IN THE HIGH COURT OF NEW ZEALAND
WELLINGTON REGISTRY

CIV-2015-485-235

UNDER	The Declaratory Judgments Act 1908 and the New Zealand Bill of Rights Act 1990
BETWEEN	LECRETIA SEALES
	Plaintiff
AND	ATTORNEY-GENERAL
	Defendant

AFFIDAVIT IN REPLY OF RICHARD GLYNN OWENS
AFFIRMED 18th MAY 2015

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I, RICHARD GLYNN OWENS, Professor of Psychology, of Auckland, solemnly and sincerely affirm:

Introduction

1. I am a Professor of Psychology at the University of Auckland, specialising in the psychology of end of life care.

2. My background and expertise is outlined in my first affidavit filed with the Court, dated 24 April 2015.

3. In this affidavit I respond to the affidavits of certain of the Crown's witnesses and provide further evidence concerning the following:

   (a) The incidence of, and circumstances in which, New Zealand medical practitioners cause the death of their patients.

   (b) The distinction between a patient's rational decision to die ("**RDD**") and suicide.

   (c) The inability of palliative care to, in some instances, address all aspects of a patient's suffering.

4. I also respond in detail to the affidavit of Baroness Ilora Finlay.

5. To the extent I express opinions in this affidavit, I confirm that these matters are within my areas of expertise and experience. I confirm that I have read the High Court Code of Conduct for Expert Witnesses as set out in Schedule 4 of the High Court Rules. I agree to comply with that Code.

New Zealand practitioners cause patient death

6. I have read the affidavits of Amanda Landers and Dr Sinéad Donnelly.

7. I disagree with the proposition advanced in those affidavits that medical practitioners (in New Zealand or, where applicable, countries which prohibit aid in dying) do not cause the death of their patients.[1]

8. That is supported by my research into New Zealand medical practitioners and their involvement in bringing about the death of their patients, which I discuss below.

Research on New Zealand general practitioners

9. In 2000 I conducted, with my PhD student Kay Mitchell, a survey of New Zealand general practitioners to determine the prevalence of physician aided dying. The results were published in two co-authored peer-reviewed papers (annexed as exhibits "**RGO(2)1**" and "**RGO(2)2**"). Amongst other things, my research indicated that:

   (a) a similar percentage of deaths in patients cared for by New Zealand general practitioners result from doctors' actions taken

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1 See affidavit of Amanda Landers dated 4 May 2015 at [25] - [28]; and affidavit of Sinéad Donnelly (unsworn) May 2015 at [55].

with the intent of hastening death (without request) as in the Netherlands, where the law allows for assisted dying;

(b) the availability or non-availability of palliative care has no effect on physicians' decisions to act with intent to hasten death; and

(c) in over half the cases in which physicians brought about patient death, there was no discussion with the patient beforehand, despite almost a quarter of such patients being judged competent.

Methodology

10. That research collected information from an anonymous questionnaire previously used in Dutch and Australian studies, with appropriate adaptation for the New Zealand environment. An additional section was added relating to access to palliative care services. Given the use of the questionnaire previously used in other studies, it is possible to meaningfully compare results as between the countries.

11. We sought details from physicians regarding medical decisions at the end of life ("**MDEL**") made for the last death attended in the preceding 12 months and whether this was within the context of palliative care services. We obtained responses from over 1,000 New Zealand general practitioners.

Incidence of MDEL

12. Eighty-eight percent of the doctors who responded (approximately half of those approached) reported attending a death in the past 12 months. Sixty-three percent had made a medical decision that could hasten death. The last action before death ranged from decisions to withdraw or withhold treatment or increase the alleviation of symptoms with the probability that death would be hastened (61.8%), through to actions partly or explicitly taken to hasten death (32.6%). In 39 (5.6%) cases, the respondents had provided some form of physician aided death and 226 (32.6%) had taken actions partly or explicitly with the intention of hastening death. The latter actions would be indefensible under the principle of double effect.

13. Even if we assume (implausibly) that not one of our non-responders (we had a 48% response rate) had administered a drug with the intention of hastening death, it would still imply that 2.7% of deaths here are the result of actions taken with the intent of hastening death. I note also that the percentages refer to deaths, not doctors (doctors were simply asked about their last patient death). It is almost inevitable that some of the doctors had done nothing untoward on their last patient death, but would have taken such actions in previous cases – about which we weren't asking (our concern was to obtain estimates of the percentage of deaths which involved this kind of action, not the percentage of doctors who were doing so). The 2.7% is therefore a *minimum* figure for New Zealand general practitioners.

Availability of palliative care

14. Of all respondents, 88.9% indicated access to a multidisciplinary pain management or palliative care team and 97.8% of these indicated that they consulted with such a team. Two percent stated that they had access to such a team but did not use them; the main reason given being the physician had sufficient palliative care knowledge.

15. The research indicates that the intent to hasten death is not a consequence of the non-availability of palliative care. This suggests that palliative care did not always meet patients' needs. It is not known whether this is because the best palliative care was not available or because even the best care was insufficient to meet patients' needs.

Patient discussion

16. There was no discussion with the patient before the last MDEL in 54.8% (380) of the 693 cases where an MDEL was actioned. The patient not being judged competent (or not fully competent) to make the decision was the main reason given for no discussion. However in 23.1% (88) of these 380 cases the patient was judged competent by the doctor but there was no discussion. In 17% (65) cases, there was evidence that the patient had expressed a wish to have death hastened at a previous time.

Comparison with other countries

17. Our results were consistent with research elsewhere. Of the 1,100 general practitioners who had the opportunity to make a MDEL, 3.5% (39) provided a physician aided death. This compares with 3.7% of general practitioners in a 1991 Dutch study ("**Dutch study**").[2] The results indicate that the more serious the action taken, the more likely respondents were to estimate that life had been shortened and by a longer period. A similar effect was noted in the Dutch study.

18. So-called life-terminating acts without explicit request of the patient ("**LAWER**") drew widespread criticism of Dutch practices. However, subsequent research suggests that similar practices are occurring elsewhere and clearly have occurred in New Zealand. Of the deaths, 2.7% were LAWER. The proportion of physician aided deaths in which there was no prior discussion with the patient was higher in New Zealand than reported in the Netherlands, but similar to that in Belgium and Australia.

RDD is not suicide

19. I have read the affidavit of Robert George and wish to respond to his comments at paragraphs 80 - 85, which assert that there is no distinction between RDD and suicide.

20. With respect to Professor George, the distinction between RDD and suicide is reflective of an established body of academic literature and based on significant differences in the circumstances and decision-making processes of the person affected. The every-day terminology used by clinicians to describe a person who causes his or her own death

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2 Van der Maas PJ, van Delden JJM, Pijnenborg L. Euthanasia and other medical decisions concerning the end of life. Lancet. 1991;338, 669-674.

is not relevant to this distinction or the legitimacy of the psychological literature.

21. Rather, the critical point is encapsulated in the comments of Tony O'Brien in his affidavit: in the case of suicide, the person wants to die and will usually say so. In the case of RDD, the person wants to live, but only if an unbearably distressing state can be avoided.[3] In RDD, the person is aware they are dying in circumstances where (as discussed below) the best palliative care may not be able to alleviate their suffering. In one sense the dying person who makes a RDD is not, in fact, making the decision to end their life, but rather indicating a preference.

22. I agree with Mr O'Brien that there is a small but "important minority" who express a wish to die "at a time, in a place and in a manner of their choosing".[4] As Mr O'Brien notes, the characteristics of such patients are that they:[5]

    (a) are not depressed or otherwise exhibiting mental illness;

    (b) often are intelligent, controlling and analytical people; and

    (c) feel the need to continue to exercise the greatest possible level of control over their destiny.

23. Often members of this group appreciate they will continue to deteriorate in their illness, but do not wish to end their lives immediately; rather they wish to have control to do so in the future. It appears that Lecretia Seales falls within this category of persons.

24. Dr Sinéad Donnelly raises concerns about the motivations of people who may wish to die at paragraphs 79 - 82 of her affidavit.[6] In doing so, Dr Donnelly relies on a 2013 study conducted by Phillipa Malpas. Dr Donnelly fails to note that these same concerns have been responded to in detail by Malpas in correspondence between the two published in the New Zealand Medical Journal (annexed as exhibit "**RGO(2)3**") prior to the 2013 study.

Medical ethics are not affected

25. The frequent reference to medical ethics in some affidavits (for example, Dr Sinéad Donnelly's reference to the principle of *primum non nocere*, meaning "first do no harm")[7] is at best naïve (cutting off someone's legs does harm, but may be the best option in some circumstances). However, it also neglects a second of the four key principles of modern medical ethics, that of autonomy. Significantly, the option of aid in dying gives effect to this aspect of patient treatment.

26. In this regard I refer to Dr Harvey Chochinov's discussion of the sacrificing of a patient's "conscious awareness" through palliative sedation,[8] the presentation of which is seen as acceptable, legal, and not requiring the checks which are generally mandated for aid in dying

3 Affidavit of Tony O'Brien dated 6 May 2015 at [26].
4 Affidavit of Tony O'Brien dated 6 May 2015 at [26].
5 Affidavit of Tony O'Brien dated 6 May 2015 at [26] - [27].
6 Affidavit of Sinéad Donnelly dated 12 May 2015 at [79] - [82].
7 Affidavit of Sinéad Donnelly dated 12 May 2015 at [60].
8 Affidavit of Harvey Chochinov (unsworn) May 2015 at [51].

overseas (for example, there is no requirement for a second opinion, no formal monitoring, and no requirement for a repeated or sustained request). Yet, in my experience many people – both healthy individuals and patients - have stated unequivocally that being dead would be very preferable, as far as they're concerned, to being alive but unconscious.

The best palliative care cannot always address suffering

27. A number of the Crown's witnesses either explicitly state or appear to imply that palliative care, when properly applied, is able to fully alleviate a patient's suffering.

28. That is not consistent with my clinical experience and academic research.

29. As I discuss in paragraphs 7 and 8 of my first affidavit, my work of over 30 years has focused on working with patients at the end of their lives to relieve their suffering through palliative psychology. I agree with the comments of Simon Allen at paragraph 17 of his affidavit. Although I am a tremendous supporter of good palliative care, every individual's circumstances are different and in some cases the psychological suffering cannot be attenuated, even with the best support. If we are honest we have to admit that states of unbearable suffering cannot always be avoided.

30. From my knowledge of Lecretia Seale's condition, which I discuss at paragraphs 8 - 10 of my first affidavit, palliative psychology is unlikely to be able to address the emotional or psychological suffering that she experiences, which may arise from frustration at a lack of autonomy and dignity, or anxiety at the prospect of a painful death.

31. I note that my view that psychological suffering cannot always be addressed is also consistent with the evidence of some Crown witnesses, including Dr Roderick MacLeod,[9] and with Dr Harvey Chochinov, who states that "in spite of outstanding palliative care, there will always be individuals who in the course of approaching death, will want the option of assisted suicide".[10] Likewise, I agree with Dr Chochinov's comments that "palliative care will never be the perfect foil for suffering".[11]

32. It is important to recognise that pain is highly subjective. In this regard I agree with Dr Roderick MacLeod's comments that:[12]

> ...psychological, spiritual and social aspects of pain are more difficult to identify and treat in patients at end of life care. This is for the reason that they are often more subjective and difficult to measure and in some cases are not able to treated or managed with medications.

