

**Examining the relationship between risk assessment  
and risk management in mental health**

**Short title: Mental health risk assessment and management**

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## **Accessible summary**

- Risk assessment is crucial for developing risk management plans to prevent or minimise mental health patients' risks which will impede their recovery.
- Risk assessments and risk management plans should be closely linked. Their content and the extent to which they are linked within one Trust is explored.
- There is a great deal of variability in the amount and detail of risk information collected by nurses and how this is used to develop risk management plans.
- Keeping risk assessment information in one place rather than scattered throughout patient records is important for ensuring it can be accessed easily and linked properly to risk management plans.
- Strengthening the link between risk assessment and management will help ensure interventions and care is tailored to the specific needs of individual patients, thus promoting their safety and wellbeing.

## **Abstract**

Thorough risk assessment helps in developing risk management plans that minimise risks which can impede mental health patients' recovery. Department of Health policy states that risk assessments and risk management plans should be inextricably linked. This paper examines their content and linkage within one Trust.

Four inpatient wards for working age adults (18 - 65 years) in a large mental health Trust in England were included in the study. Completed risk assessment forms, for all patients in each inpatient ward were examined (n=43), followed by an examination of notes for the same patients. Semi-structured interviews took place with ward nurses (n=17).

Findings show much variability in the amount and detail of risk information collected by nurses, which may be distributed in several places. Gaps in the risk assessment and risk management process are evident, and a disassociation between risk information and risk management plans is often present. Risk information should have a single location so that it can be easily found and updated. Overall, a more integrated approach to risk assessment and management is required, to help patients receive timely and appropriate interventions that can reduce risks such as suicide or harm to others.

(194 words)

**Keywords: Mental health, risk assessment, risk management, risk**

## **Introduction**

Minimising the risks of violence, self-harm, self-neglect and suicide is recognised as being of paramount importance both to patients, for aiding recovery, and also to service providers who need to reduce costs as well as adverse outcomes (Department of Health (DH) 2007, National Health Service (NHS) Litigation Authority 2010).

Assessing and managing risk is therefore a key task in mental health care (Doyle and Duffy 2006), including the promotion of safe and positive risk taking (DH 2004), which is often a central activity of mental health nurses (DH 2006).

Research literature and NHS policy support the inextricable link between risk assessment and risk management (Kennedy 2001, DH 2007), and identify best practice, including: the use of evidence-based risk assessment tools supporting structured clinical judgment; using risk assessments to develop appropriate risk management plans; recognition that risks may change dynamically over time; and the involvement of patients and carers in risk assessment and management. The aim is to “embed risk management in day-to-day practice”, rather than it being an add-on to patient care (DH 2007).

Risk assessment and risk management are acknowledged as difficult and complex tasks (Douglas 1992; Leiba, 2000), but it is unclear why they often remain very separate. This study aims to identify: what information nurses in an acute inpatient setting collect in order to carry out risk assessments; how and where this information is recorded; how this information is used to formulate risk management plans; and how the dynamic nature of risk is captured, recorded and acted upon. Dynamic risk

factors are those relating to the current status of the patient and can easily change, such as emotions, social circumstances, and plans. They contrast with the more static and historic factors, such as dates of first risk episodes or traumatic life events.

In order to comply with best practice, one large mental health Trust in England (hereafter 'the Trust') adapted the Galatean Risk Screening Tool (GRiST, [www.egrist.org](http://www.egrist.org)), one of three recommended multiple risk tools (DH 2007). GRiST was developed as a web-based decision support system for risk assessment that links mental-health expertise to a database of patient cues for mathematical analysis, thus integrating structured clinical judgement with empirical evidence. At the time of this study, the evidence base for GRiST lay in the rigorous research process that ensured its structure and content accurately reflected how mental-health experts conceptualise risk assessment (Buckingham, 2003, 2007; Buckingham et al 2004, 2007, 2008). GRiST was being used to provide an information profile to support rather than replace clinicians' risk judgements, because it is well known that there is little evidence for tools accurately predicting suicide or other risk behaviours, particularly in diverse patient groups and contexts (e.g. Stein 2002; DH, 2007; Royal College of Psychiatrists, 2008).

GRiST is intended to be a systematic, structured, and holistic tool for gathering risk-related information. It is organised in layers, starting with a short series of screening questions that, if answered affirmatively, point to areas requiring further, more detailed investigation. No patient needs all questions answered and the web-based GRiST displays only relevant questions, making the tool quicker and easier to navigate than the paper version many organisations were using. The screening

questions begin with those for specific risks (e.g. suicide or self-harm) followed by questions for gathering generic risk information that may be relevant to more than one risk, e.g. about patients' social context, physical health, personality, current behaviours. The integration of these generic questions is where GRiST provides a more holistic profile than tools focussing predominantly on risk-specific behaviours. The generic questions include protective factors such as supportive relationships, belief systems, motivation, etc. and show how changing circumstances can impact on risk, which means GRiST can play a part in monitoring recovery as well as at initial assessment.

