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Suicide in psychiatry and medical liability: A case series

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ABSTRACT

The suicide of a patient is a serious event that may constitute a therapeutic failure. To prevent these situations, national and international guidelines exist. When a suicide occurs in a psychiatric hospital or immediately after release, legal action may follow, most frequently for malpractice claims related to the failure to provide reasonable management of the suicide risk. In an attempt to respond to the increased anxiety in the health care system and among practitioners, we used case reports to determine the minimum medico-legal standards that the physician must follow in the context of suicide.

From February 1st to May 30th, 2019, we gathered all available expert psychiatric reports following criminal prosecutions from the University Center of Legal Medicine of Geneva. We restricted the extraction of cases to those from January 1st, 2007, to May 30th, 2019.

We identified 7 cases. The psychiatrist expert provided a care setting assessment, clinical/survey assessment, and suicidal risk assessment. Improper care setting assessment was the most commonly found conclusion, but the two other categories were as detrimental concerning suicidal risk. Only one psychiatrist was condemned, but the decision was revoked on appeal. The combination of our cases and a scoping review on the subject leads to the recommendation of minimum medico-legal standards to complete individualized suicide risk reduction plans.

Minimal medico-legal standards should be applied and documented to optimize care practice for the reduction of suicidal risk at three different levels: the initial evaluation, the treatment, and the surveillance.

1. Introduction

Suicide is the act of intentionally causing one's own death; it is defined as a "death caused by self-directed injurious behavior with any intent to die as a result of the behavior" (Crosby, Ortega, & Melanson, 2011). Suicidality includes suicidal ideation, action to prepare for an attempt, attempt or nonfatal self-harm, or death. It is a complex phenomenon and a major public health issue, particularly in the WHO European region, where the mortality rate is the highest in the world (14.1 per 100,000 population)(WHO, 2016).

Men are almost twice as likely as women to die of suicide, and some indicators of risk, such as agitation, have been identified (Bryan et al., 2014). A strong link is established between mental illness and suicide, with up to 90% of individuals who complete suicide meeting criteria for a psychiatric disorder, in particular mood disorder, substance use disorder, psychosis and personality disorders (Suominen et al., 1996). The psychiatric populations that are the most concerned with this high risk of suicide are individuals suffering from depressive disorder (235.1 per 100.000 person-years) and bipolar disorder (216.0 per 100.000 person-years) (Olfson et al., 2016). Furthermore, individuals with a history of suicide attempts form a well-defined high-risk group for suicide (Christiansen & Jensen, 2007); still, inpatient suicide attempts are high, with 3 to 5.5% of suicides in psychiatric units and 2% of suicides in general hospitals (Martelli, Awad, & Hardy, 2010).

Moreover, in some countries, 60% of suicide attempters are discharged against medical advice (Shin et al., 2018). This practice raises concerns, as a recent meta-analysis revealed that the postdischarge suicide rate of patients admitted with suicidal thoughts or behaviours reached nearly 200 times the United States general population global suicide rate (178/100.000 per year) during the first 3 months after discharge (Chung et al., 2017; Olfson et al., 2016). An increase in the suicide rate of inpatients from 68 to 646 per 100.000 per year is observed from the 1960s/1970s period compared to the 2000s/2017s period (Olfson et al., 2016); however, it is fundamental to place these data in context, as the hospitalization criteria, duration, population, treatment and care have considerably changed in 50 years. To explain

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this increase in both inpatient and postdischarge suicides and evaluate the efficacy of suicide prevention interventions, several explanations have been proposed: modification of admission criteria, lighter inpatient treatment, spreading of deinstitutionalization, or dysregulation of care (Smith et al., 2015).

To prevent suicide, guidelines have been created by local, national and supra-national bodies (Jayaram, 2014; Matsubayashi & Ueda, 2011). In many countries, the implementation of these guidelines has resulted in a reduction in suicides during hospitalization or after release. Recent evidence underlines the efficacy of suicide prevention interventions on completed suicides and on suicide attempts, particularly multi-level interventions (Hofstra et al., 2019).

Despite specific suicide prevention programmes (Jayaram, 2014; Matsubayashi & Ueda, 2011), the suicide of patients during their hospitalization stays is an all-too-frequent event that constitutes a therapeutic failure and provokes severe distress to relatives and even to practitioners, who can feel trapped between feelings of responsibility and lack of efficiency (Wurst et al., 2013). As an unnatural death, suicide gives rise to a police investigation. The question of the responsibility of the institution or the healthcare team is increasingly frequently raised, and investigations are commissioned. Responsibility may relate to the field of criminal, civil and disciplinary justice, and the worldwide incidence of malpractice litigation in the field of psychiatry is increasing. The most common malpractice claim is the failure to provide appropriate care for the protection of suicidal patients against their own acts and thoughts. From this perspective, the documentation of the assessment of suicidal risk and the understanding of the reasons for the failure of the means of prevention are of major importance (Sher, 2015).

Considering the increased anxiety of the health care system towards the management of suicidal patients, we decided to examine the existing evidence regarding the difficult task of providing adequate and effective care for suicidal patients.