33. It is hard to imagine anything which is more subjective than pain, and a mantra frequently heard in palliative care settings is that "pain is whatever the patient says it is". The point there being that it is not for us, as carers and physicians, to tell patients whether they are in pain or not (as we

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9 Affidavit of Roderick MacLeod (unsworn) May 2015 at [34].
10 Affidavit of Harvey Chochinov (unsworn) May 2015 at [46].
11 Affidavit of Harvey Chochinov (unsworn) May 2015 at [52]. See also the affidavit of Baroness Illora Finlay dated 6 May 2015 at [119], noting that "of course no system of human endeavour can relieve all suffering".
12 Affidavit of Roderick MacLeod (unsworn) May 2015 at [34].

might tell them whether or not they have a raised temperature), but for the patient to tell us, they being the only ones privy to this entirely subjective experience.

34. Dr Roderick MacLeod also makes reference to the World Health Organisation's 1996 claim that pain can be relieved in up to 90% of patients.[13] Whilst very encouraging, it is no consolation to the small but significant group of people whom, by implication, we are unable to treat adequately. Similarly, Dr Alistair MacLeod makes reference to family questioning the merits in patients receiving "assertive treatment causing such horrendous adverse effects".[14]

35. That underlines the point: palliative care, for all its significant benefits, is not always trouble-free and can be insufficient to meet the needs of some patients. It is not an answer for those for whom there is no relief from unendurable suffering. Moreover, the slow improvement of palliative care possible over the longer term is of no benefit to those who cannot be helped *right now*.

Response to Baroness Finlay

36. I have read the affidavit of Baroness Ilora Finlay. I wish to respond in detail to her claims:

(a) At paragraph 26 of her affidavit, Baroness Finlay claims that "patients who receive the message that their situation is devoid of any hope for restoring their dignity and respect are more likely to lose a sense of meaning or worth...". With respect, those comments appear to be highly speculative and do not accord with my clinical experience, nor with the findings of the research cited.

(b) At paragraph 30, Baroness Finlay confuses causation and correlation in respect of elderly people who request aid in dying. It is no surprise that most of such people are elderly: terminal illnesses are most likely to develop in this age bracket.

(c) Paragraph 32 confuses the difference between persons *requesting* and *receiving* aid in dying. The first sentence, which should be treated with caution given the small sample, concerns those who have received aid in dying. The second sentence is about those requesting aid in dying in Oregon and cannot be supported by implication from the first.

(d) Paragraphs 39 and 40 compare suicide rates in the UK and incidence of physician aid in dying in the Netherlands. This is a classic "apples and oranges" example, where the two data sets are not comparable.

(e) At paragraph 42 Baroness Finlay talks about patients facing a "bleak" future. However, her answer avoids the problem of people for whom the present is, and continues to be, bleak. In such cases, people wish to retain autonomy and make their own decisions about whether such suffering is bearable. Making

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13 Affidavit of Roderick MacLeod (unsworn) May 2015 at [33].
14 Affidavit of Alistair MacLeod dated 11 May 2015 at [26].

help illegal may simply mean that the uncertain future becomes a factor in shortening a life which would have been longer had the help been available.

(f) Baroness Finlay's comments at paragraph 44 are highly misleading and a classic example of "cherry picking"; in fact suicide in Oregon has decreased after the Act was passed – Baroness Finlay has simply opted to drop the two years immediately following the passing of the Act, in which there was a marked drop, keeping only the subsequent years in which the numbers went up. There appears to be no reason to exclude the two years immediately following except that they don't suit her purposes. While it is true that Oregon's suicide figures are higher than the national average, they were before the Death with Dignity Act too and have risen and fallen in parallel with national trends in the United States (see, for example, Figure 1 in the exhibit annexed as "**RGO(2)4**").

(g) Baroness Finlay's mention of the "Werther effect" at paragraph 48 is highly inappropriate. That has nothing to do with terminal care and assisted dying, but is a feature of suicide. Most of the following paragraphs are highly speculative and are not supported by research.

(h) The Baroness' comments at paragraph 60 that value judgements about "not wanting to go on" are projected onto patients is bizarre and irrelevant to circumstances where a patient has repeatedly expressed a desire to die, in the face of opposition. Her position does not put one into the shoes of the patient, but rather assumes for the patient that "even if I was like that, I wouldn't want my life to end". This is why the patient's autonomy is essential.

(i) The Baroness' view that patient autonomy should be restricted is more apparent at paragraph 72. The reality is that of course we must restrict autonomy where granting it would provide a distress to others that was disproportionate. But we need evidence of such a disproportionate distress to others, not speculation. The interviews that my research team has conducted with people who have assisted loved ones in dying is that they experience quite the opposite.

(j) In relation to her comments at paragraph 81, in my experience reluctance or ignorance regarding hospice and palliative care is not a problem. For example, some years ago I had a patient, a young woman in her 30s, dying of cervical cancer. On raising the question of hospice, she looked unenthusiastic, suggesting that it would just be where "old people go to die". I arranged for her to be taken on a visit to her local hospice, her views changed dramatically, and she ended her days peacefully in the hospice having made her own informed choice.

(k) I entirely disagree with Baroness Finlay's comments at paragraph 101 suggesting that "imaginative and creative" thinking in caring is incompatible with a request for death. This is nonsense. I have spent some 35 years in end-of-life care, I

have never been in principle opposed to assisted dying, but that does not mean I do not take the trouble to try to solve the problem in other ways.

(l) If Baroness Finlay's comments at paragraph 106 imply that she has never failed to control a patient's pain, I find that entirely inconsistent with the clinical realities I have seen and experienced over 35 years.

(m) Lastly, I find it highly questionable whether a death from starvation and / or dehydration should be characterised as respecting the patient's personal integrity and dignity, or minimising distress (I refer to paragraph 15 of my first affidavit).

REGISTRAR OF HIGH COURT AUCKLAND N.Z.

AFFIRMED at Auckland this 18 day of May 2015 before me:

Richard Glynn Owens

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Deputy Registrar ~~A Solicitor~~ of the High Court of New Zealand

"RGO (2) 1"

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End of life decision-making by New Zealand general practitioners: a national survey

Kay Mitchell, Glynn Owens

Abstract

Aim To explore type and incidence of medical decisions at the end of life that hasten death made by general practitioners in New Zealand, within the context of access to palliative care.

Method An anonymous questionnaire investigating the last death attended in the previous 12 months was sent to 2602 general practitioners (GPs) in New Zealand.

Results From a 48% (1255) response, 88.9% (1116) GPs indicated access to an interdisciplinary pain management or palliative care team. Of those attending a death in the previous 12 months, 63% (693) had made a prior medical decision. These decisions included withdrawing/withholding treatment or increasing pain relief with (a) probability death would be hastened 61.8% (428) or (b) partly or explicitly to hasten death 32.6% (226). Moreover, death was caused by a drug supplied or administered by the GP in 5.6% cases (39), actions consistent with physician-assisted death.

Conclusion Physician-assisted death provided by some general practitioners in New Zealand is occurring within the context of available palliative care.

Early in 2002, Belgium became the fourth country/state/territory in the world to legalise physician-assisted death[1]—after the Netherlands,[2] Oregon (in the United States),[3] and the Northern Territory (in Australia)[4]—although the Northern Territory legislation was subsequently overturned.

The laws controlling assisted death in Oregon and the Northern Territory were predicated on the patient being terminally ill, and this was also proposed in the failed Death with Dignity Bill in New Zealand in 1995.[5] Belgium has adopted similar policies to the Netherlands,[6] in that the patient does not have to be terminally ill but must be experiencing unbearable, intractable suffering. A failed Private Member's Bill recently debated in New Zealand proposed physician-assisted death for terminally or incurably ill persons, on request .[7]

Research indicates that patients with cancer,[8] HIV/AIDS,[9] and amyotrophic lateral sclerosis[10] would like the option of physician-assisted death. Similarly, physicians have also indicated that this option may be justified for some patients .[8,11] (The official stance of the New Zealand Medical Association is that it is opposed to physician-assisted death.)[12]

Prior to legalisation, research in Australia, the Netherlands, and Belgium indicated that physicians were nevertheless providing physician-assisted death to their patients.[13–15] In each of the studies, a similar questionnaire was used, developed for the Remmelink investigation into physician-assisted death in the Netherlands in 1990.

Interpretation of previous studies has in part been problematic due to lack of information regarding the range of physician options, particularly the extent of access to specialist palliative care. The present study was thus designed to obtain information on end of life decision-making in New Zealand within the context of palliative care availability.

The aim of this study was to explore type and incidence of medical decisions at the end of life (MDELs) that hasten death made by general practitioners (GPs) in New Zealand, within the context of access to palliative care.

Method

A survey methodology was adopted using the questionnaire from the Remmelink Death Certificate study of the Dutch investigation.[16] The questionnaire was administered to GPs in New Zealand (in August and September, 2000). It asked for details on the last death in the previous 12 months for which the physician was the attendant doctor, and whether that physician had access to a multidisciplinary palliative care team.

Whilst confining responses to the last death means the incidence can only be assessed indirectly, the format was used both to anchor responses to minimise bias and to retain consistency with prior studies. There are approximately 3000 practising GPs in New Zealand and a questionnaire was sent to 2602 on a commercial mailing list.

The English version of the questionnaire was obtained from the authors of the Australian study.[15] Demographics were changed to suit the New Zealand environment—ie, ethnicity and place of practice. An additional section was added related to access to palliative care services. Analysis was done using SPSS (version 9) software.

Throughout this article, 'physician-assisted death' and 'euthanasia' refer to the intentional ending of the patient's life by the physician and 'physician-assisted suicide' refers to drugs supplied by the physician to end life, but administered by the patient.

Ethics approval was given by the University of Auckland Human Subjects Ethics Committee on 10 February 2000, reference 1999/Q032.

Results

There was a 48% response rate from two mail-outs. Thirty-two questionnaires could not be delivered (unknown at address). Returned questionnaires numbered 1302 of which 47 were returned blank, some with comments for non-response, which left 1255 useable questionnaires.

Of these, 1100 respondents had access to the patient prior to death and therefore there was the potential to make an end of life decision. Non-response was attributed to the sensitive nature of the research and the workload of general practitioners.[14] Demographic breakdown of responders is in Table 1.

Of the 1100 physicians who had contact with the patient prior to death, 693 (63%) reported making MDELs. The last action before death ranged from decisions to withdraw or withhold treatment or increase the alleviation of symptoms with the probability that death would be hastened 61.8% (428), through to actions partly or explicitly taken to hasten death 32.6% (226).

Moreover, of the 693 physicians who reported a MDEL, 5.6% (39) attributed death to a drug that had been prescribed, supplied or administered for that purpose—ie, euthanasia or physician-assisted suicide (see Table 2).

Table 1. Demographic breakdown of general practitioners participating in study (n=1255)

Gender	%*	Age (years)	%*	Religious	%*	Ethnicity	%*	Location	%*
Male	64	<35	11	Extremely	4	NZ European	78	City	45
Female	35	36–45	45	Very	12	Maori	1	Small city	22
DM	1	46–55	32	Moderately	22	Pacific Is	0.5	Town	15
		56–65	9	Slightly	30	Asian	5	Rural	17
		>65	4	Not	30	Indian	2	DM	1
		DM	0.2	DM	3	Other	12		
						DM	1		

*Percentages may not total 100 due to rounding; DM=data missing; City (>100,000 people); Small city (30,000–100,000 people); Town (<30,000 people).

