentation, *"I've put moderate because there is not talk of him actually wanting to harm himself but he's impulsive and I think being detained and being brought in by the police to a high dependency unit I think there's always going to be a risk"* (P10). Similarly, judgements of risk posed by lack of support, problems with functioning, and history of treatment response were more divergent. Jim was seen to have professional and personal support available, although participants differed on assessment of level of support given the potential for carer burnout and the implications of threats to their personal safety. There were also some differences that emerged in interviews regarding whether an assessment of support recorded on the tool should refer to the family, or support that Jim would have while in hospital by staff and his treatment. Assessment of problems with functioning centred on Jim being detained for treatment and the immediate problems that brought Jim to the hospital (e.g. diagnosis, conflict with his wife), *"He's not travelling well"* (P5). Participants also focused on detention status when assessing history of response to treatment. Risks relating to problems with

functioning, level of support, and response to treatment history were seen to require further information through consulting case notes and obtaining collateral information.

There was a tendency for participants with less experience in mental health (≤5 years) to assess risk of harm to others and self as higher, and risk of absconding as lower, than those with more mental health experience. There were less discernible differences for other assessed risks. Overall, professionals saw Jim as being of “High Risk” (8 participants) or “Medium Risk” (2 participants). Seven participants recommended close 15-minute observation, with the remaining three indicating half-hourly observation.

[Table 1]

Risk management

There was consensus between professionals regarding goals for Jim’s hospitalisation and plans to achieve these goals were detailed. The most frequently documented focused on allocating male staff where possible (8/8), regular observation (5/8), supervised visits (5/8), minimising effects of alcohol withdrawal (5/8), medication compliance (e.g. administration of wafers) (5/8), maintaining (supervised) activity levels (5/8), and identifying and avoiding triggers (3/8). Involving family and providing support (e.g. counselling, community services) were also mentioned (3/8). Risk management plans often involved drawing on strengths (e.g. engagement with son and male staff; physical fitness), *“There are some positive ones to counterbalance that and in our favour as well which you always look at”* (P14). Examples of goals and plans included:

> *Minimise confusion/disorientation – direct client and orientate to room, lounge, dining, etc.; explain and direct verbally and by action what is required of him* (P2).

> *Prevent harm to others and self – detained in high dependency unit; C15 sightings; daily risk assessment; safety checks room environment and person; monitored approved visits especially with wife* (P11).

Use of the tool

Participants saw the tool as facilitating strategic and structured information collection, ensuring that certain areas were covered, and allowing documentation and communication of risk to staff:

> *I think probably in terms of highlighting…key areas and by giving them a score then they can be prioritised, so it gives a focus for discussion and strategies, and…it's a tool that promotes reflection and analysis of the situation* (P14).

The tool was not seen to replace clinical judgement, but to provide a *"clear short snap of…the areas we need to look at or work from"* (P14). This required information collected to be valid, and continual updating of case notes and the form.

It was important to be able to move beyond completion of the form when conducting a patient assessment:

> *I think some new staff…have their paperwork, correct that bit and go on to the next bit of paper and it's sort of knowing how to do a complete assessment of the situation* (P4).

This included being aware of when formal assessment using the tool is required by policy, but that RAM is *"part of the job description"* (P1) and *"that is the crux of what we do"* (P4) in service provision was underscored.

Some professionals believed that types of risk such as risk of harm to self or others were more suited to being scored on a 0 (None) to 4 (Extreme) scale, but that attempting to quantify other risks such as level of support available in this way was more challenging:

> *I must admit the ones that I tend not to think about too much are the ones where we look at the level of support, response to treatment, attitude, engagement in treatment, what numeric value am I supposed to assign to something like this?* (P1).

Participants also reflected that documenting *concise* management plans on the form for communication to other professionals was difficult.

Discussion

The purpose of this study was to examine how multidisciplinary health staff working in a mental health setting use tools to reach consensus in assessing risk and formulating plans to manage identified risks. Participants overall exhibited moderate agreement in their assessment of risk and care planning. According to participants, however, the tool facilitated structured risk assessment, where risk management decisions could be made following assessment and communication to the team of current risk and consideration of pertinent history. It was important not to focus solely on completion of the tool when interacting with a patient (Godin 2004).

While professionals similarly assessed Jim's presentation, they differed in their clinical judgement as evidenced by inclusion or omission of particular history, and diversity of risk scores. Findings are similar to those across the literature regarding lack of consistency in judgement between clinicians (Holzworth & Wills 1999; Paley 2006), and even those

which have used real-life complex case scenarios (Gale *et al.* 2002). This suggests that diversity of opinion in clinical ratings and recommendations which follow are likely to occur, unless there is a strong focus on shared decision making. Professionals did reflect on such an approach in the service, including at intake referrals and ward rounds, and through informal discussion. Care plans were seen by participants to be more complex than rating risk against a set of numerical criteria. The lack of guidance in risk tools of what follows an assessment (e.g. particular intervention or action) (Hawley *et al.* 2006) may contribute to this difficulty.