Our primary objective was to examine the minimum medico-legal standards that the physician should take in the context of suicide prevention in psychiatric institutions in French-speaking Switzerland. These standards are determined by Swiss experts and courts.

Our secondary objective was to provide a basis for future practice recommendations by conducting a scoping review of evidence-based effective measures to reduce the risk of suicide.

2. Methods

To obtain cases of criminal prosecutions from the University Center of Legal Medicine of Geneva that potentially concerned deceased persons, the research protocol of the study was presented and approved by Swiss ethic committees on research (Registry number - Basec 2018-02289).

2.1. Search strategy

From February 1st to May 30th, 2019, in accordance with our research protocol, we gathered all available expert psychiatric reports following a criminal prosecution from the University Center of Legal Medicine of Geneva. We restricted the extraction of cases from the 1st of January 2007 to the 30th of May 2019. All original cases were in French. All available cases had occurred in cantons other than the canton of the correspondent Center of Legal Medicine, as demanded by Swiss law. All cases were requested by prosecutors. The expert psychiatric reports all contained a detailed description of the admission, the progress of hospitalization, the given treatment, the circumstance of the suicide, and interviews with related and health care staff.

2.2. Inclusion criteria and case selection

We included all criminal prosecutions of psychiatrists or medical institutions following the attempted or completed suicide of hospitalized patients in general hospitals or adult psychiatry wards. There were no restrictions concerning the duration of hospitalization or the occurrence of suicide following discharge. One of the authors of the study (G.N.) selected and conducted anonymization of all cases that could be included in our study prior to the data analysis.

2.3. Outcomes and data extraction

All data extraction was conducted by the same author, who was not involved in case selection (M.S.), and a full-text analysis was performed. This author inspected the psychiatrist expert report, containing the answers to the prosecutor, as well as the questions of the defending attorney, if available, and the conclusions of the expert. The qualitative analysis of all cases followed a methodological approach, with the extraction of several outcomes concerning the case characteristics: (a) the final retained diagnosis by the expert, (b) the medical background of the patient, (c) the duration of stay at the hospital, (d) the monitoring of suicide risk, (e) the identification of the suicide risk, (f) the means for suicide prevention, and (g) the circumstance of suicide (or suicide attempt). Additionally, we extracted the experts' conclusions: (h) the quality of the care setting assessment, (i) the clinical/survey assessment, (j) the suicidal risk assessment, and (h) the issued verdict. A description of the identified cases was also prepared to reveal the different clinical features. Finally, due to the media coverage of the identified cases, we did not report the canton in which the case occurred to preserve anonymity.

2.4. Review of evidence for suicide prevention

In order to obtain a conceptual mapping of the existing literature on evidence for suicide prevention, we decided to conduct a scoping review in addition to our review of cases. Our objective was to examine if actual measures applied to reduce the risk of suicide are evidence-based. We searched Pubmed, PsycINFO, and Embase for reviews and original articles; search terms were the following: (suicid* or selfharm) and (measures, treatments, symptom*, scale, validat*, self-report, or questionnaire). Results were limited to clinical trials and reviews, and to articles in English published these last 20 years. Clinical practice guidelines of medical societies for suicide were also examined.

3. Results

3.1. Search results

We identified 7 cases concerning our main outcome (Table 1). Our sample was mainly composed of men (85%). The mean age was 33.7 years, and the mean duration of stay was 17 days (from 1 days to 2 months). All cases presented psychiatric medical backgrounds, but only one patient had a history of prior suicide attempts. Only two patients benefited from a follow-up (cases 2 and 7). Of importance, all cases suffered from depression, with a dual substance disorder diagnosis for two cases (cases 3 and 7). Only two patients presented multiple suicide attempts during hospitalization (cases 1 and 4). A majority of five cases (71%) presented psychotic symptoms. All cases committed suicide during hospitalization, except one, who made his attempt the day following discharge (case 3). In three cases (cases 5, 6 and 7), an improper clinical assessment of the suicide risk, and an improper healthcare setting was retained. In only one case, a condemnation was decided by the court (case 6).

3.2. Qualitative description of included cases

3.2.1. Case 1

A 46-year-old woman suffering from recurrent depressive disorder, who benefited from a non-voluntary hospitalization. The patient had a record of three suicide attempts in the last 3 years. The given treatment

Table 1
Summary of retrieved cases.

