

**ALEXANDRE Y.** Today we will talk about assessing and managing suicidal risk in old people. I have nothing to disclose. And I  
**DOMBROVSKI:** would like to acknowledge collaborators who contributed to our research on old age suicide and also the funding agencies that supported it.

The main points of today's talk is that older white men are at highest risk for suicide, that That means that you need to worry about primarily are the firearms, that in older people, psychosis and addiction are risk factors for suicide that clinicians often miss, that in the therapeutic relationship, your main weapon is your rapport with the patient.

It's important to talk to other clinicians who are involved in the case, to pay attention to the patient's communications, to manage your own feelings about the person's distress and their suicidal thoughts and behavior, and to also treat severe refractory mood disorders aggressively and consider options such as lithium and electroconvulsive therapy that may have specific anti-suicidal activity.

Let's first talk about the basics of suicidal risk. In most countries of the world, suicide rates increase throughout the life. And in almost every country, you see this increase in older males. That even includes China, where suicide rates are overall higher in females.

This picture is similar in the United States as shown in this data from the CDC. And in the US, this is also moderated by race, such that older white men, after the seventh decade of life, seem to have skyrocketing suicide rate that keeps going up as people age.

Suicidal behavior is more serious and determined in old age than in younger people. And this was shown in a multi-center European study by Diego DeLeo and colleagues who showed that in older males, for every completed suicide, there was only 1.2 suicide attempt.

And this ratio was 3.3 to one in older females. And that compares to about 200 to one, 200 suicide attempts per one completed suicide, that you see in, say, younger females. So this suggests that you ought to worry almost 100 times more about an older white male at risk for suicide than about a younger female patient.

In the United States, firearms are the main method of completed suicide in older males. As you see, they account for 80% of deaths. This figure is a bit lower in females where we see more overdoses.

One question is whether the mere access to firearms represents a risk factor or whether people who are determined to end their life would have found another lethal means. And studies by Yeates Conwell and colleagues and the review of the evidence by the Institute of Medicine Panel suggest that in older adults, the mere access to firearms seems to be a risk factor for suicidal behavior. And perhaps the same is true of adolescents.

The lay stereotype of older age suicide is that as Thomas Szasz, one of the founders of anti-psychiatry, said, it's a free and dignified answer to the insufferable burdens of old age. However, the evidence shows that the main factor contributing to suicide in old age is depression. And if we go back over 100 years, Emil Kraepelin in his textbook said that the tendency to commit suicide is more pronounced and more to be guarded against in melancholia than in any other form of mental disease. And by melancholia, he meant what we now refer to as late life depression.

This notion is upheld by recent studies. And the finding that depression is the main contributing factor is very robust. So you can see this Swedish study by [INAUDIBLE] and colleagues that finds that different forms of depression, major and minor, recurrent and single episode, have the highest odds ratio for completed suicide in this psychological autopsy study.

And the other contributing factors are substance use disorders, addiction, and psychosis. And anxiety and sleep disorders here appear to make a smaller contribution. The findings of this New Zealand study by [INAUDIBLE] and colleagues are similar, showing that mood disorder seems to predispose to suicide risk, as well as psychiatric hospital admission in the last year.

The findings for physical illness are less consistent. However, these two studies, again, the Swedish study from [INAUDIBLE] and the Canadian population-based study by [INAUDIBLE] and colleagues showed that malignancy, neurological disorders, visual impairment that can be very painful and disabling in older adults, seizures, and severe pain seem to be the risk factors.

However, I should say that these findings are not universally replicated. And the notion that certain physical illnesses predispose to suicidal behavior remains controversial.

Of course, the past behavior is the best predictor of the future. And many people who die by suicide had previous suicide attempts. However, the Swedish study by [INAUDIBLE] and colleagues found that 70% of male older suicide victims died in their first suicide attempt, mirroring the findings of the European multi-site study showing that the first suicide attempt could be lethal in an older man.