The present study was not a validation of the tool and cannot provide such evidence for its use. Indeed fundamental issues of validity and reliability exist in RAM research because of the use of different tools and criteria across services (Gale *et al.* 2002), and examination of one proforma still limits generalisability to others (Hawley *et al.* 2006). Instead, this small investigation was an attempt to examine how clinicians thought about and used a tool as part of their risk assessment and management. Comparison of the tool with an investigation by Hawley *et al.* (2006) of risk assessment proformas suggests a number of desirable elements, including documenting severity of particular risks (instead of a 'yes/no' format), documenting when particular risk history incidents occurred, and room on the form to consider risks beyond harm to self or others and vulnerability to exploitation.

Other tools and methods such as structured professional judgement and actuarial assessment were not referred to by participants when asked about how they assess risk (although they were not asked specifically about this). This may relate to a focus on this tool through completion of it at the beginning of the study, or the larger number of nursing staff than psychiatrists and medical officers in the sample. In a review of literature on risk assessment instruments, Lewis and Webster (2004) contended that while the research supports the ability of nurses to assess risk, assessment is likely to take the form of unstructured clinical judgment methods rather than the use of structured professional judgement and

actuarial assessment. Findings may reflect a clinical reality regarding the use of less-validated or standardised instruments in clinical settings (Doyle & Dolan 2002; Murphy 2004).

Replication with a larger sample and more sophisticated design is needed. Particularly important given issues of validity and reliability with the tools, themselves, would be to examine the ways in which clinicians come to a consensus in team meetings and ward rounds regarding risk, since assessments are conducted and/or reviewed in consultation with other team members. A sample with more representation of medical and allied health staff would also allow examination of the role of different disciplines in formulating a risk assessment and management plan. At present, the use of the tool by staff in their practice and their reflections of the usability of the instrument supports many of the criteria outlined by Borum (1996, using the criteria of Webster *et al.*, 1995) for useful tools, such as accessibility across disciplines, and that they are able to be administered efficiently within current policy and practices. The importance of completing risk assessment tools accurately and comprehensively is underscored given that health professionals, particularly nurses, indicate that such proformas are useful for providing important risk information and directing clinical action (Hawley *et al.* 2010). Clinicians differed in how much they documented on the tool, with some indicating in the interview that differences in documentation between staff on the ward can be a concern.

The extent to which a RAM tool was seen as one means to ensure that clinicians are "on the same page" (P10) as much as possible may mean that the use of such instruments, with knowledge regarding strengths and weaknesses, is appropriate while research continues into best practice. The need for mental health services to support multidisciplinary teams to manage risk with training and clear operational guidance is particularly apparent.

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Table 1. Level of risk documented by clinicians, medians and ranges for individual risks

Risk	***N***	***Mdn***	***Range***
Harm to Self (Suicidality)		2	0-3
0 None	3		
1 Low	3		
2 Moderate	6		
3 Significant	2		
4 Extreme	0		
Harm to Others		4	2-4
0 None	0		
1 Low	0		
2 Moderate	1		
3 Significant	3		
4 Extreme	10		
Absconding		3	2-4
0 None	0		
1 Low	0		
2 Moderate	3		
3 Significant	7		
4 Extreme	4		
Problem with Functioning		3	0-4
0 None	1		
1 Low	1		
2 Moderate	0		
3 Significant	8		
4 Extreme	1		
Level of Support		2	0-3
0 No Problems/Highly supportive	2		
1 Moderately supportive	4		
2 Limited support	3		
3 Minimal	4		
4 No support in all areas	0		

History of Response to Treatment		3	0-4
0 No Problems/Minimal difficulties	2		
1 Moderate response	0		
2 Poor response	3		
3 Minimal response	6		
4 No response	1		
Attitude and Engagement to Treatment		3	2-4
0 No Problem/Very constructive	0		
1 Moderate response	0		
2 Poor engagement	1		
3 Minimal response	7		
4 No response	5		
Other individual risks most commonly documented and scored	alcohol use; alcohol withdrawal on the ward; medication non-compliance, impulsivity; poor judgement (*N, Median* and *Range* cannot be calculated, since professionals documented different risks)		
Overall risk	80% “High risk”, 20% “Medium Risk”		

Note: In the N column, frequencies which do not total 14 participants reflect missing response(s).

Appendix A: Case scenario

Jim is a 73 year old male with a provisional diagnosis of frontal lobe dementia with psychotic features. He is detained and is a client in the high dependency unit.

Jim is described by his family as having an obsession with weapons. It is known that Jim has access to guns. He is also described as "always having a bit of a temper". Jim's daughter informs you there is a history of domestic violence in the home.

Jim is physically fit and has threatened his wife with physical violence and stated he is going to shoot her prior to being brought to the Emergency Department by police. Jim's wife called the police.

Jim has a good relationship with his son, and appears to respect male staff while being dismissive and threatening to female staff.

Social situation – Jim lives at home with his wife. Interests include gardening and walking – he walks 5 km each day.

He is known to have a heavy alcohol intake.

Jim is reluctant to accept medication.