Suicide in the national protocol for monitoring sentinel events

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Summary. In 2005, the Ministry of Welfare started a protocol for reporting sentinel events, in order to provide monitoring of such events at the national level in a way that makes the data available to others. The main objectives of the monitoring system include the collection of information of sentinel events which occurred in NHS structures. The analysis focused on systems, processes and determining factors contributing to the occurrence of these events, compilation and implementation of recommendations addressed to all the NHS hospitals to minimize the risk of occurrence, and feedback to local health services and Regions. This study describes sentinel events reported to the Ministry of Welfare in the first eighteen months of activity, during which it received 123 reports of sentinel events, suicide being the most reported event. The analysis of the causes and contributing factors has highlighted the lack of application, and sometimes the total absence of appropriate procedures and guidelines which would allow the identification of the possible actions to be taken to counteract the recurrence of these serious events in the interest of public health. In particular, it highlighted the need to disseminate and implement specific recommendations to prevent errors, promote training on clinical risk and improve communication among operators and between operators and patients. Given the importance of suicide in public health policies and the need for preventive activity on this issue, recommendations for the prevention of suicide in hospitals have already been drafted.

Key words: suicide, monitoring system, sentinel event, prevention recommendations.

Riassunto (L’evento suicidio nel protocollo nazionale di monitoraggio degli eventi sentinella). Il Ministero del Welfare ha avviato nel 2005 un protocollo sperimentale di monitoraggio degli eventi sentinella, con lo scopo di giungere alla definizione di una modalità univoca e condivisa di sorveglianza di tali eventi sul territorio nazionale. I principali obiettivi del sistema di monitoraggio riguardano la raccolta delle informazioni relative agli eventi sentinella occorsi nelle strutture del SSN, l’analisi, focalizzata sui sistemi e sui processi, dei fattori contribuenti e determinanti per l’accadimento degli eventi, l’elaborazione ed implementazione di raccomandazioni specifiche rivolte a tutte le strutture del SSN per minimizzare il rischio di accadimento degli eventi, il ritorno informativo alle strutture del SSN ed alle Regioni e PA. Nel presente lavoro vengono riportati gli eventi sentinella segnalati al Ministero del Welfare nei primi diciotto mesi di attività, durante i quali sono pervenute 123 segnalazioni di eventi sentinella tra cui il suicidio ha rappresentato l’evento maggiormente segnalato. Relativamente all’analisi delle cause e dei fattori contribuenti si è evidenziata la carenza applicazione o la totale assenza di appropriate procedure e linee guida; ciò consente di individuare, in una logica di sanità pubblica, le possibili azioni da mettere in atto per contrastare il ripetersi di tali gravi eventi. In particolare, è emersa l’esigenza di diffondere ed implementare raccomandazioni specifiche per prevenire gli errori, di promuovere la formazione in tema di rischio clinico, di migliorare la comunicazione tra gli operatori e tra operatori e pazienti. In considerazione della rilevanza dell’evento suicidario nelle strutture sanitarie e della necessità di una maggiore azione di prevenzione rispetto a questa problematica è stata elaborata la raccomandazione per la prevenzione del suicidio in ospedale che viene illustrata nelle sue azioni principali.

Parole chiave: suicidio, sistema di monitoraggio, eventi sentinella, prevenzione, raccomandazioni.

INTRODUCTION
In the course of the last few years, we have seen considerable change in the manner in which health services are provided. The provision of such services is very complex, requiring action at all levels of the health system, action that is coordinated and integrated in
accordance with the principles of clinical governance. The orientation of the NHS is to offer, in a responsible manner, high quality health assistance in the safest conditions. The Ministry of Welfare will take it upon itself the responsibility for initiating the evaluation of the supply of the essential level of assistance, as well ensuring patient safety, in order to guarantee that the right of all citizens to have proper and appropriate health care is respected.

