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RISK MANAGEMENT HT2018
Assignment 1

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Risk management in healthcare

Introduction

The health system is a complex process for different variables (specificity of individual patients, complexity of interventions, multiple professional experiences, different management models), as well as other systems such as aviation and military defense. Since in every complex organization the error and the possibility of an accident can't be eliminated, all the possible interventions must be used so that they are, at least, controllable.

Starting from the consideration that the error is an inevitable component of human reality, it becomes fundamental to recognize that even the system can make mistakes by creating the circumstances for the occurrence of an error (stress, technology unknown...), which remain latent until an operator error (active failure) makes them manifest. If human error can't be fully eliminated, it is essential to encourage the ideal working conditions and implement a set of actions that makes it difficult for man to make mistakes, and secondly, to implement defences able to stem the consequences of an error that occurred.
A risk management must be done to help the system preventing adverse health events.

In this assignment the selection of processes and risks is inspired by the knowledge of the author who has worked as a volunteer in the general surgery department at San Raffaele Hospital in Milan. The exposure of risks and methods is therefore an example and does not reflect the current management at that hospital. The case is also downsized to fewer categories presenting a case study of a not-so-large size.

Problem definition

Clinical risk management has been developing for some time. This area of risk management is primarily concerned with patient care, especially during surgical operations.

It is important that surgeons report incidents that occur during the surgery. Considerable emphasis has been placed in clinical risk management on the need to report, in an accurate and timely manner, details of any incidents that occur in the operating theatre. (Hopkin, 2017)

There are two approaches for the problem of adverse health events:
- the first focuses on human behavior as a source of error, attributing the incident to aberrant behavior. The remedy is therefore constituted by the reduction of the inappropriate variability of human behavior. The risk prevention effort focuses on improving individual knowledge and training.
- the second possibility focuses on the conditions in which the error occurs, which is seen as the result of a failure of the system, understood as a set of humans, technological and relational elements, strongly interconnected, interactive and aimed at a common goal. The remedy is directed towards hidden and profound problems and a remodelling of processes.

Generally, clinical risk could be defined as the probability that a patient is the victim of an adverse event, that is, he suffers any one damage or unease imputable, even if unintentionally, to medical care given during the period of inpatient, which causes a prolonged period of hospitalization, a worsening of health conditions or death (Kohn, 1999). The clinical risk can be stemmed through Risk Management initiatives implemented at the level of single healthcare facility, at company, regional, national level. These initiatives must provide for work strategies that include the participation of numerous healthcare professionals.
Furthermore, the Risk Management program must be articulated and include all the areas in which the error can manifest itself in the entirety of the patient's clinical care process.

Analysis and risk assessment

The activity of analysis and risk assessment can be divided into four essential phases.

Phase 1 - Analysis of processes and activities.
Systematic description of the main activities of the care processes (for structures operating in quality scheme, this phase is always already implemented).

Phase 2 - Identification of dangerous situations and possible error modes.
- Analysis of activities
- Identification of dangerous situations, source of possible errors
- Identification of the error associated with each dangerous situation highlighted, based of a standardized classification of the errors.

For example, here some risks are classify and describe.

General categories:
- Commission risks - this category includes all risks due to the execution of doctors or assistance acts not necessary or practiced incorrectly.
- Omission risks - this category includes all risks due to not performed medical and assistance acts that are considered necessary for patient care, based on knowledge and to the professional experience.

Categories for error type:

- Human risks - slips, lapses, mistakes.
- Violation risks - deviations from safe operating procedures, standards or rules.
- Organizational risks - this category includes all errors due to the organization of the work, to emergency management planning, to availability and accessibility of health and/or support equipment.

Some specific categories:

- Use of drugs:

- Prescription error risks
- Preparation error risks
- Transcription error risks
- Distribution error risks
- Administration error risks
- Monitoring error risks

- Surgery risks:

- Foreign bodies in the surgical outbreak
- Intervention on part or side of the wrong body
- Improper surgical execution
- Surgery not necessary
- Incorrect management of the surgical patient

- Use of equipment risks:

- Malfunction due to technical manufacturing problems (not caused by the user)
- Malfunction due to the user (maintenance, setting, other use errors)
- Use in inappropriate conditions
- Inadequate maintenance
- Inadequate instructions
- Incorrect cleaning
- Use beyond the envisaged duration limits

- Examinations and diagnostic procedures risks:

- Not performed
- Scheduled but not performed
- Inadequately or incorrectly performed
- Performed appropriately but on wrong patients
- Not appropriate

- Timing:

- Delay in drug treatment
- Delay in the execution of the surgical intervention
- Delay in diagnosis
- Other organizational / managerial / logistic delays

Phase 3 – Design of a risk register and estimation of the current level of risk

The purpose of the risk register is to form an agreed record of the significant risks that have been identified. Also, the risk register will serve as a record of the control activities that are currently undertaken. It will also be a record of the additional actions that are proposed to improve the control of the particular risk. (Hopkin, 2017).
In this case the likelihood of the risk could be quantitative, using statistical data of literature, or qualitative in a rating scale. Infact using past registered data and time analysis models, it is possible to understand the probability of the risk event. For example, referred to the category "use of drugs", administration errors could have a probability of 7% (that is quite high). In the same way it is possible to divide our scale in a qualitative range (remote, occasional, probable, frequent).
The same argument can be made for the estimation of the damage as impact. An example of the range could be:

- None - the error did not involve any damage or only necessitated a greater monitoring of the patient
- Mild - the error caused temporary damage to the patient and required treatment or additional interventions, or has led to an extension of the hospital stay to above the average value
- Medium - the error caused temporary damage to the patient (temporary disability) and has a beginning or extension of the hospitalization was necessary
- Serious - the error caused permanent damage to the patient (permanent disability) or resulted in an event close to death (anaphylactic shock, cardiac arrest)
- Death - Patient death

Phase 4 - Evaluation (of the degree of acceptability) of the risk.
Priority significant risks facing an organization are those that have:

- high or very high impact in relation to the benchmark test for significance;
- high or very high likelihood of materializing at or above the benchmark level;
- high or very high scope for cost-effective improvement in control.

For hazard risks, the range of responses available is often described as the 4Ts, that can be sommarized as tolerate, treat, transfer, terminate. (Hopkin, 2017)

Starting from this point it is possible to place the estimates in a risk matrix to determine the degree of intervention priority on the individual error modes, but also on specific dangerous situations or on portions of the process. The possible risk assessment matrix is shown in Table 1, which highlights four areas of priority refer to the qualitative ranges of Phase 3.

	None	Mild	Medium	Serious	Death
Frequent					
Probable					
Occasional					
Remote					

Table 1 - Risk assessment matrix

Acceptable risk	Monitoring interventions

Low risk	Programming interventions
Medium risk	Urgency interventions
High risk	Emergency interventions

Starting from the category "use of drugs", the Table 2 gives an example of the risk assessment evaluation.

Prescription error risks	Remote	Serious	Programming interventions
Preparation error risks	Remote	Death	Urgency interventions
Transcription error risks	Occasional	Serious	Urgency interventions
Distribution error risks	Remote	Mild	Monitoring interventions
Administration error risks	Probable	Mild	Programming interventions
Monitoring error risks	Remote	Mild	Monitoring interventions

Table 2 – Risk assessment matrix example

Aims for the clinical risk management

Simultaneously with the introduction of risk prevention measures, systems should be activated monitoring and defining deadlines to monitor the effect of prevention measures: this part is necessary to identify the possibility of introducing any further improvement measures.
In order to reduce errors it is necessary to:
• Identify a uniform organizational model for clinical risk management
• Draw up guidelines for the uniform detection of errors and risks in health facilities
• Promote training events to spread the culture of error prevention
• Promote the reporting of near misses. The minimum information level for detecting adverse and/or avoided events should meet the following criteria: what happened, where, when, how, because it happened, what action was implemented or proposed, what impact the event had on the patient, on other people, on the organization, which factors have or could have minimize the impact of the event
• Experiment, at company level, methods and tools for reporting errors, collection and data processing to obtain information on high-risk procedures and frequencies of errors;
• Periodically monitor and guarantee informative feedback;
• Define organizational measures and appropriate technologies for avoidable errors;
• Promote, also through appropriate experimentation, the development of organizational models and supports innovative technologies to improve the level of security.

Conclusion

Health risk management is becoming increasingly defined as one of the structural planning activities of the health system. Initially born as an answer to economic and health needs, due to the increasing level of medical-legal disputes and therefore of the claim for compensation for real damages or presumed, the Risk Management has been enriched

becoming part of the interventions in order to improve the quality of health services. Clinical risk management can be designed at all levels of decision and health intervention.
Strategic support for interventions aimed at controlling clinical risk management is the training activity of operators, which will not only identify and discuss the answers to the question "why" manage the safety of health interventions, but will also have to meet the demand for the "how" to manage.

References

Hopkin, P., 2017. *Fundamentals of risk management : understanding evaluating and implementing effective risk management*. Kogan Page.

Kohn L., 1999. *To err is human: building a safer health system*. National Academy Press.