What about suicidal ideation? The longitudinal follow-up study by Aaron Beck and colleagues at the University of Pennsylvania shows that it's the suicidal ideation at the deepest, worst point in the patient's life that seems to be most predictive of old-age suicide.

And clinically, for us this means that when you interview a patient, what one needs to pay attention to is not only the current suicidal ideation, but also how deep they went in the previous depressive episode. So the key question here is, when was a time in your life when you were the closest to ending your life? And how close were you?

One useful way to think about suicidal risk is the stress diathesis model. Here is a version of this model that was proposed by John Mann and colleagues. And you can think of this as the who column, people who are primarily vulnerable to suicidal behavior and carry the diathesis, and the when column, which is the description of stressors that might trigger suicidal behavior.

So factors in the who column include impulsivity and aggression, which, however, may play a stronger role in younger adults than in older adults, and the enduring hopelessness that has been noted in the original studies of Aaron Beck. And this finding has been replicated in many studies since.

When you think about stressors, conventionally, we think of a psychosocial crisis. However, John Mann suggests that the illness is also a stressor. And it's an indication of when suicidal risk is the highest. And that applies to the findings regarding depression, psychosis, and addiction that we just reviewed.

So you can see the diathesis and the stress interacting like a lock and key to produce suicidal behavior. And that's the notion that should guide our risk assessment.

What about the personality and social components of vulnerability? The data from the Gustavo Turecki Group in Montreal suggests that impulsive, aggressive traits, which are a very robust risk factor in younger adults, seem to play a smaller role in late-life suicide.

On the other hand, anxious, avoidant, and anankastic, meaning obsessional, personality traits, are common in older suicide victims. Our own behavioral and brain imaging work at the University of Pittsburgh suggests that there are subgroups of impulsive and non-impulsive patients who engage in suicidal behavior in old age.

The other factor is social isolation and conflict. And many studies have shown that loneliness, bereavement, and especially divorce, family discord, and chronic interpersonal problems often characterize people who attempt to take their life or die by suicide in old age.

What about the cognitive components of vulnerability? Scandinavian cohort studies that have followed military recruits throughout their life have conclusively shown that lower IQ in young age seems to be associated with emergent suicidal behavior, both attempted and completed suicide, at a later age. But what are the components of cognition that seem to be particularly affected in people who are at risk for suicide?

And the case control studies both in midlife got a lot of data from the Columbia Group, headed by John Mann, with John Kilp reporting on samples of midlife suicide attempters, data from the Rochester Group, and our own data suggests that executive function, or the ability to plan your actions and have higher order representations of what is the task and how do you accomplish it, seems to be particularly disrupted in people who attempt suicide.

Another emerging area of research on suicidal risk concerns decision making. One thing that you note often clinically is a discrepancy between how intelligent the person is and how hard they try to work and the poor level of functioning in real life. And often, we see that this poor functioning is due to the bad decisions they make.

And our own experimental work of the University of Pittsburgh seems to isolate several patterns of disadvantageous or maladaptive decision making that are present in older people who attempt to take their life. And that includes decisions that are overly present focus and focus too much on the here and now and neglect the future.

So one famous quote here is that suicide is a permanent solution to a temporary problem. And someone who is too focused on the current suffering may neglect the rewards that await them later in life and also the deterrents that are important to other people in their future.

Another style of decision making that we note is a way of making decisions that's careless and that ignores important information, where decisions are made despite the knowledge that it's probably a bad thing to do. And the final vulnerability in the decision style that we see is the over reactivity to aversive experiences and punishments that's characteristic of depressive patients, where a single aversive experience, such as a negative interaction with a family member or a colleague, can undermine the person's coping strategy.

Let us now talk more about the practical issues that arise in managing people who may be at risk for suicide. Here I will discuss some of the points raised in a very interesting clinical paper published by Herbert Hendin and colleagues in the *American Journal of Psychiatry* in 2006, where the investigators interviewed psychotherapists whose patients ended up dying by suicide and uncovered a number of problems that often arise in treatment.