In light of this, the Ministry of Health initiated, in July 2005, the monitoring of sentinel events [1], with the aim of providing a clear method of surveillance of such events nationally. The decision to promote the monitoring of sentinel events was stimulated by the fact that these events, which are potentially avoidable, represent adverse events of great seriousness that can cause death or serious injury to the patient and result in a loss of trust by citizens in the national health service. A single case is sufficient in itself to give way to an investigation or inquest in order to ascertain if the contributing factors could have been eliminated or reduced and to implement the corrective measures. The monitoring of sentinel events is accompanied by the analysis of the contributing and determining factors in order to learn from errors and, thereby, promote preventative actions to counteract the onset of similar events.

For infrequent sentinel events, it is necessary to have a national monitoring system, so that precious information for patient safety is not lost. From the point of view of synergy and efficiency, this information should be made public and available to all health structures located in the region.

The different international experiences used [2, 3] orient themselves towards the predisposition of national monitoring protocol.

Research indicates that timing is a risk factor for suicide in the hospital. The period following hospital discharge is when the most suicides take place, a time when patients often decide to take their own life. This puts emphasis on the importance of follow-up after hospitalization as a way of preventing suicide.

The World Health Organization (WHO) considers suicide to be a complex, multi factorial problem, deriving from the interaction of biological, genetic, psychological, social, cultural and environmental factors. WHO estimates that there are approximately one million deaths from suicide each year, incurring a cost of millions of euros. The report on sentinel events conducted by the Joint Commission, published in September 2008, indicated that suicide occurring in a hospital setting is one of the most reported adverse events (12.4%), second only to surgical errors. About half (52%) of the suicides occur in psychiatric wards, and hanging is the most common method for suicide, used by 30% of the suicides [4]. Australian data on public hospitals for the years 2006-2007 indicates that suicide occurring on hospital premises to be amongst the most frequent adverse events, second only to surgical procedures performed on the wrong patients or on wrong part of the body [5].

The present report analyses data from the first 18 months of the monitoring program. The information pertaining to health care professionals, health organizations and regions is kept confidential. The decision to keep the data confidential was made so as to encourage health organizations to report events accurately, without fear of being singled out for blame.

With reference to the sentinel event of suicide, epidemiological aspects of the suicides are described and reported to the monitoring system, as well recommendations to be put into action in order to counteract the occurrence of this adverse event.

METHODS

Characteristics of the sentinel events monitoring system

There are many different methods for the monitoring of adverse events in the healthcare system, each having weaknesses and strengths. The correct choice should be appropriate for pre-established objectives. With respect to other methods, such as population studies based on the study of medical records or on the analysis of administrative data, the reporting system does not provide data on the incidence or the prevalence of adverse events because numerous factors can influence the reporting of adverse events, such as the culture attitude regarding safety and whether the organization is geared towards identifying and reducing adverse events [6, 7]. The reporting of adverse events is promoted in safety programs by WHO [8, 10].

The monitoring system of sentinel events has, as its main purpose, using the national healthcare system to learn from errors, a task which constitutes the foundation of the methodology for clinical risk management and patient safety. It is important since one of the most frustrating aspects of patient safety is the apparent inability to learn from one’s errors.

Tragic errors continue to occur in many situations and in all health organizations. The best suited solution to this problem is to study our errors and to share the knowledge gathered as a result of the development of reporting systems of adverse events [9].

The main objectives of the reporting system are to gather information regarding adverse events which have occurred in the National Healthcare System, the analysis of the contributing factors and the determinants of such sentinel events, focusing on the systems and processes, the elaboration and implementation of specific recommendations for all the structures of the NHS to minimize the risk of occurrence of these events. The reporting of sentinel events is voluntary and guarantees the anonymity of professionals and of the health organizations involved.