Table 2. Medical decisions at the end of life (MDELs) by general practitioners for the last death attended in the previous 12 months (n=1100)

	Number (%) deaths attended in last year (n=1100)	Number (%) actions before death* (n=693)	Number (%) last actions before death (n=693)
No MDEL actioned	407 (37.0)		
First contact after the death	35 (3.2)		
Sudden and totally unexpected death	75 (6.8)		
No MDEL was performed (No 'yes' to Q 3-6)	279 (25.4)		
Missing data (no response)	18 (1.6)		
MDEL actioned	693 (63.0)		
Taking into account the probability that end of life hastened by:			
- Q3a withholding a treatment		258 (37.2)	28 (4.0)
- Q3b withdrawing a treatment		200 (28.9)	27 (3.9)
- Q3c intensifying alleviation of pain and/or symptoms		588 (84.8)	373 (53.8)
Q4 In part with intention of hastening the end of life by:			
- intensifying the alleviation of pain and/or symptoms		172 (24.8)	94 (13.6)
With the explicit purpose of not prolonging life or hastening the end of life and death caused by:			
- Q5a withholding a treatment		130 (18.8)	75 (10.8)
- Q5b withdrawing a treatment		71 (10.2)	57 (8.2)
Q6 Death caused by drug prescribed, supplied or administered with the explicit purpose of hastening the end of life (or patient ending own life)		39 (5.6)	39 (5.6) Drug given by (n=39)* Patients: 5 (12.8) Doctors: 21 (53.8) Nurses: 21 (53.8) Other: 2 (5.1)

Q=Question; *More than one question could be answered.

There was no discussion with the patient before the last MDEL in 380 (54.8%) cases (see Table 3). The patient not being competent (or not being fully competent) to make the decision was the main reason given for no discussion. However in 23.1% (88) cases where the patient was judged competent by the doctor, there was no discussion. In 17% (65) cases, the patient had expressed a wish to have death hastened at a previous time (see Table 4).

Table 3. Discussion with patient about possible hastening of death by proposed action

	Last-mentioned MDEL							
	Q3a* n=28 %†	Q3b* n=27 %†	Q3c* n=373 %†	Q4* n=94 %†	Q5a* n=75 %†	Q5b* n=57 %†	Q6* n=39 %†	Total N=693 %†
Discussed at the same time	25.0	14.8	8.6	12.8	18.7	26.3	23.1	13.4
Discussed beforehand	10.7	11.1	12.6	31.9	29.3	29.8	33.3	19.5
No discussion took place	53.6	59.3	58.7	53.2	50.7	43.9	43.6	54.8
Missing data (no response)	10.7	14.5	20.1	2.2	1.3	–	–	12.2

*See Table 2 for details of action; †May not total 100% due to rounding; Q=Question, MDEL=Medical decisions at the end of life.

Table 4. Informant in decision-making when no discussion with patient about possible hastening of death.

	Last-mentioned MDEL							
	Q3a* n=15 %	Q3b* n=16 %	Q3c* n=219 %	Q4* n=50 %	Q5a* n=38 %	Q5b* n=25 %	Q6* n=17 %	Total N=380 %
Patient not capable/not fully capable of discussion	86.7	81.3	60.7	84.0	84.2	88.0	94.1	71.3
Patient competent to discuss	13.3	6.3	32.4	14.0	15.8	4.0	-	23.1
(Missing)	-	12.5	6.8	2.0	-	8.0	5.9	5.5
Patient had expressed a wish to have death hastened	13.4	18.8	11.9	30.0	21.0	16.0	35.3	16.9
Doctor informed of wish by:†								
- Verbally by patient	-	6.3	10.0	22.0	13.2	12.0	23.5	12.1
- Written Directive	-	-	-	-	-	-	5.9	0.3
- Partner/Relative of patient	13.3	6.3	2.7	6.0	10.5	12.0	23.5	6.1
- Nursing staff	6.7	-	0.9	-	2.6	-	-	1.1
- Colleague	-	-	-	-	-	-	-	-
- Otherwise	-	-	-	-	-	-	-	-
Explicit request to hasten death made by:†								
- Partner/relative	6.7	6.3	2.7	16.0	21.1	24.0	23.5	8.9
- Colleague	-	-	-	2.0	-	4.0	-	0.5
- Nursing staff	6.7	-	0.5	-	2.6	8.0	23.5	2.4
- Others	-	-	0.5	-	-	-	-	0.3
- No explicit request	86.7	81.3	85.4	70.0	73.7	60.0	52.9	78.9

*See Table 2 for details of action; †More than one answer could be indicated; Q=Question; MDEL=Medical decisions at the end of life.

In half of the cases where a MDEL was actioned, the doctor estimated that life was either not shortened or was shortened by less than 24 hours. A further 26.8%

estimated that was life shortened by less than 7 days. In the three cases where life was estimated to be shortened by more than 6 months, death was caused by actions taken explicitly for that purpose; in two cases, withholding treatment; and in one case; administering a drug. There was a high (13.5%) non-response to this question (see Table 5).

Table 5. Estimate of life shortened by last action taken.

	Last-mentioned MDEL							
	Q3a* n=28 %	Q3b* n=27 %	Q3c* n=373 %	Q4* n=94 %	Q5a* n=75 %	Q5b* n=57 %	Q6* n=39 %	Total N=693 %
Missing (not answered)	10.7	14.8	22.5	2.1	1.3	-	-	13.5
Probably not shortened	32.1	55.6	44.2	14.9	12.0	8.8	7.7	31.7
<24 hours	3.6	3.7	15.5	37.2	17.3	17.5	35.9	19.0
1 to 7 days	50.0	18.5	15.0	31.9	49.3	43.9	48.7	26.8
1 to 4 weeks	3.6	-	2.4	13.8	13.3	22.8	5.1	7.2
1 to 6 months	-	-	0.3	-	4.0	7.0	-	1.2
>6 months	-	-	-	-	2.7	-	2.6	0.4

*See Table 2 for details of action; MDEL= Medical decisions at the end of life; Q=Question.

In 8 of the 39 cases where death was caused by a prescribed, supplied, or administered drug, more than one person was identified as administering the drug to the patient (introducing the drug into the body). In two cases, the patient was identified as ingesting the drugs acting alone. The doctor administered the drug alone in 13 cases, a nurse alone in 15 cases, and in one case it was not specified who administered the drug (see Table 2).

Of the 1255 respondents, 88.9% (1116) indicated access to a multidisciplinary pain management or palliative care team, and 97.8% (1090) of these indicated that they consulted with such a team. Twenty-two doctors (2%) stated that they had access to such a team but did not use them; the main reason given being the physician had sufficient palliative care knowledge (see Table 6).

Of those reporting physician-assisted death, 34 had access to an interdisciplinary pain management or palliative care team. In the remaining 5 cases, 3 said they would use a team if available. One of these cases involved the death of a child. The remaining 2 did not respond.

Of those who had the potential to make a MDEL males were significantly more likely to have done so (chi squared=6.422, *df* 1, p=0.011). There was no significant difference between those who had made a MDEL and those who did not for age, ethnicity, religion, place of practice or access to palliative care.

Doctors who performed euthanasia/physician-assisted suicide were significantly older (z=-3.198, p=0.001) and less religious (z=-2.309, p=0.021) than those who had not but had performed another type of MDEL action. There was no significant difference between these two groups for gender, place of practice, or access to palliative care. Ethnicity was not compared due to low numbers.

Table 6. Access and use of interdisciplinary palliative care or pain services (N=1255)

YES, ACCESS TO PALLIATIVE TEAM (88.9%, N=1116)	%	NO ACCESS TO PALLIATIVE TEAM (9.8%, N=123)	%
Consult team	97.8	Would consult if available	80.5
Don't consult team*	2.0	Would not consult*	13.8
Missing	0.2	Missing	5.7
How often consult team (n=1090)			
Very occasionally	8.2		
Occasionally	23.3		
Frequently	50.1		
Always	18.0		
(Missing)	0.4		
***Reasons don't consult/would not consult with team (n=40)**			%
- GP has sufficient palliative care knowledge			38.5
- Advice/consultation unhelpful in past			2.6
- Services are inaccessible			12.8
- Difficulty in past with shared care			10.2
- Other			30.8
- (Missing)			5.1

Note: Totals rounded.

Discussion

Perhaps the most interesting study finding is that, despite legal constraints, 39 doctors had performed some kind of action which would conform to everyday concepts of physician-assisted suicide or euthanasia. Moreover this did not appear to be a consequence of the non-availability of palliative care. Of the 1100 general practitioners that had the opportunity to make a MDEL, 3.5% (39) provided a physician-assisted death. This compares with 3.7% of general practitioners (n=2356) in the Dutch study.[16 p139]

Information that nurses introduced the drug into the patient, alone, in 15 cases requires some comment. The use of syringe drivers to deliver medication is widespread in end-of-life care, when oral medication is no longer possible. Invariably this regime would be established by a nurse, acting under physician orders thereby rendering the nurse the person to have 'introduced' the drug into the patient's body. If drugs charted are presumed to be dangerous for the patient, the nurse is obliged to refuse to carry out the drug order. In these cases, this has not happened, which suggests that either the nurses colluded with doctors in providing assisted death or alternatively they were unaware that the drug was charted explicitly to end the life of the patient. Either way, nurses are clearly involved in end of life actions and decision-making (see Table 4).[17,18]

There is a commonsense issue in discussions of euthanasia concerning the extent by which life is estimated to have been shortened by the action. The present results

indicate that the more serious the action taken, the more likely respondents were to estimate that life had been shortened and by a longer period (see Table 5). A similar effect was noted in the Dutch study.[16 p129]

The majority of respondents in the New Zealand study estimated that the action taken had shortened life but in 78% of cases this was by less than 7 days (see Table 5). It is notable that this question had one of the higher rates of non-response at 13.5%. The wording of the questionnaire, which gave the mildest option of 'life probably not shortened' rather than 'life not shortened' may have been implicated, with respondents reluctant to imply any shortening of life if this, in their judgement, had not occurred. Several respondents noted difficulties with the wording of the questionnaire.

If this is the case, and it seems plausible, life was estimated "not shortened" or shortened by less than seven days in over 90% of cases (see Table 5). Arguably then, the actions could be seen as a compassionate response to distress experienced in the last few days of expected life when the dying phase had been diagnosed.[19]

In 54.8% (380) of cases the MDEL-action was taken without discussion with the patient, rendering the action legally dubious (see Table 3). It is plausible that the missing cases (12.2%) indicate no discussion, which leaves only one third of cases where a discussion took place with the patient at some time, indicating that life could be shortened by the action being considered. The physician not believing that death was hastened by the action seems to be implicated in some instances of no discussion with the patient given (a) that some respondents indicated this and (b) that the likelihood of a discussion having taken place increased with the seriousness of the action taken. However in 17 cases, there was no discussion when physician-assisted death occurred (see Table 3).

While in some cases the patient had previously expressed a wish to have death hastened (see Table 4), it should be noted that a persistent request expressed at the time the action is performed is one criteria necessary for the provision of physician-assisted death wherever this is, or has been, legalised.[1,3,4,6]

So-called life-terminating acts without the request of the patient drew widespread criticism of Dutch practices (see, for example, reference number 20). However subsequent research suggests that similar practices are occurring elsewhere[14,15] and clearly have occurred in New Zealand. However, these figures may not be as sinister as first appears. The combined factors of closeness to death and probable moribund state (see Tables 4 and 5) also evidenced by nursing involvement (see Table 2) probably indicating use of syringe driver or IV medications, suggests that the actions were a compassionate response to patient need—ie, shortening dying rather than shortening life.

