

## Model matrix

For the full *Risk matrix for risk managers*, go to [www.npsa.nhs.uk](http://www.npsa.nhs.uk)

**Table 1 Consequence scores**

Choose the most appropriate domain for the identified risk from the left hand side of the table Then work along the columns in same row to assess the severity of the risk on the scale of 1 to 5 to determine the consequence score, which is the number given at the top of the column.

	Consequence score (severity levels) and examples of descriptors				
	1	2	3	4	5
Domains	Negligible	Minor	Moderate	Major	Catastrophic
<b>Impact on the safety of patients, staff or public (physical/psychological harm)</b>	Minimal injury requiring no/minimal intervention or treatment.  No time off work	Minor injury or illness, requiring minor intervention  Requiring time off work for >3 days  Increase in length of hospital stay by 1-3 days	Moderate injury requiring professional intervention  Requiring time off work for 4-14 days  Increase in length of hospital stay by 4-15 days  RIDDOR/agency reportable incident  An event which impacts on a small number of patients	Major injury leading to long-term incapacity/disability  Requiring time off work for >14 days  Increase in length of hospital stay by >15 days  Mismanagement of patient care with long-term effects	Incident leading to death  Multiple permanent injuries or irreversible health effects  An event which impacts on a large number of patients
<b>Quality/complaints/audit</b>	Peripheral element of treatment or service suboptimal  Informal complaint/inquiry	Overall treatment or service suboptimal  Formal complaint (stage 1)  Local resolution  Single failure to meet internal standards  Minor implications for patient safety if unresolved  Reduced performance rating if unresolved	Treatment or service has significantly reduced effectiveness  Formal complaint (stage 2) complaint  Local resolution (with potential to go to independent review)  Repeated failure to meet internal standards  Major patient safety implications if findings are not acted on	Non-compliance with national standards with significant risk to patients if unresolved  Multiple complaints/independent review  Low performance rating  Critical report	Totally unacceptable level or quality of treatment/service  Gross failure of patient safety if findings not acted on  Inquest/ombudsman inquiry  Gross failure to meet national standards

<b>Human resources/ organisational development/staffing/ competence</b>	Short-term low staffing level that temporarily reduces service quality (< 1 day)	Low staffing level that reduces the service quality	Late delivery of key objective/ service due to lack of staff  Unsafe staffing level or competence (>1 day)  Low staff morale  Poor staff attendance for mandatory/key training	Uncertain delivery of key objective/service due to lack of staff  Unsafe staffing level or competence (>5 days)  Loss of key staff  Very low staff morale  No staff attending mandatory/ key training	Non-delivery of key objective/service due to lack of staff  Ongoing unsafe staffing levels or competence  Loss of several key staff  No staff attending mandatory training /key training on an ongoing basis
<b>Statutory duty/ inspections</b>	No or minimal impact or breach of guidance/ statutory duty	Breach of statutory legislation  Reduced performance rating if unresolved	Single breach in statutory duty  Challenging external recommendations/ improvement notice	Enforcement action  Multiple breaches in statutory duty  Improvement notices  Low performance rating  Critical report	Multiple breaches in statutory duty  Prosecution  Complete systems change required  Zero performance rating  Severely critical report
<b>Adverse publicity/ reputation</b>	Rumours  Potential for public concern	Local media coverage – short-term reduction in public confidence  Elements of public expectation not being met	Local media coverage – long-term reduction in public confidence	National media coverage with <3 days service well below reasonable public expectation	National media coverage with >3 days service well below reasonable public expectation. MP concerned (questions in the House)  Total loss of public confidence
<b>Business objectives/ projects</b>	Insignificant cost increase/ schedule slippage	<5 per cent over project budget  Schedule slippage	5–10 per cent over project budget  Schedule slippage	Non-compliance with national 10–25 per cent over project budget  Schedule slippage  Key objectives not met	Incident leading >25 per cent over project budget  Schedule slippage  Key objectives not met
<b>Finance including claims</b>	Small loss Risk of claim remote	Loss of 0.1–0.25 per cent of budget  Claim less than £10,000	Loss of 0.25–0.5 per cent of budget  Claim(s) between £10,000 and £100,000	Uncertain delivery of key objective/Loss of 0.5–1.0 per cent of budget  Claim(s) between £100,000 and £1 million  Purchasers failing to pay on time	Non-delivery of key objective/ Loss of >1 per cent of budget  Failure to meet specification/ slippage  Loss of contract / payment by results  Claim(s) >£1 million
<b>Service/business interruption Environmental impact</b>	Loss/interruption of >1 hour  Minimal or no impact on the environment	Loss/interruption of >8 hours  Minor impact on environment	Loss/interruption of >1 day  Moderate impact on environment	Loss/interruption of >1 week  Major impact on environment	Permanent loss of service or facility  Catastrophic impact on environment

## Table 2 Likelihood score (L)

What is the likelihood of the consequence occurring?

The frequency-based score is appropriate in most circumstances and is easier to identify. It should be used whenever it is possible to identify a frequency.

Likelihood score	1	2	3	4	5
Descriptor	Rare	Unlikely	Possible	Likely	Almost certain
Frequency How often might it/does it happen	This will probably never happen/recur	Do not expect it to happen/recur but it is possible it may do so	Might happen or recur occasionally	Will probably happen/recur but it is not a persisting issue	Will undoubtedly happen/recur, possibly frequently

Note: the above table can be tailored to meet the needs of the individual organisation.





Some organisations may want to use probability for scoring likelihood, especially for specific areas of risk which are time limited. For a detailed discussion about frequency and probability see the guidance notes.

## Table 3 Risk scoring = consequence x likelihood ( C x L )

	Likelihood				
Likelihood score	1	2	3	4	5
	Rare	Unlikely	Possible	Likely	Almost certain
5 Catastrophic	5	10	15	20	25
4 Major	4	8	12	16	20
3 Moderate	3	6	9	12	15
2 Minor	2	4	6	8	10
1 Negligible	1	2	3	4	5

Note: the above table can be adapted to meet the needs of the individual trust.

For grading risk, the scores obtained from the risk matrix are assigned grades as follows

	1 - 3	Low risk
	4 - 6	Moderate risk
	8 - 12	High risk
	15 - 25	Extreme risk

### Instructions for use

- 1 Define the risk(s) explicitly in terms of the adverse consequence(s) that might arise from the risk.
- 2 Use table 1 (page 13) to determine the consequence score(s) (C) for the potential adverse outcome(s) relevant to the risk being evaluated.
- 3 Use table 2 (above) to determine the likelihood score(s) (L) for those adverse outcomes. If possible, score the likelihood by assigning a predicted frequency of occurrence of the adverse outcome. If this is not possible, assign a probability to the adverse outcome occurring within a given time frame, such as the lifetime of a project or a patient care episode. If it is not possible to determine a numerical probability then use the probability descriptions to determine the most appropriate score.
- 4 Calculate the risk score the risk multiplying the consequence by the likelihood: C (consequence) x L (likelihood) = R (risk score)
- 5 Identify the level at which the risk will be managed in the organisation, assign priorities for remedial action, and determine whether risks are to be accepted on the basis of the colour bandings and risk ratings, and the organisation's risk management system. Include the risk in the organisation risk register at the appropriate level.