GRiST requires clinicians to provide patient risk evaluations for all the risks covered. It also has space for recording additional, qualitative, information about the risks as well as to devise an appropriate action plan. The use of this structured tool thus provided a good opportunity to study how and what risk information was collected, updated and used to formulate risk management plans. However, it is first necessary to know the context for GRiST's use within the Trust, including how it was adapted before deployment and how it fitted with the rest of the care-record documentation.

### ***The Trust's care-record documentation***

Although the Trust decided to adopt GRiST, it did so as part of revamping its entire care-record documentation. Project management was conducted in two parallel streams, one for the overall integrated care record (ICR), overseen by the medical director, and the other specifically for the risk-assessment tool, overseen by the nursing director. Difficulties arose when the two were put together because the ICR had several documents that overlapped with GRiST: its own initial risk-screening

page, generic health and social care questions, and risk summaries. Due to time pressures, these duplications were not resolved. The ICR's screening page was kept separate from GRiST, resulting in two sets of screening questions in the ICR, one in GRiST and one outside. Staff instructions were to complete either, but only the GRiST set pointed to where additional questions were located – hence the layering approach would have been ineffective if the other document was used. Further, clinicians were instructed that completion of generic health and social care questions within GRiST was voluntary, which increased the likelihood of risk-related information being separated from the risk tool. Finally, the paper format of GRiST was altered by the Trust so that the question structure was more difficult to navigate. Study results therefore need to be interpreted in the light of how risk documentation was organised and clinicians' overall documentation load.

## **Method**

Four acute inpatient adult psychiatric wards on two different Trust sites were included in the study. They were selected because they were the first Trust adopters of the risk assessment tool within the ICR and thus more experienced with it.

Evaluation of risk assessment and risk management processes, and the connection between them, was carried out by:

- i) Examining the risk assessment forms for all patients in each inpatient ward (n=43 in total) to explore: whether risk assessments had been completed; what risk information was included in risk assessments; which parts of the risk assessment documentation had been completed; and how and when risk reviews took place.

- ii) Examining notes for the same set of patients (n=43) to explore: whether a risk management plan existed; the content of the risk management plan and its relation to risk assessments (does it reflect identified risks?); whether the risk management plan was updated to reflect dynamic changes; and where risk information was recorded in patients' notes. A proforma was developed to capture this information.
- iii) Semi-structured interviews with mental health nurses completing the risk assessments (n=17: 15 staff nurses, 2 ward managers), with the aim of eliciting a description of how they conducted and reviewed risk assessments, and identifying any difficulties they experienced. Participants were all the professionally qualified nurses on duty during data collection who had time to be interviewed (n=17/24). An interview schedule was developed to capture: sources of information used during risk assessments; how risk assessments were reviewed; and the process of formulating risk management plans.

The research had both ethics and Trust R&D approvals.

## **Results**

The study sample provided excellent conditions for this investigation. The mean length of inpatient stay on the notes review date was 60 days (minimum 2, maximum 176). Two thirds of patients (n=28) had been admitted to the same ward previously, and all but one had a current risk assessment in place, of which 81% (n=34) were completed by a staff nurse, although it was unclear who had completed the risk assessment documentation in 17% (n=7) of cases.

### *Extent of risk data collection*

For patients in an inpatient setting, it would be expected that all sections of the risk assessment tool would be completed, so that as much information as possible informs risk management plans. However, Table 1 shows variation in the extent to which risk assessment data are recorded. The rapid screening questions had been completed in 98% of cases (n=41) but in 10% (n=4) of cases this was the only section completed. In one case this may have been due to the patient's recent admission, but the other patients were admitted weeks or months previously. The additional questions for risk-specific screening were covered quite well. In 48% of cases (n=20) they were completed for all risks identified in the screening section, and in 38% of cases (n=16) for some of the identified risks. Completion of the additional "generic" questions relating to more than one risk was understandably patchy because the Trust had made these voluntary in the light of ICR overlaps. Less explicable was the failure in more than a quarter of cases (n=11, 26%), to record risk judgments in the summary section of the risk assessment tool.

Variation in the amount of risk information provided could be due to differences in the information sources nurses used (Table 2). The most popular was documentary evidence rather than patients' own personal accounts. Another cause could be inconsistent training, as 41% of nurses (n=7) said they had not had any recent risk assessment training, or that training had been inadequate for their needs.