Alternatively, these actions may indicate a lack of knowledge by the physician of what is palliatively achievable without ending the life of the patient as a way of meeting need (10% indicated they had no access to palliative care services, see Table 6). Another explanation is that the doctor acted in 'palliative' terms—ie, may have provided terminal sedation which is defensible under the principle of double effect, but interpreted this in "euthanasia" terms as an action knowingly taken to hasten death.[21]

The data discussed above, together with the supplementary qualitative data obtained from the questionnaires gives us some insight into issues for the physician when providing end of life care. Physicians of course have their own personal views and there is a requirement that they reconcile those with external demands - on the one hand to reduce suffering, on the other to preserve life. The following captures the potential polarity of these views:

> I have no problems withholding medication to hasten death in a terminally ill patient. I would have a problem administering medication to hasten death, even on request from the patient or relatives. This of course does not apply to terminating an unwanted pregnancy - no problem here. (NZ GP 189)

> The laws re euthanasia vs termination of pregnancy are, in my opinion, completely arse about face! If you will excuse the vernacular. (NZ GP 797)

In many instances such attempts at reconciliation were problematic for the physician concerned and it is perhaps unsurprising that some physicians called for greater external guidance:

> Often patients don't ask about choosing the time and mode of death in a terminal illness and I do not initiate discussion as this is not yet a clearly legally available option. So in my opinion I am not yet obligated to offer this option (but I would prefer to be able to either offer and/or respond better to the occasional request for euthanasia). (NZ GP 447)

Although several physicians indicated they would like to be able to offer physician-assisted death in some instances, others emphasised that they would never consider this an option.

It seemed clear from comments that the general practitioners assumed responsibility for providing a good death for the patient. In order to do so some felt that they required access to specialist drugs they deemed necessary for palliative care:

> GP should have unrestricted access to all specialist drugs for palliative care. (NZ GP 448)

> My purpose is to save life and to make dying as pleasant as possible and pain free - dignified. I find this latter can be virtually always achieved with morphine and would be easier with heroin which for some reason is unobtainable in NZ. (NZ GP 373)

A team approach to care (implying open communication and shared decision-making) was deemed desirable by many:

> In the area we share care with district nurses and rest homes. Together with local hospital. A team approach exists therefore. (NZ GP 203)

> The current system of doctor and patient and families together making decisions at the end of life have worked well for generations. (NZ GP 246)

Many other physicians commented on the issue of communication around end of life actions, some wanting openness and transparency:

> I feel much more respect must be made of the wishes of the person dying. More discussion needs to be had on the influence/wishes of caregivers. I support a more liberal attitude with the correct legal/ethical oversight being provided. Perhaps some "guidelines" (dare I use the word) are in order. (NZ GP 48)

And others insisting that only the patient and doctor should be involved in decision-making:

> Very dangerous territory. Only the doctor and patient; don't include anyone else. (NZ GP 41)

This latter statement appears to be a reflection of the fear some physicians expressed that their actions may have legal repercussions:

> It is such an emotional and value-dependent issue. I will do anything to protect myself medico-legally, some of the actions taken are futile and wasteful and not of any "benefit" to the patient. (NZ GP 307)

Constraints on open communication when hastening death is considered can provide the physician with challenges. One doctor articulated the difficulty for the physician in managing communication within the caring group when the law inhibited the patient's preferred (implied) end of life action:

> I was more concerned about what the relatives (wife, adult daughter) thought rather than legislation. Indeed, when the patient pleaded with me for him not to have another night of extreme respiratory distress he cautioned me to "protect myself" (against the relatives) however they had previously introduced the idea! (NZ GP 63)

When physician-assisted death is secretly provided for the patient, the emotional coping of those persons who knew or were having euthanasia may be complicated by being unable to share their experience with loved ones and leave-take appropriately. Research indicates that the psychological effect for doctors providing physician-assisted death is profound, suggesting that doctors who do so in secret are at risk when they cannot talk through the actions they propose, or have taken.[22]

Conclusion

Legal or not, physician-assisted death is an international reality, and New Zealand is no exception with such actions occurring in an apparently palliative rich environment. Moreover the results of this study indicate that physician-assisted death is at times occurring without consultation with the patient.

There exists a confusing state of affairs where doctors and family are torn between conflicting demands - on the one hand to relieve suffering, on the other to conform to professional and legal requirements. The current situation is problematic for everyone: doctors carry a heavy burden; patients are unable to have access to options to which they may feel entitled; families are kept in the dark or carry a similar burden to the physician.

Limitations

It is of course, important to exercise a degree of caution in interpreting the above findings. Trying to access empirical data on such a complicated and potentially sensitive activity such as medical decision-making at the end of life is extremely difficult. A questionnaire cannot do justice to the complexity of such decision-making. The wording of the questionnaire may have "forced" respondents to indicate an action performed that did not correctly reflect the actual action. Fifteen respondents criticised the wording in the questionnaire.

> A very difficult questionnaire to complete - complex issues that I do not believe are able to be determined by yes/no answers. Hence my revisiting some of the questions. NB My response to the questions may have been quite different if Q3 had stated possibility rather than probability. (NZ GP 292)

Moreover, some rationalisation of actions may have occurred between the time of the death and completing the questionnaire, responses maybe reflective of cognitive processing invoking defence-mechanisms rather than action *per se*. However no death

occurred more than 12 months previously and it is plausible that many were within weeks of the questionnaire being filled out.

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Judgments of laypersons and general practitioners on justifiability and legality of providing assistance to die to a terminally ill patient: a view from New Zealand

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Abstract

As part of a larger study, four decisions related to a vignette scenario of the elective death of a terminally ill patient suffering intractable pain are examined (doctor supplying information and drugs, assisting patient to take the drugs, or administering a lethal injection). Judgments on justifiability and legality of actions were obtained from laypersons and general practitioners (GPs) in Auckland, New Zealand. The results show that over 72% of laypersons and over 30% of GPs judged all four actions justified. Despite illegality a significant number of laypersons and some doctors were unsure of the legal status of actions. The current law in New Zealand prohibiting physician-assisted death may not reflect judgments by the majority of laypersons or 30% of general practitioners on the justifiability of elective death options for a terminally ill patient with intractable pain. Judgments on justifiability may be related to confusion over the legality of actions.

Keywords: Physician-assisted suicide; Euthanasia; Terminally ill

1. Introduction

The Netherlands has been committed to a strategy of transparency of practice in medical decisions that hasten death, since the early 1990s [1]. This has resulted in a body of methodologically rigorous research on the subject that has not been possible in other countries mainly due to ethical and legal constraints, see for example [2]. In The Netherlands, euthanasia (EU) and physician-assisted suicide (PAS) are considered together for "philosophical analysis, empirical description and effective regulation" ([1], p. 18). Thus, the involvement of the physician is regarded as equal whether this is limited to supplying information or drugs or actively assisting in the administration of drugs. Others consider there is a legal or even ethical difference between these two facets of assisted death [3] and such reasoning has informed practices in Oregon.

Oregon legalised physician-assisted suicide with the passing of the Oregon Death with Dignity Act, through statewide votes in 1994 and again in 1997 after legal challenges. The Act allows for doctors to prescribe drugs in sufficient quantity to allow a suitable patient (screened as per stated protocols) to commit suicide at a time they choose. However, doctors are not permitted to actively involve themselves with the patient taking the drugs, or to give an injection to assist the patient to die in the event of a failed attempt at suicide [4]. Such actions would be regarded as euthanasia, which remains illegal in Oregon. However, making a distinction between euthanasia and physician-assisted suicide for practical purposes may lead to anomalous and tragic consequences.

1.1. Potential consequences when doctor excluded from death

Policies that exclude the physician from active involvement in the death may not always be workable in practice. There have been no reports of difficulties with patients ingesting drugs to successfully end life since Oregon adopted PAS policies in 1997. It has been suggested that the lack of reporting on "failed" suicide bids that had been observed and reported in Holland [5], may reflect selective reporting on the part of PAS advocates [6]. This is countered with the view that "botched" attempts have not occurred due to increased knowledge about the correct drugs to use acquired from The Netherlands [7]. This argument is weakened however when it is considered that the preferred euthanatic used

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in Holland is a curare-like drug which is administered intravenously after a sedative to ensure that death is relatively instant (Herb Cohen, Physician, The Netherlands, personal communication). Under Oregon law, such physician involvement in the death would escalate the action to euthanasia rather than physician-assisted suicide [4].

When drugs are taken orally, there may be a lengthy period until death occurs. The period between ingestion and death has been described as stressful and frightening by one Oregon family who waited 36 h after ingestion for the death of a family member [8]. Elsewhere graphic accounts of the struggle to achieve death by young men suffering from AIDS make horrifying reading. Acting under practitioner advice but with no practitioner present the men vomited drugs, took days to die with friends constantly administering morphine injections. Ultimately in one reported case, death was achieved by smothering the patient [9]. Moves to suggest that the physician should be legally required to be present however are criticised on the basis that the family may prefer privacy at this time, although the physician should feel "compelled" to be present if the family request this ([10], p. 5). It seems implicit in a request for the physician to be present that there is the requirement for the physician to facilitate a "good death" and to intervene if unfolding events threaten this.

1.2. Degrees of physician involvement in elective death

The framing of the Oregon Death with Dignity Act, with its prohibition on active physician involvement is in line with physician preferences [11]. It is suggested that limiting the involvement of the physician may have been formulated to present the least offensive option, thus circumventing opposition to the legalisation of PAS in Oregon. Such a move may be politically expedient, but may not be in line with the preferred options of the public for physician involvement. In the United States, the public show a preference for forms of euthanasia that involve active participation from physicians and suggest "a desire for authoritative control over the procedure of voluntary euthanasia" ([11], p. 79).

This study explores changes in the attitudes of respondents towards medical actions related to physician-assisted death as the actions become more severe. The four actions described in this section have been ranked according to what could arguably be perceived as degrees of severity related to physician involvement. None of the actions are legal in New Zealand.

2. Method

As part of a wider study into medical decisions at the end of life that hasten death, respondents were asked for judgments on the justifiability and legality of actions related to physician-assisted death using vignettes concerning a terminally ill patient with intractable pain (see Box 1).

Box 1. Vignettes representing medical decisions related to physician-assisted death.

Patient B has a terminal illness (i.e. no hope of recovery), and *pain is a constant problem*, not alleviated by drugs. The doctor is requested by the patient to supply information on how to end one's life, and to prescribe enough drugs to make this possible. The doctor agrees to supply the information and drugs to the patient for the patient to use without the assistance of the doctor.

IN YOUR OPINION, is the doctor justified in supplying *information* to this patient?

IN YOUR UNDERSTANDING, is this action legal in New Zealand?

IN YOUR OPINION, is the doctor justified in supplying *drugs* to this patient?

IN YOUR UNDERSTANDING, is this action legal in New Zealand?

Some time passes and Patient B deteriorates to the point where taking the drugs that the doctor has prescribed is impossible without assistance. The doctor assists by holding the drinking cup while the drugs are swallowed.

IN YOUR OPINION, is the doctor's action in assisting the patient to take the drugs, justified?

IN YOUR UNDERSTANDING, is this action legal in New Zealand?

Patient B has difficulty swallowing and requests the doctor to administer a lethal injection to end the suffering. The doctor administers a lethal injection

IN YOUR OPINION, is the action of the doctor in giving the patient a lethal injection justified?

IN YOUR UNDERSTANDING, is this action legal in New Zealand?

2.1. Participants

Three diverse groups in Auckland, New Zealand were approached. Participants were sought by mail from Greypower (an activist organisation for age 55+ years), 30% response rate, $n = 595$; general practitioners (GPs), 40% response rate, $n = 120$; and in lectures from Psychology Students 18–29 years, 80% response rate, $n = 205$. The higher response rate for Students is attributed to a personal approach in recruitment. No enticements were offered for participation.

2.2. Analysis

Using SPSS, McNemar tests measured changes within each group in how respondents judged the actions. Marginal homogeneity tests tested for changes in judgments on legality within each group. A Bonferroni adjustment was made when setting the levels of significance.