The main features of the monitoring system of sentinel events adopted by the Ministry of the Welfare are summarized in Table 1.
Definition and classification of sentinel events

The monitoring protocol defines a sentinel event as the following: “an adverse event of particular seriousness, potentially avoidable, that can cause death or serious injury to a patient and which results in the loss of faith in the healthcare system by the patient”. The occurrence of a single case is sufficient to give way to an investigation in order to ascertain the leading factors that may have contributed and to activate adequate measures on the part of the organization. Table 2 describes sentinel event categories foreseen by the monitoring protocol.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Typology of sentinel events foreseen by monitoring protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Procedures performed on the wrong patient</td>
</tr>
<tr>
<td>2.</td>
<td>Procedures performed on the wrong body part (side, organ or part)</td>
</tr>
<tr>
<td>3.</td>
<td>Suicide by a hospitalized patient</td>
</tr>
<tr>
<td>4.</td>
<td>Retention of instruments or other foreign object during surgery requiring another or successive surgery or procedure in order to rectify error</td>
</tr>
<tr>
<td>5.</td>
<td>Transfusion reaction consequent to ABO incompatibility</td>
</tr>
<tr>
<td>6.</td>
<td>Death, coma or severe functional alterations as a result of an error in pharmacological therapy</td>
</tr>
<tr>
<td>7.</td>
<td>Severe maternal illness or death related to labour and/or delivery</td>
</tr>
<tr>
<td>8.</td>
<td>Violence committed on a hospitalized patient</td>
</tr>
<tr>
<td>9.</td>
<td>Death or permanent disability in a healthy newborn weighing &gt; 2500 grams not related to a congenital illness</td>
</tr>
<tr>
<td>10.</td>
<td>Every other adverse event that causes death or severe injury</td>
</tr>
</tbody>
</table>

(Adapted from Lucien Leape, 2005)

Definition of injury

With reference to the definition of a sentinel event with “severe injury”, this is intended to cover all the conditions: permanent disability, coma, illness that requires prolonged hospitalization or intensive care; major trauma consequent to the fall of a patient, transfer to a semi-intensive unit or intensive care unit, repeated surgery, cardiopulmonary resuscitation, specific request for psychiatric and psychological treatments consequent to suicide attempts or as a result of violence, and all transfusion errors made from ABO incompatibility.

Reporting procedures

The monitoring system of sentinel events is based on the reporting of such events by the health organizations. A protocol has been made available on the Ministry’s website which consists of an individual form for every sentinel event to be monitored. Form A is for the reporting of events and gathering information regarding the typology and the main descriptive characteristics of the events. Form B is to be used for the analysis of the contributing factors and determinants of the event and for the plan of action to be implemented by the health organization for the prevention of the reoccurrence of these events. These forms will be transmitted by the health organization to the Ministry of Welfare and the Region for clinical risk management purposes.

RESULTS

In the period between September 2005 and February 2007, 123 sentinel events have been reported. In regards to the formal procedure pertaining to the reporting of these events, 53% (n=65) were reported spontaneously without the solicitation on the part of the Ministry, while 47% (n=58) were reported following a formal request by the Ministry of Welfare. In Table 3, the reported events are presented by type according to the categories foreseen by the reporting protocol. The most common event is category 10, “other adverse events”, followed by suicide; retention of instruments or other material left during surgery which requires another surgery or further procedure; death or permanent disability in healthy newborn weighing > 2500 grams not related to a congenital illness; severe maternal illness or death related to labour and/or delivery; death, coma or severe functional alterations derived from error in pharmacological therapy.

Regarding the outcome of sentinel events, 68% (n=84) of the reported events caused patient deaths, while the remaining 32% (n=39) caused severe patient injury, such as severe or permanent disability, the necessity for further surgical procedures or hospitalization in an intensive care unit.

Analysis of causes and contributing factors of sentinel events

The purpose of the analysis of the causes and of the contributing factors is to ascertain the leading factors that may have contributed to the onset of
sentinel events by applying a methodology of inquiry orientated toward the system and the processes. The identification of the root causes is necessary to determine the most appropriate solution in order to prevent the event from occurring again. The application of such a method at the level of health structures requires dedication to clinical risk management and the acquisition of knowledge and specific skills by all healthcare workers involved.