### ***Variability in risk assessment review practice***

Table 3 indicates that the frequency of reviewing risk assessments varied between wards, despite the fact that they provided similar inpatient services. Overall, since first completion, risk assessments had been reviewed for 56% of patients, at a mean rate of 1.3 reviews per patient for a mean inpatient stay of 60 days, but changes to the risk summary section occurred in only 3 cases. Some reviews re-recorded previously incorrect risk information (verified by cross-checking with patients' notes), but this may reflect time constraints and confusion about the process. Forty one per cent of nurses (n=7) stated that lack of time affected completing and reviewing risk assessments, and 59% of nurses (n=10) were unclear about the frequency of reviewing risk assessments and where information should be recorded. When asked about frequency, one nurse said it happens:

*“Generally when they come in and when they leave, unless something crops up”.*

Positive changes in risk levels were rarely recorded. One nurse explained:

*“If a problem has lessened you probably wouldn't record it”.*

This precludes opportunities to monitor patients' progress towards recovery.

### ***Updating risk documentation***

In a number of cases, incidents or information relating to risk or to increased risk were not recorded in the risk assessment tool, but elsewhere in patients' notes. Sometimes

this information was only available by looking back through daily nursing notes.

When asked about this, one staff nurse replied:

*“That’s the thing we don’t do (record changes) we don’t connect incidents to the risk assessment, we use incident forms”.*

Table 4 gives some examples where updated information is missing from the risk assessment tool.

### ***Risk management plans***

Table 5 shows that 79% (n=34) of patients had a risk management plan on file, although rates varied between wards. Where a plan existed, in 41% of cases (n=14) they were lists of identified risks rather than actual plans for managing them. In 26% of cases (n=9), the risks listed in the risk management plan did not correspond fully with risks identified during assessment, although this may be because nurses only develop plans for major risks.

### **Discussion**

Findings indicate considerable variability in the level of detailed risk information collected in these wards. Gaps in the risk assessment and management processes are evident, with disassociation between the risk information nurses collect and record, and the management plans subsequently formulated.

Variability in the depth of risk information recorded in this setting is unlikely to reflect patient differences, because all are acutely ill and likely to remain in hospital for several months. However, for more than half of the patients, detailed risk information was not collected for identified risks, and complete generic risk

information was recorded for only half of the patients. Variability is much more likely to be due to confusion about where risk information should be recorded. If nurses used the ICR's own risk screening page, there would be no navigation guidance to where the more detailed questions should be asked, and the GRiST layered approach would be by-passed.

Variability is not due to lack of commitment because Hawley et al (2010) reported that of the staff groups they studied, mental health inpatient nurses had the most positive attitude towards the completion and usefulness of risk assessments, which has also been our experience. Indeed, almost three-quarters of the nurses put information into the generic section of GRiST even though the ICR instructions stated this was only voluntary and the ICR required them to enter some of it again elsewhere. It indicates their understanding of the importance of these data to risk assessments and that they should be available within the assessment tool.

An alternative reason for variation in the data recorded could be the disparate sources of information nurses used when assessing risk. This did not always include information from patients, families or carers, so that, contrary to the New Horizons vision (DH 2009), the patient's perspective on risk was often missing. Although most patients were admitted via home treatment teams, the opportunity to gather valuable risk information from colleagues was also frequently missed. Lack of time may explain these omissions.

Lack of confidence and, possibly, training in risk assessment may be behind nurses' apparent reluctance to record their risk judgements. The selected study wards were

“early adopters” of the ICR so that the Trust culture as a whole had not changed. Explicitly quantifying risk judgements and providing precise assessment data to underpin them was not the accustomed approach and, as stated earlier, there is plenty of controversy about how accurate risk judgements are in the first place.

The low number of risk assessment reviews observed is unexpected because GRiST encompasses many risk factors likely to change with time. However, awareness of the dynamic quality of risk assessment was not always evident, and nurses were also unclear about the process of reviewing and recording changed risks. Morgan (2007) argues that risk assessment, “should not be seen as a one-off duty, discharged by completion of risk-assessment forms”. Regular re-assessment benefits patients because it identifies changes in risks that enable interventions to be more appropriately targeted. More attention to managing repeat assessments is needed, both in terms of the time allowed and also the tools used. They are much more easily recorded, for example, using GRiST’s web-based patient management system where static (i.e. persistent historic data) can be carried across from the previous assessment to the current one, thus focussing attention on areas more likely to change, and showing where they have already changed over previous assessments. The rapid improvement in mental-health Trusts’ information technology should help with both collecting and communicating risk information (Stein 2002), as paper recording decreases.