Case characteristics								Expert conclusions			Court decision
Case (sex, age)	Diagnosis retained	Psychiatric medical history	Duration of stay	Appropriate monitoring of the suicide risk	Appropriate identification of the suicide risk	Appropriate means for suicide prevention	Circumstance of suicide (or suicide attempt)	Improper healthcare setting	Improper suicidal risk assessment	Improper survey of the suicide risk	
1 (F,46)	Recurrent depressive disorder, severe current episode without psychotic symptoms. Presence of suicidal ideation.	Recurrent depressive disorder with psychotic symptoms during acute phases. Three suicide attempts in the last years. No follow-up	2 months	Yes. Adequate evaluation for the first month.	Yes. Management of a first suicide attempt during the first month of hospitalization.	Yes. Use of coercive measure with progressive release. Regular assessments of the suicide risk.	Jumped from a bridge during a leave. The patient died.	Yes. A window was open.	Yes	No	The jury found for the defense
2 (M,35)	Recurrent depressive disorder with obsessive-compulsive personality. Presence of suicidal ideation.	Sent to hospital by his psychiatrist. Recurrent depressive disorder with obsessive-compulsive personality.	9 days	Yes. Adequate evaluation for the first month.	Yes. Assessment during admission of the suicidal risk.	Yes. Daily evaluation with nurses and doctor.	Defenestration, the day following the exit of the unit. The patient survived.	No	No	No	The jury found for the defense
3 (M,31)	Severe depression with possible psychotic symptoms. Presence of dark thoughts.	Depression with consumption of alcohol. No follow up.	2 days	No. Improper evaluation of psychosis	Yes. Considering identified clinical elements.	Yes. Daily evaluation with nurses and doctor.	Defenestration, the day following the admission. The patient died.	No	Yes. Improper assessment of psychosis.	No	The jury found for the defense
4 (M,18)	First episode of initial severe depression wit gradually installation of psychotic symptoms. Presence of suicidal ideation.	The month before the patient saw a psychiatrist for suicidal thoughts.	1 month	Yes. Adequate evaluation.	Yes. Management of multiple episodes of suicide.	Yes. Daily evaluation with nurses and doctor.	Hanged in his bathroom with a pillowcase. The patient died.	Yes. Premature exit project.	No	No	The jury found for the defense
5 (M,42)	Bipolar affective disorder, current episode of severe depression. Presence of a mixed state with an attempt of suicide (venesection)	One year of depression following a divorce. One hospitalization for depression and suicidal thoughts a few months ago. After the exit, bipolar symptoms appeared. No follow-up.	1 days	No. Absence of close monitoring.	No. No assessment of the suicidal risk the morning following admission.	No. Lack of assessment of the suicidal risk. Absence of therapeutic relationship.	The patient fled from the unit and threw himself under a train. The patient died.	Yes. Open unit.	No	Yes. No assessment the morning of the suicide.	n.a.
6 (F,36)	Post-partum severe depression with psychotic symptoms. Presence of suicidal ideation.	Two episodes of depression the years before the hospitalization. No follow up.	2 days	No. Absence of close monitoring.	No. Psychotic symptoms were not taken into account	No. A monitoring protocol should have decided. Absence of therapeutic relationship.	The patient fled from the unit and threw herself under a train. The patient died.	Yes. Absence of surveillance of the patient.	Yes. Improper detection of psychotic symptoms.	Yes. Absence of appropriate surveillance.	Condemnation. The decision was revoked on appeal.
7 (M,28)	Severe depression with psychotic symptoms and alcohol addiction. Presence of suicidal ideation.	Two episodes of depression and two hospitalizations for alcohol and heroin withdrawal in the last 5 years. Benefited from a follow-up.	15 days	Yes. Adequate evaluation.	No. Psychotic symptoms were not properly investigated. Antipsychotic was quickly stopped (day two).	Yes. Daily evaluation with nurses.	The patient fled from the unit and threw himself under a train. The patient died.	Yes. No proper treatments.	Yes. Improper detection of psychotic symptoms.	Yes. Lack of experimented clinicians, lack of proper survey of the suicide risk.	n.a.

Abbreviations: M = male gender, F = female gender: n.a. = not available.

was mirtazapine (15 mg), oxazepam (15 mg), and quetiapine (50 mg). At admission and during the first week of the stay, the patient aborted attempts of suicide under increasing and multiple security measures (closed unit, with patient surveillance every 15 min). A month after a progressive release of these coercive measures, she committed suicide, while no suicide risk was detected. The patient had a good therapeutic alliance with the healthcare team and benefited from regular assessments the days before the suicide. The family of the deceased made the complaint.

3.2.2. Case 2

A 35-year-old man, suffering from a recurrent depressive disorder and an obsessive-compulsive disorder. The patient denied the suicidal ideation that led to admission. He had a treatment of venlafaxine (375 mg), mirtazapine, clorazepate (5 mg) and olanzapine (2.5 mg); he asked for a diminution of treatment by venlafaxine (300 mg) due to a plasmatic overdose and stopped olanzapine. The patient benefited from a proper therapeutic alliance with the healthcare team and regular assessments of suicide risk. At discharge from the unit, the patient was satisfied with the care. The day following this exit, he committed a defenestration. The patient did not die and brought suit against the psychiatrist.

3.2.3. Case 3

A 31-year-old man, with a medical background of depression and comorbid alcohol abuse without follow-up. The patient verbalized suicidal thoughts and accepted a voluntary hospitalization. The diagnosis of severe depression with possible psychotic symptoms was retained. A treatment of 1 mg lorazepam, if needed, was prescribed. The patient presented negative thoughts but claimed not to have suicidal thoughts and committed to asking for help in case of recrudescence of suicidal ideation. Care measures were applied (close supervision even while patient dresses, no active surveillance of suicidal risk). The day following the admission, the patient benefited from a medical interview. Complex auditory hallucination was objectified. At the end of the meeting, the patient immediately ran to the roof of the hospital and jumped. He died shortly after.