Table 4 presents the state of completeness and accuracy of the compiled forms of the analysis of the causes and contributing factors carried out by health organizations. Forty percent of the files sent forward supplied valid and usable information for the elaboration of the present report; 42% were incomplete and/or not completed adequately, while the forms were not sent off for 18% of the events. The 40% of the forms providing useful information were used for this report.

Table 5 presents the distribution frequency of the causes and possible contributing factors for the onset of a sentinel event. The absence or the disregard for procedures and guidelines, as well incorrect assessment, evaluation and observation of a patient’s clinical situation are among the most notable categories.

As far as the number of plans of actions developed by the health structures in which a sentinel event had occurred, only 20% of the events classified had a plan of action to reduce the risk.

### Table 3 | Frequency distribution of sentinel event

<table>
<thead>
<tr>
<th>Event type</th>
<th>n.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wrong patient</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>2. Wrong part of the body</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>3. Suicide in hospitalized patients</td>
<td>20</td>
<td>16%</td>
</tr>
<tr>
<td>4. Retention of instruments</td>
<td>14</td>
<td>11%</td>
</tr>
<tr>
<td>5. Transfusion reactions(ABO)</td>
<td>9</td>
<td>7%</td>
</tr>
<tr>
<td>6. Error in pharmacological therapy</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>7. Labour and/or delivery</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td>8. Violence or mistreatment</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>9. Death or permanent disability in healthy newborns</td>
<td>12</td>
<td>10%</td>
</tr>
<tr>
<td>10. Other adverse events</td>
<td>51</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>123</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Table 4 | Form transmission for the analysis of causes and contributing factors of sentinel events

<table>
<thead>
<tr>
<th>Forms</th>
<th>n.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms sent and completed properly</td>
<td>49</td>
<td>40%</td>
</tr>
<tr>
<td>Forms sent and completed improperly</td>
<td>52</td>
<td>42%</td>
</tr>
<tr>
<td>Forms NOT sent</td>
<td>22</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>123</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Table 5 | Analysis of causes and contributing factors

<table>
<thead>
<tr>
<th>Causes and factors</th>
<th>n.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedures and guidelines</td>
<td>23</td>
<td>24%</td>
</tr>
<tr>
<td>Patient assessment/evaluation</td>
<td>18</td>
<td>19%</td>
</tr>
<tr>
<td>Communication</td>
<td>16</td>
<td>17%</td>
</tr>
<tr>
<td>Training/professional competency</td>
<td>11</td>
<td>12%</td>
</tr>
<tr>
<td>Information</td>
<td>11</td>
<td>12%</td>
</tr>
<tr>
<td>Safety systems/tools for patient protection</td>
<td>9</td>
<td>9%</td>
</tr>
<tr>
<td>Medical instrument/equipment</td>
<td>7</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total causes and factors</strong></td>
<td>95</td>
<td>100%</td>
</tr>
</tbody>
</table>

Epidemiological characteristics of sentinel events categorized as suicide

The epidemiological characteristics of sentinel events categorized as suicide were analyzed. In 80% of the cases, suicide occurred in males and 60% of these cases were over the age of 65. The site most often was in non-psychiatric departments, as shown in Figure 1.

The most common method for committing suicide was by a patient jumping from height such as from a window (Table 6).

The analysis of causes and contributing factors for the suicide in the hospital shows the absence or the disregard for procedures and guidelines are most frequently implicated (34, 38%) followed by communication problems (31.25%) and these results are similar to those observed in the other sentinel events.

Elaboration of a recommendation for the prevention of suicide

On the basis of the results obtained form the monitoring of sentinel events, a recommendation for the prevention of suicide, has been proposed.

The general aim of the recommendation is to offer healthcare workers and administrators information on the diagnostic and therapeutic procedures at high risk and which have the potential to cause severe injury to patients. The intention is to increase the knowledge of the potential risks and to offer tools that assist in implementing a solution for the health organization [11].

The recommendations are based on the collaboration of the technical group on clinical risk located at the Ministry of Health, further consultation with experts and external stakeholders, verification with the regional health commission and feedback from the health organization and workers.