Few changes were made to risk assessments when subsequently reviewed or when new risk-related information was recorded elsewhere in patients’ notes. There was a lack of cross-referencing, checking and updating of information, undoubtedly due to

the difficulty of doing this with multiple documents to riffle through. As two thirds of patients in this study had been previously admitted to the same hospital at least once, familiarity with patients may have contributed to a more informal approach. The consequences are obviously dangerous, especially where bank staff are frequently used, as accurate, up to date risk information will not be available in one place, but rather known about only by regular staff. In our study, this was compounded by data duplication in patient documentation but Langan and Lindow (2004) suggest lack of integration may be a more widespread problem. Certainly, the dispersion of risk assessment data does not help linkage with management plans, contrary to best practice guidance (Kennedy 2001, DH 2007). Plans were rarely updated and in many cases were re-listings of identified risks, with no documented route for implementation.

### **Study Limitations**

Although our mixed methods have highlighted variation in nurses' behaviour, these results are based on a small sample of data that was collected in the early days following Trust rollout of the new documents, before significant changes in Trust culture occurred. While the Trust had made commendable efforts to rationalise documentation, the risk-assessment tool had not been properly integrated and local adaptations to it made the process more difficult. Collecting data at this one point in time only could be viewed as a study limitation. Had we repeated the exercise at a later date, less practice variability may have been observed.

## **Conclusion**

Our mixed methods have identified variation in risk assessment and risk review practice, and in risk management plan formulation. They also highlight the inherent difficulties in documenting risk information within the overall patient care record, and underline the importance of managing organisational change in clinical practice. Risk assessment needs prioritisation within mental health care, where it is seen to have support and to be driven at all organisational levels. Nurses' comments about lack of time and needing more training indicate that this priority may not have percolated down to the "coal face", despite good high-level impetus. Staff must 'buy into' and understand the dynamic nature of risk, the purpose and scope of thorough risk assessment and management, and the inextricable link between the two. Even if precise risk judgements are difficult to make, it is still important to identify the contributing factors because eliminating them or reducing their impact will inevitably lower risks and benefit patients.

Moving to electronic patient records will greatly assist information integration because it can be managed automatically if the data-gathering and reporting systems are sufficiently sophisticated. Of course, the right information needs to be identified for collection, which is facilitated by tools like GRiST that encapsulate structured clinical judgements as well as actuarial data. They can also support necessary changes to the way nurses conceptualise risk assessment and risk management, and the relationship between them. This will help mental health Trusts rise to recent policy challenges (DH 2007, 2008, 2009) by adopting a more integrated approach, where interventions and care plans are tailored to the specific needs of individual patients.

(3034 words)

## References

Buckingham C.D. (2003). Can you help us develop a mental-health decision-support system? *The British Journal of Healthcare Computing & Information Management* 20, p13

Buckingham C.D., Kearns G., Brockie S., Adams A. E., Nabney I. T. (2004). Developing a Computer Decision Support System for Mental Health Risk Screening and Assessment. In: *Current perspectives in healthcare computing*. (ed, J. Bryant), 189-195. The British Computer Society, Swindon.

Buckingham C.D. (2007) Improving mental health risk assessment using web-based decision support, *Health Care Risk Report*, Feb. 2007, 17-18.

Buckingham C.D., Ahmed A., & Adams A.E. (2007) Using XML and XSLT for flexible elicitation of mental-health risk knowledge, *Medical Informatics and the Internet in Medicine*, 32, 65-81.

Buckingham C. D., Adams A. & Mace C. (2008) Cues and knowledge structures used by mental health professionals when making risk assessments. *Journal of Mental Health* 17, 299 – 314

Department of Health (2004) *The ten essential shared capabilities – a framework for the whole of the mental health workforce*. London, UK

Department of Health (2006) From values to action; The Chief Nursing Officer's review of mental health nursing. DH, London, UK

Department of Health (2007) Best Practice in Managing Risk. London, UK

Department of Health (2008), High quality care for all: NHS Next Stage Review final report. London, UK

Department of Health (2009) New Horizons: Towards a shared vision for mental health. Department of Health, London, UK

Douglas M. (1992) Risk and Blame: Essays in Cultural Theory. London, Routledge.