3.2.4. Case 4

An 18-year-old man with a first voluntary hospitalization in psychiatry. During the stay, the patient ran from the unit and presented several episodes of intense suicidal thoughts. Initially, the patient benefited from treatment with olanzapine (2.5 mg) and lorazepam (2.5 mg). Numerous suicidal crises were assessed during hospitalization (nurse follow-up during travel and while patient dressed, intensification of suicidal surveillance), and the treatment was adapted with citalopram (40 mg) and quetiapine (800 mg). After almost 4 weeks of hospitalization, the patient seemed to get better. The future exit of the unit was discussed. Despite the regular assessment of suicide risk and the good alliance with the healthcare team, the next day, the patient was found hanged in his bathroom with a pillowcase.

3.2.5. Case 5

A 42-year-old man. The patient suffered from bipolar symptoms following a divorce and one episode of depression. The patient underwent involuntary hospitalization for a suicide attempt (venesection) and severe depression. During hospitalization, a mixed state was described, and the diagnosis of bipolar disorder was discussed. A treatment of mirtazapine (15 mg), lorazepam (2.5 mg), and zolpidem (10 mg) was given upon admission. Coercive measures were applied (close surveillance, active surveillance of suicide risk). The patient claimed to have no suicidal or black thoughts and to commit to appealing for help in case of recrudescence of suicidal ideation. After less than 24 h of hospitalization, the patient fled from the unit and committed suicide by throwing himself on a train.

3.2.6. Case 6

A 36-year-old woman, with two prior episodes of depression. The patient was hospitalized for a severe episode of depression. A treatment with citalopram (10 mg), quetiapine (25 mg) and lorazepam (1 mg) was given. Since the patient presented suicidal thoughts and could not engage herself to commit to appealing for help, her movement was restricted to the unit; however, no specific surveillance was applied, and no proper therapeutic alliance was established. The second day of hospitalization, the patient fled from the hospital during the transfer to a mother-baby unit. She committed suicide by throwing herself under a train.

3.2.7. Case 7

A 28-year-old man, with two prior episodes of depression and a history of substance dependence (heroin, alcohol, cannabis). The patient was hospitalized for an episode of severe depression with suicidal thoughts and slight psychotic symptoms with no hallucinations. The antipsychotic was quickly stopped (haloperidol) as were the antidepressants (mirtazapine). A switch of antidepressants was not fulfilled, as the new antidepressant was also stopped within 10 days due to slight side effects (sertraline), and the patient had only a quetiapine treatment (150 mg per day). The suicide risk was not properly assessed even with regard to the modification of treatment. The therapeutic alliance was appropriate, and the patient saw an intern a few times per week. The patient fled from the hospital in the morning, was not searched for by the healthcare team and was found dead at midday outside the hospital.

4. Discussion

4.1. Discussion of the reported cases of the reported cases

Our review of the cases indicates that despite all efforts and coercive or close surveillance measures, suicide often defies predictability. A diminution of suicide in many countries, as in Switzerland in recent decades, is observed (Kaision & Gasser, 2016), as a result of national and international guidelines on suicide prevention and risk management (WHO, 2018). In the case of suicide and criminal prosecution, it is important to note that the legal logic does not match the medical logic. Indeed, for the justice system, practitioners must prevent suicide with acknowledgement of the rules of the trade, on one hand, by respecting current guidelines and medico-legal standards, and on the other hand, by implementing all the necessary means to prevent suicide. Nevertheless, for the justice system, the implementation of recognized guidelines is not a sufficient justification to release the doctors and institutions from responsibility.

A broad list of widely used clinical measures remain largely without evidence and mostly to apply a sense of control to a distressing situation (e.g., contract of safety, closed ward measure, suicide risk assessment instruments). Moreover, achieving the balance between the patient's degree of freedom and adaptation to clinical improvement constitutes a difficult challenge for practitioners.

The question that arises is what does it mean to implement all the necessary means to avoid suicide? By using evidence-based medicine literature and more deeply examining the described cases, we can distinguish the interventions that could be efficient and recommended, from those that have no evidence-based effect on the reduction of suicide risk; thereafter, we will present some medico-legal standards illustrated by clinical caveats and pitfalls concerning suicide risk management.

4.2. Review of current standards in suicide prevention

4.2.1. Clinical practice guidelines

In most countries, clinical practice guidelines established by medical societies for the assessment and treatment of patients with suicidal behaviour exist and are commonly applied in daily practice (NICE,

2020; WHO, 2018). Training practitioners to adhere to clinical practice guidelines directs more attention to the evaluation of suicide risk during treatment; however, the benefit of such training to suicidal patients is unclear, as is the reduction of death by suicide (de Beurs et al., 2016).