The first of them is the failure to communicate with another therapist. And what often happens is that a patient is treated by a psychiatrist and a psychotherapist. And both may be concerned about suicidal risk. But without talking to each other about this concern, the window of risk may be missed.

The other issue that is often noted is permitting the patient to control the therapy. And that may range from, Doctor, I can only see you every three months, because I live two hours away, to restricting treatment options when patients are unwilling to consider aggressive treatment, to declaring certain areas off limits to clinicians. And these areas can include addiction, drinking problem, the suicidal thoughts themselves, eating behavior, sexuality, and so on.

The next problem is the avoidance of issues related to sexuality. We often assume our older patients to be asexual, perhaps as an ageist stereotype or just because there are so many other problems that need to be addressed. However, there are certain sexual problems that are particularly toxic to older people. And they can trigger suicidal behavior. These include conflict over sexual orientation, sexual dysfunction, particularly in older men, and also pornography, which can be a very explosive and divisive issue in older couples.

I think what's in common for these three issues is that they often are associated with a lot of guilt for the patient. And also, there isn't anyone in their family or among their friends that they can talk to. So because of shame and guilt, these issues may be neglected in the treatment relationship, as well, which is the only place, really, the only safe place, where these things can be talked about.

At Western Pennsylvania, for example, it's still not uncommon to see older gay men living in a marriage of convenience who are very conflicted about their desire for a gay sex life and their guilt about that. And that often leads to conflict and tension. Another issue that you see is a conflict in the family over sexual orientation of a child, where the family ends up being divided. And people have conflicted feelings that they cannot talk about.

And finally, erectile dysfunction is very common in old men. And it undermines their sense of self, their self-esteem. And they feel often hopeless about it. And they feel a lot of guilt toward their partner.

The next problem has to do with ineffective or coercive actions arising from the therapist's anxieties. And this goes back to the larger need for a supportive structure in treatment that is not limited to the suicidal crisis. What often happens is that at a moment when the treater becomes aware of intense suicidal thoughts, the treater himself or herself feels very anguished, and threatened, and very worried.

And there is a lot of focus on getting the patient admitted to the hospital, which is quite appropriate. But this often leads to a clash with a patient. And while in the crisis, the clinician is very present and tries to intervene, the problem is often that the patient feels forced and trapped. And most importantly, it seems to undermine the therapeutic relationship.

This is a very difficult issue, because it's hard to avoid the need for, say, an involuntary commitment. However, as involuntary commitments are handled, it's important to emphasize the overall structure of the therapeutic relationship, that this is only one step in the treatment, that the clinician will continue to work with the patient and also not to burn out and to be able to follow up with a patient after they are in the hospital, especially after they are discharged from the hospital.

Finally, it's important to be in touch with one's own anxieties and feelings about the patient's suicidal thoughts or about their attempt to take their life. It's very easy to become infected with the patient's hopelessness and feel that there is nothing left for them. On the other hand, it's very easy to become angry at a patient who is being self-destructive. And here, supervision, and discussion with colleagues, and working as a team along with the patient's therapist are the strategies that help.

The next problem has to do with failing to recognize the meaning of patients' communication. People who are thinking about committing suicide are almost always ambivalent. And there's always a desire to be rescued and to get help. However, there may be also a strong desire to end their life. As a result, what we hear from patients may be very confused and ambiguous.

So the warnings that the patients give us about their imminent suicide attempt may be hard to read. And when we hear from a patient that they are considering suicide, but what's stopping them is their family, for example, we may be falsely reassured by the deterrent. And we may fail to hear the seriousness of the patient's intentions. Other warnings may include final preparations, such as taking care of finances, the house, and living directives for the family.

The final problem has to do with untreated or undertreated symptoms. Often these symptoms are in difficult areas. The two that I have already mentioned that have emerged from the psychological autopsy studies are addiction and psychosis.