The international literature has identified relevant risk factors pertaining to suicide [12-16]. The knowledge of these risk factors can allow the adoption of effective strategies to aid in the reduction of sentinel suicide events in a hospital setting, placing emphasis on the patient evaluation tools, the organizational processes, the training of healthcare workers, the environmental and structural suitability and care for patients who may have suicidal tendencies or who may attempt suicide, including continued care after hospital discharge.
The objective of the recommendation is to decrease the number of suicides and/or attempted suicides in a hospital setting and is applicable to all patients who seek health assistance and care at a hospital. In particular, the major clinical risk areas are psychiatric diagnostic and care services, oncology units, obstetric and gynaecology units, the emergency department, and the communal areas such as staircases, terraces and washrooms.

The actions foreseen for the prevention of suicide expect that the hospitals implement actions that are orientated toward patient responsibility, management of the structural features of a hospital and organizational processes, including training.

In the phase of admitting patients, it is necessary that an appropriate and correct case histories be taken in a warm and welcoming climate that will favour communication between healthcare workers and patients.

A case history is the primary tool and essential in identifying risk factors for monitoring and for evaluating the risk of suicide. In cases in which, after having gathered the case history, a suspicion arises of the presence of risk factors, there are many resources available for the healthcare worker to help conduct further conversations with the patient. All of these resources are based on the current international and national guidelines.

The following actions are based on the patient’s clinical course which must include an accurate evaluation, including integration of various competences and/or skills, specialized psychological, psychiatric and, if needed, other specialized consultations; participation of family members and friends in the evaluation and risk management phases; followed by intervention, on the basis of an agreed-upon protocol, by trained volunteers; adequate communication between patients and workers and finally the prescription of personalized therapy for those at risk of suicide.

It is of fundamental importance, not only to ensure continued treatment for these patients, but also to provide immediate availability of a hospital to contact at the time of discharge if needed and getting the social health services offered by the territory involved in order to supply physical and psychological support in an active and continuous manner.

With respect to problems related to the structural features of a hospital, it is important to install adequate safety devices, for example, safety locks, closed-circuit video, alarms, railings, and safety fixtures where possible; to ensure adequate maintenance (with special care given to light fixtures/windows on higher floors) or structures and equipment (for example, showers and shower stalls) so that they do not allow improper usage; and implement measures that prevent the person at risk of using other means for suicide purposes (for example, cutting objects, belts, cords, and medicines).

As for the internal organizational procedures, it is necessary that procedures are in place to inform the personnel of suicidal risk, to arrange specific procedures based on guidelines and assistance pathways and to pay attention to the transfers of patients at greater risk of suicide (such as not leaving them alone and, if necessary, providing formal procedures for monitoring their behaviour). Special caution should be taken during evening shifts when the ratio between personnel and patients is reduced.

<table>
<thead>
<tr>
<th>Method of suicide</th>
<th>Absolute values</th>
<th>Value%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Window</td>
<td>16</td>
<td>80.00%</td>
</tr>
<tr>
<td>Poisoning</td>
<td>1</td>
<td>5.00%</td>
</tr>
<tr>
<td>Bleeding to death</td>
<td>1</td>
<td>5.00%</td>
</tr>
<tr>
<td>Hanging</td>
<td>1</td>
<td>5.00%</td>
</tr>
<tr>
<td>Throws/falls (staircases)</td>
<td>1</td>
<td>5.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>
In order to increase the ability of healthcare workers to ascertain the likelihood of patients being suicidal risks and to take appropriate prevention measures, it is necessary to increase the amount of orientation and training of the staff in respect to such sentinel events as suicide. A periodic update, specific for the personnel operating in units considered critical, must be undertaken.

**DISCUSSION**

The results reported in this paper are from the first 18 months of monitoring activity of sentinel events. The purpose is not to point out the rates of incidence of sentinel events, nor to carry out comparisons between regions, health organizations or operating units, but rather to learn from the mistakes and from these adverse events in order to plan actions and necessary changes to increase patient safety. The study has limitations typical of similar monitoring systems of sentinel events conducted on a national level, such as the reliance on the accuracy of the reports from organizations that are signalling the event; cultural attitude toward patient safety of the staff; the staff’s competency to analyze and identify the risks and to implement the necessary actions to prevent the events from occurring. Other limitations are the difficulty of generalizing on a national level what has been seen on a local level and the difficulty in evaluating the accuracy of what has been reported.