3. Results

To test the assumption that respondents concur with the ranking of the four actions as suggested, frequencies for judgments on the legality of the actions were compared for the three groups. There was a discernible trend evident across the three groups of an increasing confidence in judging the actions as illegal, reflected in decreasing Unsure responses (see Table 1). It was considered that for the purposes of analysis, the ranking of these four actions as proposed was justified.

3.1. Judgments on justifiability of actions

There was evidence of an effect of action on response in judgments on the justifiability of supplying information/supplying drugs for the Psychology Students (Students) ($P < 0.001$), Greypower members ($< P = 0.002$) and GPs ($P < 0.001$) with each group judging supplying drugs as less justified (see Table 1).

There was evidence of an effect of action on response in judgments on the justifiability of supplying drugs/assisting to take drugs for Students ($P = 0.003$) with doctor assisting patient to take the drugs judged to be *more* justified than supplying drugs alone. There was no evidence of a change in judgments on justifiability between these two actions for Greypower members or GPs (see Table 1).

There was no evidence of a change in judgments on the justifiability of assisting to take drugs/lethal injection for Students (64 and 62%), Greypower members (77 and 76%) or GPs (34 and 30%) (see Table 1).

3.2. Judgments of legality of actions

There was evidence of a change in judgments on the legality of supplying information/supplying drugs for Students ($P < 0.001$), Greypower members ($P < 0.001$) and GPs ($P < 0.001$) (see Table 1) with respondents more likely to judge supplying drugs as illegal.

There was evidence of a change in judgments of GPs on the legality of supplying drugs/assisting to take drugs ($P < 0.001$) and for GPs and Greypower members between assisting to take drugs/lethal injection ($P < 0.008$ and 0.001) with the latter in each case more likely to be judged illegal. There was no evidence of a difference in judgments on legality between supplying drugs/assisting to take drugs for Students or Greypower members or assisting to take drugs/lethal injection for Students (see Table 1).

4. Discussion and conclusion

NB: It should be noted that this vignette related to *supplying information* on how to end life by the doctor, not just dealing with a request for hastened death. Dealing with a request for hastened death when it occurs is a normal part of the care of the dying and can occur in conjunction with several factors such as pain, loss of dignity, fear, anxiety or depression.

The majority of GPs did not judge actions justified although 50% judged it justified to supply information on how to hasten death to the patient (see Table 1). Most support for all actions came from Greypower members. Elsewhere research has suggested that older members of the population may feel under threat by more liberal attitudes towards hastened death in the younger section of society, age being seen as marginalising [12]. These results suggest that Greypower members do not see increased age as marginalising or alternatively they may see age as marginalising in relation to accessing adequate end of life care and would therefore prefer the option of physician-assisted death if necessary. Media attention in New Zealand has focused in the past on the denial of dialysis to requesting patients on the basis of age and other debilitating factors [13,14] Increasing age (mean age 70.74 years), increasing incidence of painful disease, metastatic or otherwise and experiences caring for older dependent partners or relatives may have influenced responses of Greypower members, on the justifiability of hastened death.

4.1. Confusion of legality may inhibit open communication

As the action became more serious, respondents were more likely to recognise the illegality of the action. Notwithstanding this, a significant number (over one-third of laypersons and up to a quarter of GPs) were unsure of the legal status for some actions (see Table 1).

One of the hallmarks of effective palliative care is open, honest communication between patient and the caring team [15]. Ambivalence about whether requesting/supplying information is acceptable/legal, may inhibit communication between doctor and patient on an issue that may need to be addressed and "cleared" to allow for therapeutic interventions that could reverse a perceived need for elective death. Making such a request may be a way for the patient to signal to the doctor that needs are unmet, rather than a request for assistance to die per se. Insecurity about legality/availability of elective death may shut down this type of disclosure from the patient. If it is understood that the action is illegal and therefore unavailable, the patient is free to openly express a wish for death when life becomes unbearable without being concerned that the discussion may be escalated in a direction that they would prefer not to go. Conversely, when a patient expresses a wish for death it is a clear signal to the physician that the dying patient's needs are not being met and that interventions in place need to be reassessed [15,16]. Medical training in New Zealand mirrors that of other countries in that it does not routinely prepare doctors for such discussions with their dying patients or with patients who have unbearable chronic diseases, a situation of concern when one considers the increased availability of information in the lay press related to planned suicide [17,18].

Table 1
Summary statistics (%) for judgments on justification (A) and legality (B) of doctor supplying information or drugs, assisting patient to take drugs or giving a lethal injection to a dying patient on request, by Students, Greypower members and GPs

	Students response ($n = 205$)				Greypower response ($n = 595$)				GPs response ($n = 120$)			
	Yes	Unsure	No	*P*-value	Yes	Unsure	No	*P*-value	Yes	Unsure	No	*P*-value
(A) Judgment on justification of hastening death decision												
Doctor supplying information on how to hasten death to a terminally ill patient, on request ($P = 0.01$)	65			<0.001	80			<0.002	50			<0.001
Doctor supplying drugs to hasten death to a terminally ill patient on request ($P = 0.006$)	56			<0.003	77			0.790	41			0.065
Doctor assisting a terminally ill patient to take drugs to hasten death, on request ($P = 0.006$)	64			0.503	77			0.302	34			0.219
Doctor administering a lethal injection to a terminally ill patient, on request ($P = 0.006$)	62				76				30			
(B) Judgment on legality of hastening death decision												
Supplying information on how to hasten death to a terminally ill patient, on request ($P = 0.01$)	11	40	50	<0.001	9	43	48	<0.001	18	26	56	<0.001
Supplying drugs to hasten death to a terminally ill patient, on request ($P = 0.01$)	2	36	62	−0.639	4	41	55	0.856	4	25	71	<0.001
Assisting a terminally ill patient to take drugs to hasten death, on request ($P = 0.01$)	4	33	63	<0.157	4	38	57	<0.001	0	12	88	<0.008
Administering a lethal injection to a terminally ill patient, on request ($P = 0.01$)	2	32	65		3	33	64		0	6	94	

% may not equal 100 due to rounding.

However, the option of assisted death is preferred by some patients and it has been suggested that it is not ethical to enter into discussions with patients around hastening death practices if the practitioner has no intention of honouring requests for assistance to die [19]. Over the last decade, studies have shown that a majority of patients with cancer [20], HIV/AIDS [9] and amyotrophic lateral sclerosis [21] would prefer an available option of assistance to die. Concern has been expressed that such requests may not be enduring over time [22] and guidelines in Oregon [4] and Holland [1] specifically address this issue. Others have found that attitudes among cancer patients and the general public are enduring, unlike physician attitudes. These authors raise concerns that such discrepancies in attitudes between laypersons and physicians are a potential source of conflict in end of life care [23].

In Oregon it has been noted that supplying information and drugs does not necessarily lead to the patient taking action to hasten death [24]. It appears that receiving information and even the drugs to end life, may give the patient a sense of control over their suffering, which may be sufficient to allay some fears and allow the patient to die without any intervention to hasten death [25].

4.2. Physician involvement in drug administration

The majority of respondents recognised that the doctor assisting a patient to take drugs or doctor administering a lethal injection were illegal (see Table 1). Despite this, 64 and 62% of Students, 77 and 76% of Greypower members and 34 and 30% of GPs judged the actions to be justified for a terminally ill patient with intractable pain (see Table 1).

A significant number of Students judged a doctor helping a patient to take drugs as *more* justified than supplying the drugs alone (see Table 1). A perceived need to have a person in authority and in control may be linked to this [11]. Alternatively, this group may be expressing concern about the potential abuse from such drugs being made available in the community, preferring that the drugs available for elective death should remain under the direct control of the doctor. This latter reasoning is reflective of a concern expressed by the Drug Enforcement Agency (DEA) in the United States apropos the Oregon Death with Dignity Act. Concern was expressed by the DEA that federally controlled substances should not be available in the community because they could be conscripted into illegal use, specifically for suicide that did not meet the guidelines in place for physician-assisted suicide [26].

The combined result for both groups of laypersons saw 72% judging it justified administering a lethal injection to the patient. This result is in line with previous polls in New Zealand, indicating that over 70% of the public support the option of physician-assisted death for a terminally ill patient with intractable pain [27].

As the action becomes more serious, there is decreasing support from GPs, however, it is worth noting that even the hardest option, doctor giving a lethal injection to a terminally ill patient with intractable suffering, was seen as justified by 30% of GPs (see Table 1). This is in line with similar research elsewhere where physicians have indicated that physician-assisted death is justified in some instances or that this has been provided for some patients [20,28–31]. Lack of experience with dying patients and burnout are correlated to positive attitudes to physician-assisted death [31]. Patient need and a perceived inability to meet that need may prove compelling for doctors when requests for assistance to die are made.

It appears that a significant number of general practitioners in New Zealand may be signalling that they are prepared to condone actions covering assisted death to patients who are terminally ill and in intractable pain, despite the illegality. Whether this translates to a desire to see the law changed to accommodate this practice has not been explored in this study. In Michigan, nearly one-third of doctors surveyed supported physician-assisted suicide but not a change in the law to accommodate it. Preferences were for the issue to be left to the doctor/patient relationship or for the medical profession to provide regulations and guidelines [32]. A similar system existed in The Netherlands until the recent legalisation of euthanasia in that country.

4.3. Limitations

The difficulty of making judgments from vignettes is acknowledged and results may not parallel judgments in a real life situation. Three diverse groups from society were chosen, and it is acknowledged that these may not be representative of the wider population. However, results for laypersons are in line with previous opinion polls in New Zealand [27].

4.4. Conclusion

This is the first empirical study to indicate that the current law in New Zealand prohibiting the supplying of information, drugs or assistance to die for a terminally ill patient with intractable pain may not reflect the preferences of a significant number of general practitioners, attitudes in line with the majority of laypersons. Support for supplying information or drugs to achieve elective death was significantly greater than support for the physician being actively involved in administering the drug for Greypower members and GPs. Students showed a preference for the physician being involved in administering the drug over providing the drug for patient administration. Ambivalence over perceived legality/acceptability of end of life actions may inhibit open disclosure of preference of care.

4.5. Practice implications

- Terminally ill patients with intractable pain may prefer the option of an elective death.

- General practitioners may prefer the option of providing an elective death to requesting, terminally ill patients for whom pain cannot be controlled.
- Some general practitioners in New Zealand are unsure of the legal status of actions related to elective death, most noticeably supplying information and drugs to the patient for this purpose.
- The present laws in New Zealand prohibiting the physician supplying information, drugs or assistance to the patient to achieve an elective death do not reflect the preferences of the majority of the public or a significant number of physicians.

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"RGO(2)3"

THE NEW ZEALAND MEDICAL JOURNAL
Journal of the New Zealand Medical Association

Response to Dr Sinéad Donnelly's 'Debates on euthanasia' editorial

We thank Dr Sinéad Donnelly for her considered and personal comments[1] about our recent paper[2] in the *NZMJ*.

Donnelly writes that "care of the person who is dying is not an issue for debate". We respectfully disagree. What constitutes care of the dying person must be examined and deliberated if it is to reflect what patients (and their families) want.

Our study clearly found that the care given to some dying people (friends and family of our participants) was experienced as inadequate and poor, leading them to wish for an assisted death were they ever to be in a similar situation.

We agree with Donnelly that better medical care for older people is needed, especially near the end of life when patients are uniquely vulnerable to the medical care they are the recipients of (for better or worse).

The issue of 'being a burden' was one of several themes that arose from our interviews with participants. Although some of our people spoke about their concern at becoming a burden on others, many spoke of their fear of becoming a burden on themselves. In other words, they feared becoming someone they did not want to become—someone they no longer recognised. This was voiced as a fear of losing independence and of increasing dependence.