Alcohol is probably the biggest player among the addictions in suicidal behavior. In this country, about a third of suicide victims are found to have alcohol in their system and often at a low level of about 0.03 or less, suggesting that people commit suicide not in an alcoholic stupor, but rather at a milder stage of intoxication where their feelings, their decisions, are more subtly influenced by alcohol.

In countries in Eastern Europe where alcoholism and suicide are very prevalent, such as Russia and Belarus, one sees that over time, suicide deaths tend to track with other alcohol-related deaths, such as those from cirrhosis. And Belarus, which is the country with the highest suicide rate in the world among males, reports that 2/3 of suicide victims are found to have alcohol in their system.

People often neglect to bring up their alcohol problems to the clinician. And that's where we need to proactively question patients. And the other common pattern is missing a relapse in a patient who has been sober for many years. So that's something that should also be on the radar.

Also in the baby boomers, other addictions are becoming more common in old age. That includes heroin, psychostimulants, cocaine.

The next type of symptoms that is very often under-recognized is psychosis. So [INAUDIBLE], for example, who has done large psychological autopsy studies in Sweden, in Gothenburg, says that a lot of suicide victims had mild, under-recognized psychotic symptoms.

And it's very common in patients with late-life depression to see delusions of guilt and somatic delusions that might at first come across as just the depressive negative thoughts or a sub psychotic somatic preoccupation. And these delusions tend to be very disturbing to the patient. And often, patients find themselves in a situation where they feel that there is no other exit.

Another thing to look for are command auditory hallucinations. And those hallucinations are often under-recognized. And people might present with vague complaints when they are tormented with psychosis. One thing that clinicians often see is anxiety, which may be a psychotic anxiety related to that impossible experience.

One final type of symptoms that I would like to mention are symptoms of post-traumatic stress. Patients with trauma, as we know, are at risk for suicide. And these issues are very hard in treatment, because post-traumatic stress disorder is often treatment refractory. And we often see it in patients who have a complicated childhood history, and are difficult to treat otherwise, and have multiple problems, often including depression and addiction.

What one needs to particularly watch out for are triggers and the flare-ups of post-traumatic stress disorder symptoms. And these flare-ups are often associated with higher suicidal risk.

Let's now talk more about biological treatment options for treatment refractory mood disorders, which often predispose older adults to suicidal behavior. The only pharmacotherapy that has a strong evidence of support suggesting a true anti-suicidal effect at any age, is lithium. It's true for bipolar and unipolar depression, as we learn from the work of [INAUDIBLE] and colleagues in Boston.

Lithium can be difficult to use in older adults. And there is a very helpful study by Wilkinson's and colleagues done in the UK that shows how one can stratify the renal risks in patients who are receiving lithium and how patients who are at risk for hypovolemia, who have heart failure, who have a prior history of kidney disease and may have electrolyte disturbances, need to be monitored more closely and still can be maintained on lithium long term. This was a two-year study.

Another therapy for late-life mood disorders, including depression and psychotic depression, which is very hard to treat with pharmacotherapy, is electroconvulsive therapy. Recent studies show that ECT leads to a rapid resolution of suicidal symptoms, which is particularly important in older males. And it's even more important in the era of managed care, where hospital stays are very short. And it's crucial to get the patient better soon.

Electroconvulsive therapy is under utilized out of concerns about physical complications of ECT itself and anesthesia. And yet, studies have shown lower mortality rates in patients receiving electroconvulsive therapy than in comparison groups.

So in conclusion, of this talk, I would like to reiterate the main points about recognizing and managing suicidal risk in older adults. Again, older white men are the group that we should particularly focus on. We need to be concerned about access to firearms.

The types of symptoms that are often missed include psychosis and addiction. The therapeutic rapport with the patient is particularly important in preventing suicide. It's crucial to talk to other clinicians. It's important to pay attention to the patient's communications.

One needs to manage one's own feelings about patients who are in despair or are acting self-destructively. And finally, clinicians should consider aggressive treatments for refractory mood disorders, including lithium and electroconvulsive therapy.

This concludes today's talk. Thank you for your attention.