Despite the research and development of evidence-based interventions that target suicidal behaviour, there is no empirical support of the effectiveness of these guidelines in the clinical environment; however, one meta-analysis presents the efficacy of interventions for suicide prevention, particularly multilevel interventions, with a small effect size on the diminution of completed suicides and suicide attempts, in particular in psychiatric wards (Hofstra et al., 2019). Of importance, in some situations such measures could be counterproductive, as they focus on a rational and outcome-driven evaluation rather than on the identification of the motivation and context of the suicidal crisis (Smith et al., 2015). Indeed, focusing on pre-established rational measures to reduce suicide risk is not as essential as the construction of a strong therapeutic alliance with the patient (Dunster-Page, Haddock, Wainwright, & Berry, 2017).

4.2.2. Suicide risk assessment

Despite the use of risk scales to help identify suicide risk factors in an attempt to categorize the degree of emergency, evidence suggests that this routine practice may be of limited value and may even be confusing for professionals (Mulder, Newton-Howes, & Coid, 2016). This risk assessment may provide false reassurance for clinicians and cannot be the basis of clinical decision-making (Runeson et al., 2017). For instance, in one study, patients with an absence of medical history had less suicide communication, performed suicidal acts more rapidly after admission and used more violent suicidal methods than the psychiatric inpatients (Cheng, Hu, & Tseng, 2009). The clinician's task of suicide risk assessment remains hard; for risk assessment information should be gathered from all relevant sources (e.g., relatives and ambulatory caregivers) that can, for example, reveal the presence of psychotic symptoms not identified during the clinical evaluation (Fredriksen et al., 2017; Yates et al., 2019). Therefore, the identification of risk factors for suicide should be seen as a step towards an effective management of suicidal patient but not as an endpoint in itself (Bostwick, Pabbati, Geske, & McKean, 2016).

Importantly, decisions should be the product of an interdisciplinary team discussion on the basis of a relational approach to engagement with the patient (Hofstra et al., 2019). Good training of the multidisciplinary team is also of major importance to avoid any inappropriate reaction leading to a dysregulated system response, such as the banalization of some situations, the distress of recurrent suicidal patients, or negative affect transfers (Le Moal, Lemey, Walter, & Berrouiguet, 2018). Some of our cases refer directly to information transmission (cases 5, 6) and psychosis assessment (cases 3, 6).

Finally, since suicide risk is not limited to the suicide crisis, daily evaluation of the patient is necessary. Two of our cases show that suicide can occur many weeks after the initial suicidal crisis, following several attempts (case 4) or an initial amendment of suicidal thought (case 1). An individualized suicide risk reduction plan should be established in cooperation with every patient and, if possible, with relatives or a person of confidence (Berrouiguet, Courtet, Larsen, Walter, & Vaiva, 2018; Luxton, June, & Comtois, 2013).

4.2.3. The contract for safety

One widely practised intervention for suicidal ideation is the use of 'contracts for safety', or 'no-harm contracts' (Kelly & Knudson, 2000). Developing a therapeutic alliance with the patient is of major importance. However, there is no evidence that the contract for safety reduces suicide (case 1, 2 and 3) neither does it protect practitioners from malpractice litigation (Garvey, Penn, Campbell, Esposito-Smythers, & Spirito, 2009). Furthermore, the evaluation of the medical decision-making capacity of a patient living through a suicidal crisis is extremely complex.

4.2.4. Access to lethal means

Reducing the access of highly suicidal patients to lethal means during the suicidal crisis is important, as the availability of methods influences the choice of method (Johnson, Frank, Ciocca, & Barber, 2011). An inconsistency often found in clinical situations, in particular during the suicidal crisis, is the withdrawal of personal effects to reduce access to possible methods of suicide but without proper monitoring of the patient. When the suicidal crisis is identified, it is very important to make sure that the patient does not have access to any lethal means; however, adequate surveillance is more relevant because high-risk suicidal patients can easily obtain access to lethal means even in closed rooms (e.g., the patient may use clothing for strangling or may hit walls) (Barber & Miller, 2014). One case illustrates this challenging task (case 4).

4.2.5. Monitoring and means restriction

Upon identification of a suicidal crisis, adequate monitoring must be assured (Carrigan & Lynch, 2003). Since suicidal patients requiring intensive care, this can lead to complex situations, particularly when the healthcare team is over-worked or simply understaffed (Bassett & Tsourtos, 1993). Additionally, the monitoring of suicidal risk includes the prevention of escapes and successful transport to other facilities. One typical example is the closed ward measure, which is for courts a protective measure for the patient, despite the lack of evidence that it reduces suicide risk in practice. In one of our cases (case 5), the suicidal patient was not evaluated his first morning in the hospital due to an understaffed healthcare team; the patient ran from the hospital and committed suicide. Even if direct links cannot be drawn, it is of major importance that appropriate human means be deployed to take care of such acute and sub-acute cases (Dunster-Page et al., 2017). Another intervention is the multi-patient room setting for suicide prevention. To our knowledge, no proof exists that this practice helps reduce suicide; moreover, the other patients could be exposed to unforeseen consequences.