We should not necessarily view this concern as a reflection on society's lack of care towards older people as Donnelly suggests, but rather as a way in which some people view losing control of one's life. Thus one important aspect that arises is how society responds to the person who believes they have come to the end of their life and who wants the right to choose how they would wish that end to come.

A person may wish to end their life at a time of their choosing rather than using their financial resources to sustain a life which they no longer value, preferring rather to leave that money to benefit others (either in the community or their own families)—and that is also what our respondents said.

One of the findings that came out of this small study was a need to further explore what 'being a burden' means for people. As Donnelly rightly notes, we are all burdens on others at various times in our lives. If a person has lived their life making authentic choices and decisions for themselves (and others they deeply care for), fearing becoming a burden at the very end of life may be something they are not prepared to accommodate or accept.

Whilst we agree with Donnelly that such a reason (for an assisted death) is not a reason to legislate for euthanasia, it is a reason to listen very carefully to their choices around medical care at the end of life especially if a patient is refusing medical treatment that is life-sustaining.

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Donnelly disagrees with our claim that euthanasia is legalised in carefully qualified situations, and quotes the work of Margaret Somerville and others to show that a slippery slope exists in both Oregon and the Netherlands. However there are many prominent scholars and researchers who challenge that view. For instance, Margaret Batten et al,[3] state that in relation to vulnerable people, *"there is no current factual support for so-called slippery-slope concerns about the risks of legislation of assisted dying – concern that death in this way would be practiced more frequently on persons in vulnerable groups"*.

Of course this does not mean that abuses could not happen; it means that a society in which assisted dying is legally permissible must be vigilant to ensure procedures are in place to protect vulnerable people.

Dutch researchers[4] recently assessed frequency and characteristics of euthanasia, physician-assisted suicide and other end of life practices in 2010, and assessed trends since 1990 in the Netherlands. They conclude that *"euthanasia and physician-assisted suicide did not shift to different patient groups and the frequency of ending life without explicit request continued to fall"* (Ibid., 8).

Donnelly claims that "legalisation of euthanasia creates societal pressure on vulnerable populations, such as people with disabilities, to end their lives". Presumably the same could be said for legally allowing adults to refuse any medical treatment and care even when such a decision leads to certain death: this is every New Zealander's right under the Bill of Rights[5] and the Health and Disability Code of Consumers' Rights.[6]

We do not wish to be pedantic but on such an emotional topic, language is important. Donnelly comments on, *"healthy older people advocating euthanasia"*. Although our participants are members of an organisation that supports legal medical assistance in dying, in this study they were not advocating euthanasia; rather they discussed their reasons for supporting the availability of a medically assisted death.

But perhaps more importantly, the questions and concerns that Donnelly raises in her paper about end-of-life care in New Zealand are crucial and must be addressed. We need more discussion and research that explores what New Zealanders think about medical hastening of death so that what is significant to people can be addressed.

For some people, better palliative care (or even access to palliative care) may be the answer in addressing and ameliorating end of life concerns; for others it may be access to an assisted death at a time of their choosing.

Do our doctors and nurses consider assisting a patient to die (in some circumstances) part of their professional role? What do patients who are terminally ill want? What do our disabled community want?

In many cases we simply do not know; but we ought to be asking. To that end we have recently completed interviewing older New Zealanders who are opposed to medical practices that hasten dying.

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"RGO(2)4"

This is the annexure marked "**RGO(2)4**" referred to in the affidavit of **Richard Glynn Owens** affirmed at Auckland this 18th day of May 2015 before me

Signature .....

~~A Solicitor~~ of The High Court of New Zealand
(Solicitor to sign in part on Exhibit)

Deputy Registrar

REGISTRAR OF HIGH COURT AUCKLAND N.Z.

National Violent Death Reporting System
NVDRS
OREGON

Public Health Division

Suicides in Oregon: Trends and Risk Factors

-2012 Report-

Oregon Violent Death Reporting System

Injury and Violence Prevention Program

Center for Prevention and Health Promotion

Oregon Health Authority

For more information or to receive this report
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Nov. 2012

Table of Contents

Executive Summary

Suicide is one of Oregon's most persistent yet largely preventable public health problems. Suicide is the second leading cause of death among Oregonians ages 15-34, and the 8th leading cause of death among all Oregonians in 2010. The financial and emotional impacts of suicide on family members and the broader community are devastating and long lasting. This report provides the most current suicide statistics in Oregon that can inform prevention programs, policy, and planning. We analyzed mortality data from 1981 to 2010 and 2003 to 2010 data of the Oregon Violent Death Reporting System (ORVDRS). This report presents findings of suicide trends and risk factors in Oregon.

Key Findings

In 2010, the age-adjusted suicide rate among Oregonians of 17.1 per 100,000 was 41 percent higher than the national average.

The rate of suicide among Oregonians has been increasing since 2000.

Suicide rates among adults ages 45-64 rose approximately 50 percent from 18.1 per 100,000 in 2000 to 27.1 per 100,000 in 2010. The rate increased more among women ages 45-64 than among men of the same age during the past 10 years.

Suicide rates among men ages 65 and older decreased approximately 15 percent from nearly 50 per 100,000 in 2000 to 43 per 100,000 in 2010.

Men were 3.7 times more likely to die by suicide than women. The highest suicide rate occurred among men ages 85 and over (76.1 per 100,000). Non-Hispanic white males had the highest suicide rate among all races / ethnicity (27.1 per 100,000). Firearms were the dominant mechanism of injury among men who died by suicide (62%).

Approximately 26 percent of suicides occurred among veterans. Male veterans had a higher suicide rate than non-veteran males (44.6 vs. 31.5 per 100,000). Significantly higher suicide rates were identified among male veterans ages 18-24, 35-44 and 45-54 when compared to non-veteran males. Veteran suicide victims were reported to have more physical health problems than non-veteran males.

Psychological, behavioral, and health problems co-occur and are known to increase suicide risk. Approximately 70 percent of suicide victims had a diagnosed mental disorder, alcohol and /or substance use problems, or depressed mood at time of death. Despite the high prevalence of mental health problems, less than one third of male victims and about 60 percent of female victims were receiving treatment for mental health problems at the time of death.

Eviction/loss of home was a factor associated with 75 deaths by suicide in 2009-2010.

Investigators suspect that one in four suicide victims had used alcohol in the hours preceding their death.

The number of suicides in each month varies; there was not a clear seasonal pattern.

Baker, Coos, Curry, Douglas, Grant, Harney, Jackson, Josephine, Lincoln, Klamath and Tillamook counties had a higher than state average suicide rate; and Benton, Clackamas, Hood River, Washington, and Yamhill counties had a lower than state average suicide rate.

Recommendations

1. Develop a new statewide suicide prevention strategy that prioritizes:

    a. A system of comprehensive primary prevention that implements evidence-based, upstream, primary prevention strategies that foster successful development and prevent psychological and behavioral problems (i.e. nurse family partnership, Paxis Good Behavior Game, Communities that Care, evidence-based parenting programs, mindfulness practice, and other evidence-based practices).

    b. Identify and implement evidence-based and culturally appropriate practices that address depression and suicidality among adult males to:

        i. enable men to identify depression as a manageable health condition, and
        ii. promote community, business, family and individual tools to support successful self management.

    c. Develop integrated behavioral health and primary care solutions to address depression and suicidal thoughts and behaviors among older adults.

2. Complete statewide implementation of comprehensive suicide prevention in high schools.

3. Expand suicide intervention skills efforts that will have an impact on adults, particularly men and veterans throughout Oregon.

Introduction

Suicide is an important public health problem in Oregon. Health surveys conducted in 2008 and 2009 show that approximately 15 percent of teens and four percent of adults ages 18 and older had serious thoughts of suicide during the past year; and about five percent of teens and 0.4 percent of adults made a suicide attempt in the past year[1,2]. In 2010, there were 685 Oregonians who died by suicide and more than 2,000 hospitalizations due to suicide attempts[3,4]. Suicide is the second leading cause of death among Oregonians ages 15-34, and the 8th leading cause of death among all ages in Oregon[3]. The cost of suicide is enormous. In 2010 alone, self-inflicted injury hospitalization charges exceeded 41 million dollars; and the estimate of total lifetime cost of suicide in Oregon was over 680 million dollars [3,4,5]. The loss to families and communities broadens the impact of each death.

"Suicide is a multidimensional, multi-determined, and multi-factorial behavior. The risk factors associated with suicidal behaviors include biological, psychological, and social factors"[6]. This report provides the most current suicide statistics in Oregon, provides suicide prevention programs and planners a detailed description of suicide, examines risk factors associated with suicide and generates public health information and prevention strategies. We analyzed mortality data from 1981 to 2010 and 2003 to 2010 data from the Oregon Violent Death Reporting System (ORVDRS). This report presents findings of suicide trends and risk factors in Oregon.

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(p378)

Methods, data sources and limitations

Suicide is a death resulting from the intentional use of force against oneself. In this report, suicide deaths are identified according to International Classification of Diseases, Tenth Revision (ICD-10) codes for the underlying cause of deaths on death certificates. Suicide was considered with code of X60-84 and Y87.0[1]. Deaths relating to the Death with Dignity Act (physician-assisted suicides) are not classified as suicides by Oregon law and therefore are excluded from this report.

Mortality data from 1981 to 2010 are from Web-based Injury Statistics Query and Reporting System (WISQARS) of the Centers of Disease Control and Prevention[2]. This system contains information from death certificates filed in state vital statistics offices.

The ORVDRS is a statewide, active surveillance system that collects detailed information on all homicides, suicides, deaths of undetermined intent, deaths resulting from legal intervention, and deaths related to unintentional firearm injuries[1]. ORVDRS obtains data from Oregon medical examiners, local police agencies, death certificates, and the Homicide Incident Tracking System. All available data are reviewed, coded, and stored in the National Violent Death Reporting System. Details regarding NVDRS procedures and coding are available at http://www.cdc.gov/ncipc/profiles/nvdrs/publications.htm.

Rates were calculated according to death counts and bridged-race postcensal estimates released by the National Center for Health Statistics (NCHS)[3]. The age-adjusted rate was adjusted to the 2000 standard million. Because of limited death counts in some categories, some rates might not be statistically reliable or stable; use caution with regard to those categories with fewer than 20 deaths.

A three-year moving average of age-specific suicide death rates was computed to smooth fluctuations from one year to another. The trend in rates was tested by using Poisson regression analysis. $P<0.05$ is considered significant.

When comparing rates, 95 percent confidence intervals were calculated. If the 95 percent confidence intervals do not overlap, then the difference is considered to be statistically significant at the 0.05-level[4]. A Chi-square test was used to test the difference on proportion (percentage) in the studying groups.

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Cohort-specific rates by age group (in five-year intervals) were calculated from the data that were obtained from WISQARS[1]. Six cohorts (period of birth: from 1965-1969 to 1991-1995) and six age groups (15-19 through 40-44) were used to assess suicide risk by birth cohort among white males in Oregon[2].

Occupation information is based on description of usual occupation and field of industry on death certificates and is coded by using a word-matching computer program[3].

Although ORVDRS collects data from multiple sources, it is a challenge to capture all of the details and circumstances surrounding a death due to suicide. Lack of standardized questionnaires and investigation protocols, and limited witnesses and limited witness contacts with a victim could result in underreporting of some suicides and in particular some circumstances surrounding suicide incidents. For example, if a person who died by suicide lived alone and did not have many connections with his family members and friends, it is difficult to get information on this person's health status and know his/her life stressors. In addition, all circumstances were based on the reports from the persons who were interviewed by investigators. Those interviewed persons might not recognize some mental health problems. Therefore, this report most certainly underestimates some circumstances surrounding suicide deaths such as mental health problems.