From the analysis of the present data, there appears to be good adherence to the protocol by the health structures that reported on adverse events, even though, on the basis of literature, one can estimate that the number of reported cases is less than the true number of sentinel events manifested. The problem of under-reporting, however, pertains to all countries where similar programs have been carried out. In fact, considering all of the limitations of comparison between monitoring systems of different countries, during the first year of implementation of the monitoring of sentinel events in the United States, conducted by JCAHO [3], only 22 sentinel events were reported. Subsequently, there has been a gradual increase of activity reported, with 31 events in 1996 and 215 in 2005. The same trend was observed in the state of Victoria in Australia [2], where there were a total of 79 events reported in the first year of implementation of sentinel events monitoring (2002-2003), whereas 85 cases were reported in 2003-2004.

Considering that, in our experience, 53% of sentinel events reported occurred in a spontaneous manner, it suggests a good degree of active participation in the monitoring system by those organizations that spontaneously signalled the events. On the other hand, as in the experience of JCAHO [3], there was a gradual, increasing trend in the spontaneous reporting of sentinel events, from 4% in the first year of monitoring in 1995 to 65% in 2005. From this comparison, Italy performed well considering that the results refer to an experimental phase of monitoring. Relative to the analysis of causes and contributing factors to the onset of sentinel events, only in 40% of the cases were the forms considered valid and useful for our report. This indicates the necessity that the health organizations acquire knowledge and the specific skills for the identification and analysis of sentinel events so as to arrive to the identification of the relevant and contributing factors, presumed to be indispensable for the plan of action.

It is noteworthy that in the 18 months of monitoring, there has been a gradual improvement in the completion of the forms, especially as witnessed in the forms obtained in the last 6 months. The main contributing factor emerged from the analysis of the possible causes was the lack of application or the total absence of appropriate procedures and guidelines, followed by the lack evaluation or observation of the patients, the lack of worker training/competency, and the lack of communication between the workers and between the workers and the patients.

Finally, we must highlight the modest percentage of plans of action compiled which, in turn, emphasizes the necessity of a greater allocation of resources needed for training and for continuous education in this field.

In regards to the typology of sentinel events, as observed also from the data published by JCAHO [4] and from the Australian experience [5], suicide represents the second most reported specific category. Nevertheless, differences as to where this event occurs and the method used are apparent. In the JCAHO experience, the most common place was in the psychiatric departments (52%), whereas we found that medical departments were more often the location. Regarding the methods used, the most common was hanging (more than 30% of the cases) whereas we found that jumping from a height was the most common method (window or into open spaces).

It is notable that the majority of suicides during a patient’s hospitalization in other studies occur in the psychiatry department. To date, there are no precise estimates on suicide of hospitalized psychiatric patients. The present study is an important first step in this otherwise totally ignored area. Various problems can be recognized concerning the suicide risk for psychiatric patients during their hospitalization. An important first element is the training and continuous education of the medical staff, which often lacks information on suicide prevention. According to Saarinen and colleagues [17], the medical team takes on at times strong stigmatizing attitude toward suicide that, in the presence of personal and familiar problems, brings about a reduced level of vigilance towards the patients at risk of suicide, facilitating the execution of a lethal act.

The patients most at risk for suicide are those who complain and who are more difficult to manage. In 1966, Farberow et al. [18] described the dependent-dissatisfied patient who puts a great deal of pressure on healthcare workers and who is at greater risk of suicide. Another phenomenon linked to the risk of suicide in departments of psychiatry is the concept of “malicious
terminal alienation”, an attitude that some patients develop [19, 20]. This attitude affects mainly those patients that present many relapses and seem resistant to treatment. They are considered to be manipulative, provocative, unreasonable, excessively dependent or falsely disabled [19-22]. Such an attitude causes the medical staff to give them less attention and help. The combination of alienation and of fluctuating ideas of suicide results in poor evaluation of the risk for committing suicide [23].