4.2.6. Evidence-based treatment for suicidality in adults

In the beginning of the 1990s, antidepressants were suspected to precipitate suicide in some cases, in particular selective serotonin reuptake inhibitors (fluoxetine), but no evidence of increased suicide risk was found (Beasley Jr. et al., 1991). However, several meta-analyses have shown an increase in suicidal ideation during antidepressant patients in young patients, which has the lead the United States Food and Drug Administration to issue a warning requiring patients be informed of a potential rise of suicidal risk during the initiation of antidepressants and to be monitored adequately (Kaizar, Greenhouse, Seltman, & Kelleher, 2006). Current recommendations are that antidepressants are efficient for the treatment of depression. Effective treatment of depression should reduce suicide risk and untreated depressed patients present a higher risk of suicidality than treated patients (Angst, Stassen, Clayton, & Angst, 2002), but evidence for a specific antisuicidal effect of antidepressants is sparse. Another possible treatment for the short-term reduction of severely depressed patients is electroconvulsive therapy (UKECTGroup, 2003).

For long-term reduction of suicide risk there is evidence for a beneficial effect of lithium, clozapine (Bastiampillai, Sharfstein, & Allison, 2017; Cipriani, Hawton, Stockton, & Geddes, 2013). Psychotherapy, such as cognitive-behaviour therapy and dialectal behaviour therapy in specific populations (Linehan et al., 2015).

Commonly, treatments are administered for their sedative or antipsychotic action during the acute suicidal crisis, as recent evidence suggests that agitation is a specific factor linked to the severity of the suicidal risk (Bryan et al., 2014).

Furthermore, new evidence underlines that a single dose of intravenous ketamine could be an interesting treatment for the reduction of suicidal ideation during acute phases, yet additional research is needed before clinical implementation (Wilkinson et al., 2018).

5. Discussion

5.1. Medico-legal standards to complete individualized suicide risk reduction plan

For most legal systems, the healthcare team has no obligation regarding results, but it has obligation regarding the means. Based on a descriptive review of the literature, the cases considered above and the authors' clinical practice, we present recommendations for medico-legal standards that should be mandatory for all suicidal patients around three aspects: the initial evaluation, the treatment and the surveillance of the suicidal risk.

5.2. Medico-legal standards for the initial evaluation of suicidal risk

- Measures applied to evaluate the suicidal risk should be based on evidence-based.
- Specific measures should be adapted to each unique situation to establish a strong therapeutic alliance.
- Considering that suicide risk assessment instruments have insufficient diagnostic accuracy, suicide risk assessment should be seen as a step towards the suicide assessment, but not as an endpoint in itself.
- All possible information should be gathered from all relevant sources, in particular concerning possible psychotic symptoms, previous suicide attempt or established suicide projects.
- Individualized suicide risk reduction plans should be the product of an interdisciplinary team discussion on the basis of a relational approach to engagement with the patient.

5.3. Medico-legal standards for the treatment of suicidal risk

- A strong therapeutic alliance should be established with the patient, as the quality of therapeutic alliance can impact suicidal thoughts, self-harm and suicide attempts.
- Although no drug therapy has proven efficiency for short-term reduction of suicide risk, antipsychotics, antidepressants, mood stabilizers and sedative treatments, given at an appropriate dose, should be considered.

5.4. Medico-legal standards for surveillance of suicide risk

- A follow-up plan, with frequent close contacts during the days after the attempt should be discussed. Close surveillance in the patient room can also be necessary in cases of high or imminent suicidal risk.
- Patients should be followed regularly as warranted by the level of risk, bearing in mind that risk fluctuates, particularly if the patient's situation changes. Therefore, complete daily evaluation and documentation covering all given care is fundamental (e.g., clinical aspects of suicide risk assessment, monitoring of treatment, coercive measures), as it supports the transmission of information by the relatives and between all healthcare team members.
- A proper follow-up must be organized for patients who are discharged, with involvement of involve the patient's family and support system, in particular when presenting high-risks factors of suicide.

5.5. Limitations

The main limitation of our study is the complex topic of suicidality at the crossroads of philosophical, ethical and legal perspectives, added to the discrepancy of evidence. Another limitation is the nature of the data, the number of cases gathered, and the absence of consideration of the assisted suicide question and practice.

6. Conclusions

Our cases illustrate the difficult task of suicide management in psychiatry and remind practitioners that the forensic dimension is part of suicide prevention procedures. The literature on the subject reflects that causes of suicide remain hard to comprehend and that most practices have little to no evidence for the reduction of suicide risk. Clinical decisions should be made on a case-by-case basis throughout an individualized suicide risk reduction plan. The limited evidence for the management of a core challenge of psychiatry clearly shows that continued research is needed on development of more multilevel interventions with individualized suicide risk reduction plans.

Ethics approval and consent to participate

Research ethics approval was received from the Swiss Ethic Committes. Registry number - Basec 2018-02289.

Consent for publication

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Author contributions

GN selected and conducted anonymization of all cases. MS conducted the data extraction. MS and GN collaborated on the scoping review. All authors read and approved the final manuscript.