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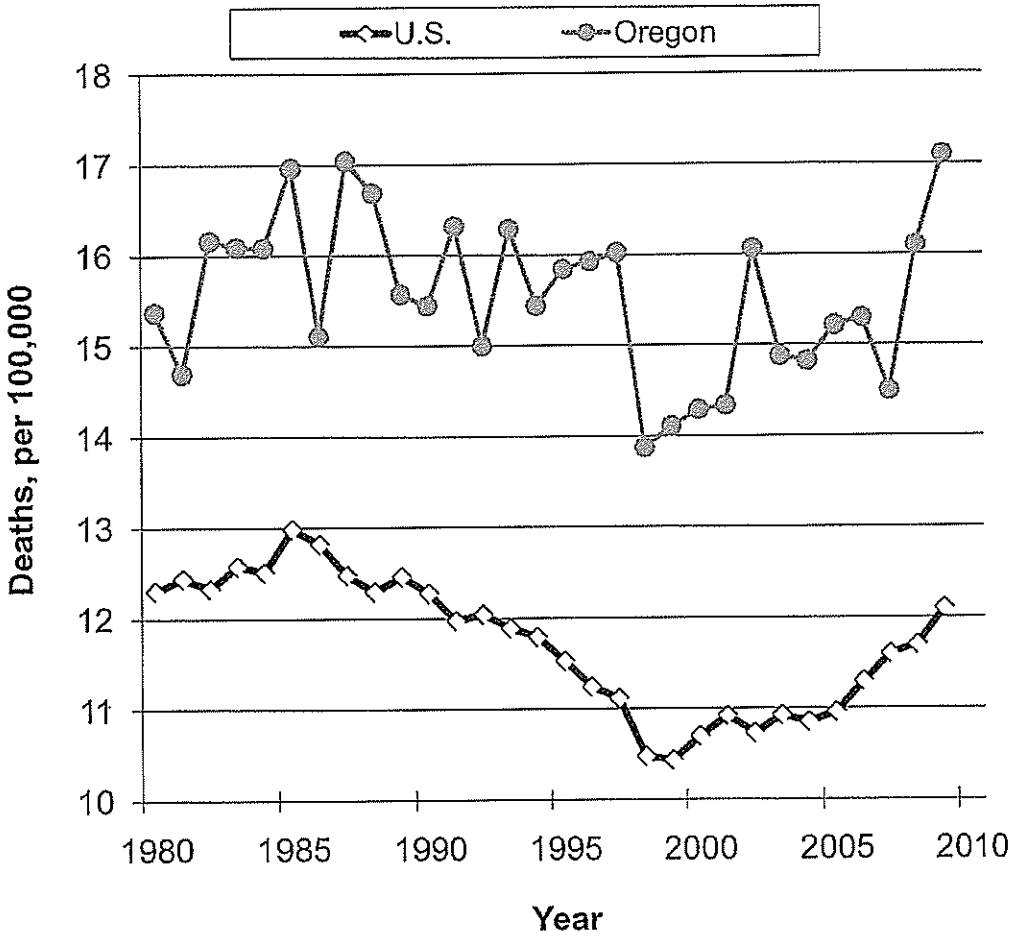
Findings

Overview

Figure 1 shows suicide rates in the US and Oregon between 1981 and 2010. Overall the trend in Oregon suicide rates is similar to the national trend— but rates in Oregon are much higher. The first peak age-adjusted rate in Oregon between 1981 and 2010 occurred in 1986 at 17.0 per 100,000. The lowest age-adjusted rate during this period occurred in 1999 at 13.9 per 100,000. The age-adjusted rates declined 18 percent from 1986 to 1999. A huge rate decrease occurred in late 90s, as rates fell from 16.2 per 100,000 in 1998 to 13.9 in 1999. Since 2000 Oregon suicide rates have increased 21 percent, reaching 17.1 in 2010.

Figure 1. Age-adjusted suicide rates, 1981-2010



Compared to the national average, Oregon suicide rates have been higher for the past three decades. The most recently available national data shows Oregon age-adjusted suicide rate of 17.1 per 100,000 in 2010 was 41 percent higher than the national average and Oregon ranked 9th place among all US states in suicide incidence. Between 2003 and 2010, Oregon suicide rates were significantly higher than the national average among all age groups except ages 10-17 and women ages 18-24 (Table 1).

Table 1. Suicide rates per 100,000 by age group and sex, U.S. and Oregon, 2003-2010

	Sex	Age Group				
		10-17	18-24	25-44	45-64	>= 65
U.S.	Male	4.2	19.6	22.3	26	29.2
	Female	1.5	3.7	6.1	7.9	4.0
	All	2.9	11.9	14.3	16.7	14.6
Oregon	Male	4.0 *	24.5	27.7	36.1	44.9
	Female	1.3 *	4.8 *	9.0	12.2	5.7
	All	2.7 *	14.9	18.5	23.9	22.9

* Not statistically significant

Trend by age group

Three-year rolling average rates of suicide by age group in Oregon are illustrated in Figure 2A and Figure 2B. For a long period, from 1991 to 2009, suicide rates decreased among men except ages 45-64, and among women ages 10-17 and 65 and older; suicide rates remained unchanged among women ages 18-24 and 25-44; suicide rates increased among both men and women ages 45 to 64. For the past decade, suicide rates remain approximately the same among men ages 10-17, 18-24 and 25-44; suicide rates increased 41 percent from 28.2 per 100,000 in 2000 to 39.7 per 100,000 in 2009 among men ages 45-64; suicide rates decreased 17 percent among men ages 65 and older. During same period, suicide rates remain approximately the same among women except ages 45 to 64, in which the rates rose more than 50 percent from 8.2 per 100,000 in 2000 to 12.5 per 100,000 in 2009. The suicide trends in Oregon fit the national picture in general[1].

[1] Hu G., Wilcox H.C, Wissow L., Baker S., Mid-life suicide- An Increasing problem in US Whites, 1999-2005. Am J Prev Med. 2008;35(6):589-593.

Figure 2A. Three year moving average of suicide rates among males, Oregon, 1991-2009

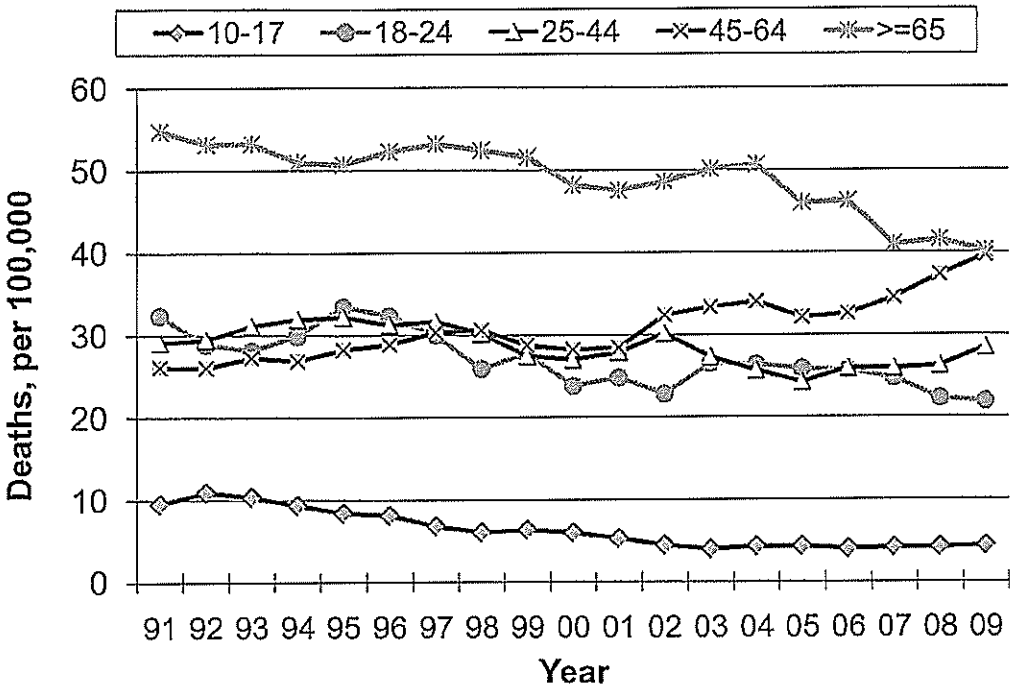
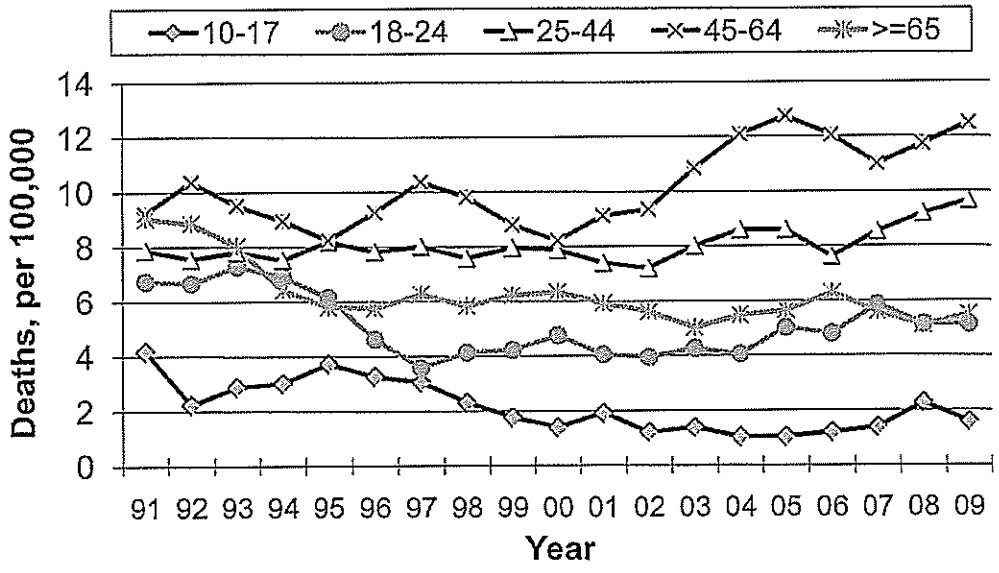


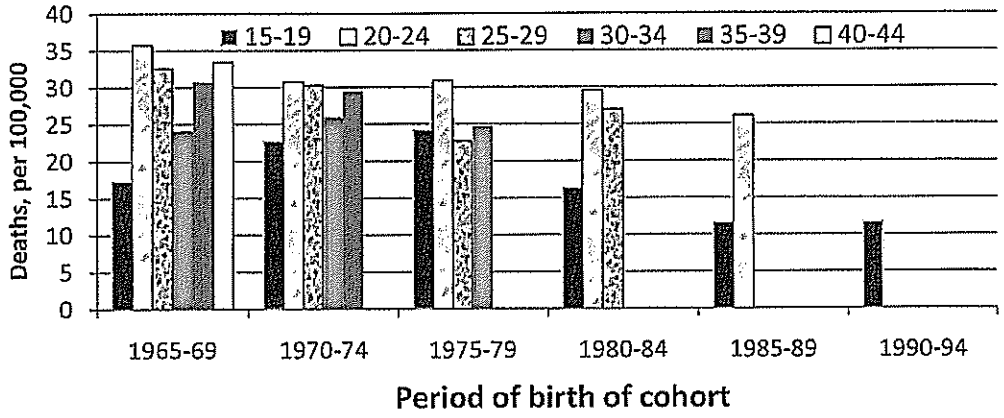
Figure 2B. Three year moving average of suicide rates among females, Oregon, 1991-2009



Trend by birth cohort

Most suicides occurred among white males in Oregon. Figure 3 shows cohort-specific suicide rates by age group among white males in Oregon. A similar pattern of rate by age consistently appeared except the birth cohort of 1975-1979 (the rate was slightly higher among ages 15-19 than among ages 20-24). Overall, the suicide rates were slightly decreased over the period of cohort of birth after 1965-1969.