The period after hospital discharge represents a very delicate moment. The staff should prepare themselves to prepare the patient adequately [24]. Rossau and Mortensen [25] have emphasized that the risk of suicide is raised in the first five days following hospital discharge; the risk remains comparable to that present in the first phase of admission for the twenty-eight days that follow hospital discharge. A timely evaluation of the suicide risk should be made throughout the six months following discharge since this is an especially delicate period for the equilibrium of the patient [25].

For the evaluation of the suicide risk, it is necessary also to take into consideration the number of hospitalizations and their duration in the course of the year that precedes the suicide. The modern approach that proposes shorter but more frequent hospitalizations could increase the risk of suicide [25]. According to Stephens et al. [26], a high risk of violent death can result in an ineffective doctor-patient relationship, made worse by the exclusive use of pharmacological therapy that hinders establishment of a therapeutic relationship that allows the accurate recognition of the patients at greater risk. The increase in the rate of suicide in the second half of the past century in schizophrenic patients could be explained in this way, according to Stephen et al.

Roy and Drapper [28], studying patients hospitalized for the duration of about a year, noted that the program of discharge can lead to a misperception of the patient who is, therefore, on the verge of losing his stable environment and contact with the staff. The family of the suicidal patient is often unprepared to welcome him home. Committing suicide at the moment of discharge realizes what the patient had in mind for a long time.

It is necessary also to consider co-morbidity with medical pathologies at the moment of hospital admission, for these can be a risk factor for the successive phases of hospitalization. Powell et al. [29] highlighted the following critical elements for suicide amongst hospitalized patients: the weekend; the hours between 8 am and noon and between noon and 4 pm; the recent loss of loved ones; delirium; despair (hopelessness); progressive self-injury; previous hospitalizations; and a family history of suicide (in close family members/relatives).

Recently, a study [30] noted that the department of psychiatry is at higher risk for suicide and that hanging is the most frequently used method by patients in all of the departments of a general hospital, followed by the slashing of arms and poisoning. Doors and doorframes were the most common choice for points of anchorage for hanging. Nevertheless, a large number of objects were available, such as cabinets, bathtub poles, windows and handrails. Special caution should be given therefore to all the possible objects or situations that can be exploited for suicide.

CONCLUSIONS
AND FUTURE DEVELOPMENTS

The present results clearly indicate that the need to improve the organizational aspects at the base of the clinical assistance processes utilized by health organizations and point to the urgent necessity:

- to publish and to implement specific recommendations to prevent errors and increase patient safety
- to promote the education and training of all healthcare workers with regard to clinical risk
- to improve the communication processes between workers and between workers and patients.

The main purpose of the monitoring system of sentinel events is to gather useful information relevant to adverse events occurring in NHS structures in order to identify the critical points of the system and to suggest possible solutions. The aim is also to propose recommendations and guidelines that act as indicators to activate and to put into practice at the health organization level actions that counteract the onset of the occurrence of sentinel events.

With this objective in mind, the Ministry of Welfare, on the basis of the information received, made available a national program for the implementation of recommendations for health organizations and for health workers, with the purpose of preventing the occurrence of adverse events.

With regard to suicide events, it appears necessary to monitor the implementation of the recommendations for the prevention of the suicide in the health structures. In addition, it is necessary that an expert group should be established to facilitate the widespread dissemination of the principles regarding the prevention of the suicide to groups of professionals and to the population. It is necessary that specialized training programs be organized in centres of training for people chosen for suicide prevention. Research programs need to be conducted, particularly with international cooperation, and adequate tools for the evaluation of suicidal risk relative must be used. Information and knowledge about the relevant problem regarding suicide should be shared widely so as to obtain a homogenous view of the activity to put into action for the prevention of suicide, supplying a common ground for all that operate in this field.

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