Doyle M. & Duffy D. (2006) Assessing and managing risk to self and others. In: Woods P., Kettles A., Byrt R., Forensic Mental Health nursing: Interventions with People with 'Personality Disorder', National Forensic Nurses' Research and Development Group. London: Quay Books 135-150

Hawley J., Gale T., Sivakumaran T & Littlechild B (2010) Risk assessment in mental health: Staff attitudes and an estimate of time cost. Journal of Mental Health 19 (1) 88-98

Kennedy, H. (2001) Risk assessment is inseparable from risk management. Psychiatric Bulletin 25, 208-211

Langan J. & Lindow V. (2004) Living with risk : mental health service user involvement in risk assessment and management. Policy Press, Bristol, UK

Leiba T. (2000) An overview of risk in community mental health care. British Journal of Community Nursing, 5, 292-296

Morgan J. F. (2007) Giving up the Culture of Blame: Risk assessment and risk management in psychiatric practice. **Royal College of Psychiatrists**, London, UK

NHS Litigation Authority (2010), Risk management Standards for Mental Health and Learning Disability Trusts. NHS Litigation Authority, London, UK

Royal College of Psychiatrists (2008) Rethinking risk to others in mental health services. Royal College of Psychiatrists, London, UK

Stein W. M. (2002) The use of discharge risk assessment tools in general psychiatric services in the UK. Journal of Psychiatric and Mental Health Nursing 9, 713-724.

**Table 1**      **Extent of completion of risk assessment tool**

<b>Completion of risk assessment tool</b>	<b>No. of patient records N= 43 (100%)</b>	
Assessment on patient file	42	(98%)
Rapid screening completed*	41	(98%)
Additional questions completed for <b>all</b> risks identified*	20	(48%)
Additional questions completed for <b>some</b> risks identified*	16	(38%)
<b>All</b> additional questions relating to more than one risk completed*	21	(50%)
<b>Some</b> additional questions relating to more than one risk completed*	9	(21%)
Risk summary completed*	31	(74%)
No risk assessment on file	1	(2%)

\* Percentages based on number of risk assessments in place (n=42)

**Table 2**      **Sources of risk information mentioned by nurses**

<b>Sources of risk information mentioned</b>	<b>By no. of nurses N=17 (100%)</b>	
Previous/current notes	13	(76%)
Patient	11	(65%)
Family/carers	7	(41%)
Other mental health teams	7	(41%)

**Table 3 Frequency of reviewing and updating risk assessments by individual ward**

Review practice	Number of patient cases				
	Ward 1 N= 10 (21%)	Ward 2 N= 16 (38%)	Ward 3 N= 10 (24%)	Ward 4 N= 7 (17%)	Total N= 43 (100%)
Number of risk assessments reviewed	9 (90%)	13 (81%)	1 (10%)	1 (14%)	24 (56%)
Number where changes were made to risk summary following review	2 (22%)	1 (8%)	0	0	3 (12.5%)
Mean number of reviews per patient	2.7	1.8	0.2	0.4	1.3
Mean length of inpatient stay (days)	77	46	61	66	60
No risk assessment	1 (10%)	0	0	0	1 (2%)

**Table 4 Examples of patient information missing from risk assessment documentation**

Patient Risk Information	Where risk information was recorded		
	Care plan or nurses' notes	Critical incident form	Risk assessment tool
History of overdose	Yes	n/a	No
Low mood and expressed wish to die	Yes	n/a	No
Admission in part because of threats to kill mother.  Patient subsequently refused to return from home leave and threatened anyone who tried to persuade him.	Yes  Yes	n/a  No	'No' ticked for risk of harm to others in screening section, so that this risk was not identified or assessed.  Tool not updated to reflect this risk.
Suicide attempt and attack on member of the public whilst on home leave.	Yes	No	No changes made. Suicide risk and risk of harm to others remain rated as 'low'.
Acts of violence and aggression towards people and property.	Yes	Yes	Not updated to reflect increased risk.
Two attempts to strangle self	Yes	No	Risks of suicide or self-harm not identified.
Patient returned from home leave with a concealed blade.	Yes	No	Not updated to reflect increased risk.

n/a = not applicable (i.e. there was no critical incident form)

**Table 5 Risk management planning by individual ward**

<b>Risk management planning</b>	<b>Number of patient cases per ward</b>				
	<b>Ward 1 N= 10 (23%)</b>	<b>Ward 2 N= 16 (37%)</b>	<b>Ward 3 N= 10 (23%)</b>	<b>Ward 4 N= 7 (16%)</b>	<b>Total N= 43 (100%)</b>
Plan on patient file	5 (50%)	15(94%)	9 (90%)	5 (71%)	34 (79%)
Plan is list of risks only*	1 (20%)	14 (93%)	9 (100%)	2 (40%)	14 (41%)
Plan fully corresponds to assessed risks*	4 (80%)	12 (80%)	6 (67%)	3 (60%)	25 (74%)

\* Percentages based on number of plans in place for each ward.