Declaration of Competing Interest

Stefan Kaiser has received royalties for cognitive test and training software from Schuhfried. Michel Sabe and Gerard Niveau declare no conflict of interest.

References

UKECTGroup. (2003). Efficacy and safety of electroconvulsive therapy in depressive disorders: A systematic review and meta-analysis. *Lancet, 361*, 799–808.

WHO. (2016). In W. H. Organization (Ed.), *Global Health Estimates 2015: Deaths by cause, age, sex, by country and by region, 2000–2015*. Geneva: World Health Organization.

WHO. (2018). In W. H. Organization (Ed.), *National suicide prevention strategies: Progress, examples and indicators*.

Angst, F., Stassen, H. H., Clayton, P. J., & Angst, J. (2002). Mortality of patients with mood disorders: Follow-up over 34-38 years. *Journal of Affective Disorders, 68*, 167–181.

Barber, C. W., & Miller, M. J. (2014). Reducing a suicidal person's access to lethal means of suicide: A research agenda. *American Journal of Preventive Medicine, 47*, S264–S272.

Bassett, D., & Tsourtos, G. (1993). Inpatient suicide in a general hospital psychiatric unit. A consequence of inadequate resources? *General Hospital Psychiatry, 15*, 301–306.

Bastiampillai, T., Sharfstein, S. S., & Allison, S. (2017). Increasing the use of lithium and clozapine in US suicide prevention. *JAMA Psychiatry, 74*, 423.

Beasley, C. M., Jr., Dornseif, B. E., Bosomworth, J. C., Sayler, M. E., Rampey, A. H., Jr., Heiligenstein, J. H., … Masica, D. N. (1991). Fluoxetine and suicide: A meta-analysis of controlled trials of treatment for depression. *BMJ, 303*, 685–692.

Berrouiguet, S., Courtet, P., Larsen, M. E., Walter, M., & Vaiva, G. (2018). Suicide prevention: Towards integrative, innovative and individualized brief contact interventions. *European Psychiatry, 47*, 25–26.

de Beurs, D. P., de Groot, M. H., de Keijser, J., van Duijn, E., de Winter, R. F., & Kerkhof, A. J. (2016). Evaluation of benefit to patients of training mental health professionals in suicide guidelines: Cluster randomised trial. *The British Journal of Psychiatry, 208*, 477–483.

Bostwick, J. M., Pabbati, C., Geske, J. R., & McKean, A. J. (2016). Suicide attempt as a risk factor for completed suicide: Even more lethal than we knew. *The American Journal of Psychiatry, 173*, 1094–1100.

Bryan, C. J., Hitschfeld, M. J., Palmer, B. A., Schak, K. M., Roberge, E. M., & Lineberry, T. W. (2014). Gender differences in the association of agitation and suicide attempts among psychiatric inpatients. *General Hospital Psychiatry, 36*, 726–731.

Carrigan, C. G., & Lynch, D. J. (2003). Managing suicide attempts: Guidelines for the primary care physician. *Primary Care Companion to the Journal of Clinical Psychiatry, 5*, 169–174.
Cheng, I. C., Hu, F. C., & Tseng, M. C. (2009). Inpatient suicide in a general hospital. *General Hospital Psychiatry, 31*, 110–115.
Christiansen, E., & Jensen, B. F. (2007). Risk of repetition of suicide attempt, suicide or all deaths after an episode of attempted suicide: A register-based survival analysis. *The Australian and New Zealand Journal of Psychiatry, 41*, 257–265.
Chung, D. T., Ryan, C. J., Hadzi-Pavlovic, D., Singh, S. P., Stanton, C., & Large, M. M. (2017). Suicide rates after discharge from psychiatric facilities: A systematic review and meta-analysis. *JAMA Psychiatry, 74*, 694–702.
Cipriani, A., Hawton, K., Stockton, S., & Geddes, J. R. (2013). Lithium in the prevention of suicide in mood disorders: Updated systematic review and meta-analysis. *Bmj, 346*, f3646.
Crosby, A., Ortega, L., & Melanson, C. (2011). *Self-directed violence surveillance: Uniform definitions and recommended data elements* (1.0 ed.). Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.
Dunster-Page, C., Haddock, G., Wainwright, L., & Berry, K. (2017). The relationship between therapeutic alliance and patient's suicidal thoughts, self-harming behaviours and suicide attempts: A systematic review. *Journal of Affective Disorders, 223*, 165–174.
Fredriksen, K. J., Schoeyen, H. K., Johannessen, J. O., Walby, F. A., Davidson, L., & Schaufel, M. A. (2017). Psychotic depression and suicidal behavior. *Psychiatry, 80*, 17–29.
Garvey, K. A., Penn, J. V., Campbell, A. L., Esposito-Smythers, C., & Spirito, A. (2009). Contracting for safety with patients: Clinical practice and forensic implications. *The Journal of the American Academy of Psychiatry and the Law, 37*, 363–370.
Hofstra, E., van Nieuwenhuizen, C., Bakker, M., Ozgul, D., Elfeddali, I., de Jong, S. J., & van der Feltz-Cornelis, C. M. (2019). Effectiveness of suicide prevention interventions: A systematic review and meta-analysis. *General Hospital Psychiatry, 63*, 127–140.
Jayaram, G. (2014). Inpatient suicide prevention: Promoting a culture and system of safety over 30 years of practice. *Journal of Psychiatric Practice, 20*, 392–404.
Johnson, R. M., Frank, E. M., Ciocca, M., & Barber, C. W. (2011). Training mental healthcare providers to reduce at-risk patients' access to lethal means of suicide: Evaluation of the CALM Project. *Archives of Suicide Research, 15*, 259–264.
Kaision, J., & Gasser, J. (2016). Suicide et institution psychiatrique : l'exemple lausannois. *Revue Médicale Suisse, 2*, 1574–1578.
Kaizar, E. E., Greenhouse, J. B., Seltman, H., & Kelleher, K. (2006). Do antidepressants cause suicidality in children? A Bayesian meta-analysis. *Clinical Trials, 3*, 73–90 (discussion 91-78).
Kelly, K. T., & Knudson, M. P. (2000). Are no-suicide contracts effective in preventing suicide in suicidal patients seen by primary care physicians? *Archives of Family Medicine, 9*, 1119–1121.
Le Moal, V., Lemey, C., Walter, M., & Berrouiguet, S. (2018). Viewpoint: Toward involvement of caregivers in suicide prevention strategies; ethical issues and perspectives. *Frontiers in Psychology, 9*, 2457.
Linehan, M. M., Korslund, K. E., Harned, M. S., Gallop, R. J., Lungu, A., Neacsiu, A. D., … Murray-Gregory, A. M. (2015). Dialectical behavior therapy for high suicide risk in individuals with borderline personality disorder: A randomized clinical trial and component analysis. *JAMA Psychiatry, 72*, 475–482.
Luxton, D. D., June, J. D., & Comtois, K. A. (2013). Can postdischarge follow-up contacts prevent suicide and suicidal behavior? A review of the evidence. *Crisis, 34*, 32–41.
Martelli, C., Awad, H., & Hardy, P. (2010). In-patients suicide: epidemiology and prevention. *Encephale, 36*(Suppl. 2). D83-91.
Matsubayashi, T., & Ueda, M. (2011). The effect of national suicide prevention programs on suicide rates in 21 OECD nations. *Social Science & Medicine, 73*, 1395–1400.
Mulder, R., Newton-Howes, G., & Coid, J. W. (2016). The futility of risk prediction in psychiatry. *The British Journal of Psychiatry, 209*, 271–272.
NICE. (2020). *Preventing suicide in community and custodial settings (NG105)*.
Olfson, M., Wall, M., Wang, S., Crystal, S., Liu, S. M., Gerhard, T., & Blanco, C. (2016). Short-term suicide risk after psychiatric hospital discharge. *JAMA Psychiatry, 73*, 1119–1126.
Runeson, B., Odeberg, J., Pettersson, A., Edbom, T., Jildevik Adamsson, I., & Waern, M. (2017). Instruments for the assessment of suicide risk: A systematic review evaluating the certainty of the evidence. *PLoS One, 12*, Article e0180292.
Sher, L. (2015). Suicide medical malpractice: An educational overview. *International Journal of Adolescent Medicine and Health, 27*, 203–206.
Shin, H., Kim, H. J., Kim, S., Choi, S., Oh, H., & Lee, B. (2018). Should let them go? Study on the emergency department discharge of patients who attempted suicide. *Psychiatry Investigation, 15*, 638–648.
Smith, M. J., Bouch, J., Bradstreet, S., Lakey, T., Nightingale, A., & O'Connor, R. C. (2015). Health services, suicide, and self-harm: Patient distress and system anxiety. *Lancet Psychiatry, 2*, 275–280.
Suominen, K., Henriksson, M., Suokas, J., Isometsa, E., Ostamo, A., & Lonnqvist, J. (1996). Mental disorders and comorbidity in attempted suicide. *Acta Psychiatrica Scandinavica, 94*, 234–240.
Wilkinson, S. T., Ballard, E. D., Bloch, M. H., Mathew, S. J., Murrough, J. W., Feder, A., … Sanacora, G. (2018). The effect of a single dose of intravenous ketamine on suicidal ideation: A systematic review and individual participant data meta-analysis. *The American Journal of Psychiatry, 175*, 150–158.
Wurst, F. M., Kunz, I., Skipper, G., Wolfersdorf, M., Beine, K. H., Vogel, R., … Thon, N. (2013). How therapists react to patient's suicide: Findings and consequences for health care professionals' wellbeing. *General Hospital Psychiatry, 35*, 565–570.
Yates, K., Lång, U., Cederlöf, M., Boland, F., Taylor, P., Cannon, M., … Kelleher, I. (2019). Association of psychotic experiences with subsequent risk of suicidal ideation, suicide attempts, and suicide deaths: A systematic review and meta-analysis of longitudinal population studies. *JAMA Psychiatry, 76*, 180–189.