Figure 3. Corhort-specific suicide rates by age group among white males, Oregon

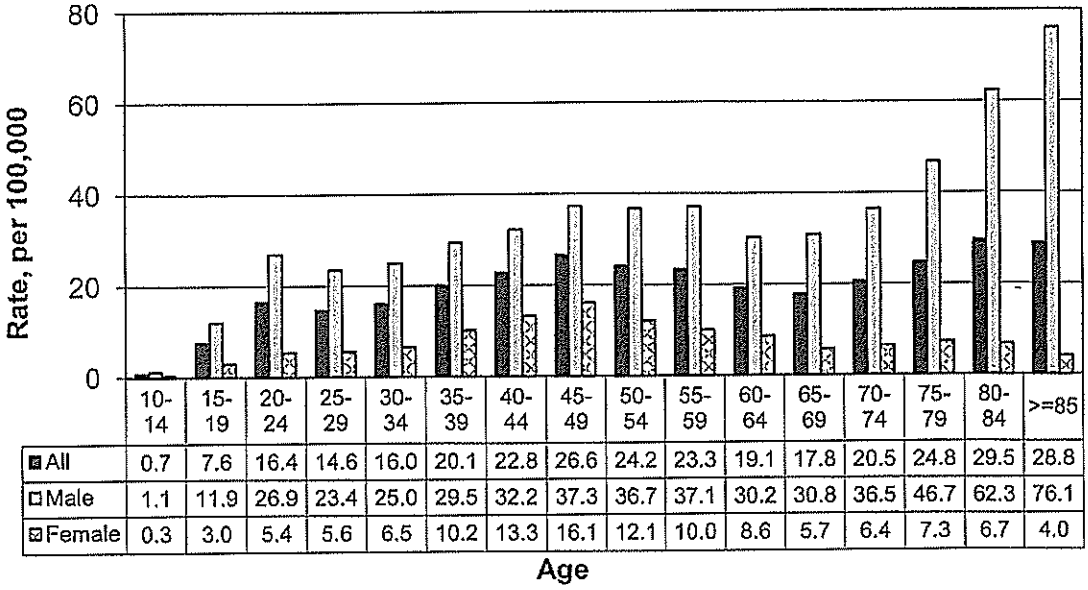


Suicide rate by age, sex, and race/ethnicity

Age

In general, suicide rates increase with age. Suicide among children under 10 is rare. The age-specific rate of suicide among men rose sharply after age 15 and reached the first peak between the ages of 20 and 24; the rate decreased slightly at the ages of 25-29, then rose gradually and reached the second peak around age 50. The rates decreased slowly between the ages of 50 and 69. After age 70 the rates rose dramatically. The highest suicide rate was among those ages 85 and over. The age distribution of suicide among women is different from that of men. The age-specific rate of suicide rose gradually after age 10 and reached the peak between the ages of 45 and 49, then decreased slowly. The rates increased slightly again after age of 70 (Figure 4).

Figure 4. Age-specific rate of suicide, Oregon, 2003-2010

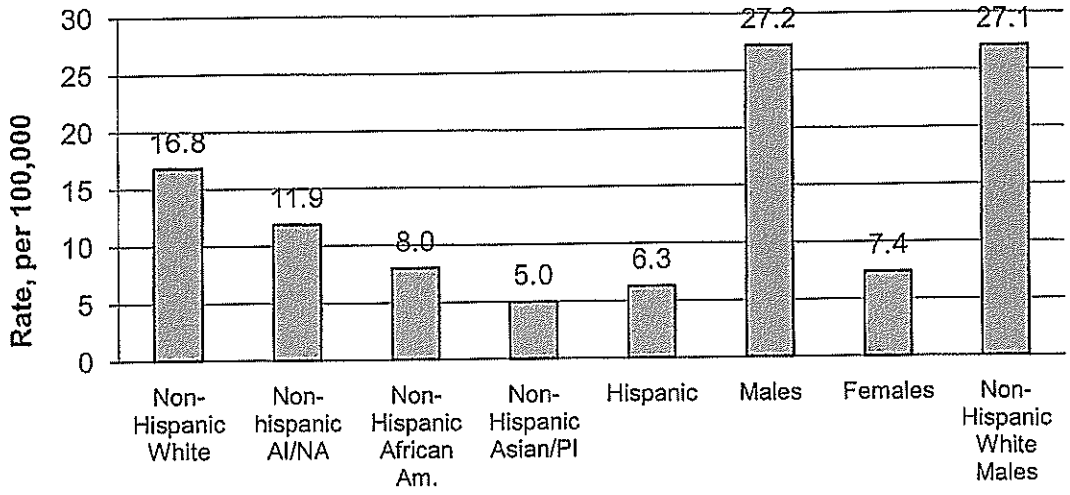


	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85
All	0.7	7.6	16.4	14.6	16.0	20.1	22.8	26.6	24.2	23.3	19.1	17.8	20.5	24.8	29.5	28.8
Male	1.1	11.9	26.9	23.4	25.0	29.5	32.2	37.3	36.7	37.1	30.2	30.8	36.5	46.7	62.3	76.1
Female	0.3	3.0	5.4	5.6	6.5	10.2	13.3	16.1	12.1	10.0	8.6	5.7	6.4	7.3	6.7	4.0

Sex, Race / Ethnicity

Men have a greater risk of dying by suicide than women. In each age group, suicide rates are higher among males than among women (Figure 4). Overall men were 3.7 times more likely to die by suicide than women (Figure 5). Among all suicide victims, 93 percent of the suicides were non-Hispanic white. The age-adjusted suicide rate among non-Hispanic whites was 16.8 per 100,000, which was higher than the rates observed among populations of other races. Overall white men had the highest suicide rate. This is mainly due to extremely high suicide rates among older white men aged 60 and over. There were not significant differences in rates between non-Hispanic white women and women of other races (Figure 5).

Figure 5. Suicide rate by race / ethnicity, Oregon, 2003-2010



Mechanism of death

Firearms, poisoning, and suffocation (hanging) are the most frequently observed mechanisms of injury in suicide deaths. Differences in mechanisms of death were observed by sex and race/ethnicity (Table 2). Firearms were the mechanism of suicide in as many as 62 percent of deaths among men compared with 31 percent of deaths among women. Poisoning was the mechanism of death among only 13 percent of men but 43 percent of the deaths among women. Suffocation was identified as the mechanism of death among 18 percent of men and women. The proportion of firearm suicides increased with age among men (Table 2A-2E – see pages 25, 27, 29, 31 and 33 for age groups).

Table 2. Mechanism of suicide by sex, Oregon, 2003-2010

Method	Males	%	Females	%	Total	%
Firearm	2300	62	332	31	2632	55
Poisoning	488	13	450	43	938	20
Hanging / suffocation	675	18	185	18	860	18
Fall	91	2	29	3	120	3
Sharp instrument	65	2	25	2	90	2
Drowning	45	1	26	2	71	1
Motor Vehicle	13	<1	2	<1	15	<1
Other MV	11	<1	1	<1	12	<1
Fire / Burn	10	<1	2	<1	12	<1
Other / Unknown	17	<1	5	<1	22	<1

Non-Hispanic white men were more likely to die from firearms than other races (64% vs. 50%) and Hispanic ethnicity (64% vs. 40%). Men with Hispanic ethnicity were more likely to die from hanging/suffocation than non-Hispanic white men (42% vs. 17%) and other races (29% vs. 17%). There were no significant differences on the mechanism of death among women between whites and other races (Table 3).

Table 3. Mechanism of suicide by race/ethnicity, Oregon, 2003-2010

Race / Ethnicity	Method	Males	%	Females	%	Total	%
Non-Hispanic White	Firearm	2176	64	310	32	2486	56
	Poisoning	459	13	429	44	888	20
	Hanging / suffocation	578	17	159	16	737	17
	Sharp instrument	62	2	23	2	85	2
	Drowning	38	1	23	2	61	1
	Fall	84	2	25	3	109	2
Hispanic	Firearm	59	40	7	32	66	39
	Poisoning	16	11	4	18	20	12
	Hanging / suffocation	62	42	7	32	69	41
	Sharp instrument	1	1	2	9	3	2
	Drowning	2	1	0	0	2	1
	Fall	3	2	2	9	5	3
Non-Hispanic other races	Firearm	56	50	13	25	69	42
	Poisoning	10	9	16	31	26	16
	Hanging / suffocation	32	29	18	35	50	31
	Sharp instrument	2	2	0	0	2	1
	Drowning	4	4	3	6	7	4
	Fall	3	3	2	4	5	3

Of 2,632 firearm suicides, 1,817 (69%) involved a handgun, 368 (14%) involved a rifle and 284 (11%) involved a shotgun; in 156 cases (6%) the type of firearm involved was unknown.

Among 938 suicides due to poisoning, more than 60 percent of them resulted from a single substance. The most often reported poisoning substance was a prescription medication. Prescription medications were involved 54 percent of male poisoning suicides and 74 percent of female poisoning suicides (Table 4).

Table 4. Class of substance causing poisoning suicide by sex, Oregon, 2003-2010

	Males (N=488)	%	Females (N=450)	%
Single substance	335	69	278	62
Prescription drug only	159	33	187	42
Over-counter drug only	16	3	16	4
Carbon monoxide or other gas only	132	27	56	12
Alcohol only	2	<1	2	<1
Street / Recreation drug only	9	2	0	0
Other	9	2	6	1
Multiple substances	143	29	167	37
Prescription drug	102	21	146	32
Alcohol	34	7	28	6
Over-counter drug	15	3	18	4
Street / Recreation drug	7	1	6	1
Carbon monoxide or other gas	5	1	4	1
Unknown	10	2	5	1

Circumstances

Circumstance differed by the sex of victim. Female victims were more likely to have a report indicating that they had a diagnosed mental disorder, depressed mood, substance use problem, that they were receiving treatment for mental health problems and had experienced a previous suicide attempt. Overall, nearly 70 percent of suicide victims had a diagnosed mental disorder, alcohol and /or substance use disorder, or depressed mood at the time of death; 35 percent of female victims and 16 percent of male victims had experienced a previous suicide attempt. Alcohol and/or other substance use problems were reported among 12 to 20 percent of suicide victims. Twelve percent of males and 20 percent of females had both a mental disorder and a substance use problem. Despite the high prevalence of mental health problems, less than one third of male victims and less than 60 percent of female victims were receiving treatment at the time of death. A crisis within the two weeks of a suicide death was reported for about 35 percent of victims. The most common crisis circumstance reported among men were a problem with an intimate partner (29%), physical health problems (25%), lost job / job problem (15%), financial

problem (14%), crime legal problems (13%) and family stressors (13%). Among women, they were a problem with an intimate partner (27%), physical health problems (26%), family stressors (17%), lost job / job problem (12%), and financial problem (11%). More than one third of persons who died by suicide had disclosed their intent to kill themselves before they died (Table 5, for age group specific information see Tables 5A – 5E on pages 26, 28, 30, 32, and 34 respectively).

Table 5. Frequencies of circumstances surrounding suicide incidents, Oregon, 2003-2010

Circumstances	Males (N=3715)		Females (N=1057)	
	Count	%	Count	%
Mental Health Status				
Mentioned mental health problems *	2544	68	863	82
Diagnosed mental disorder	1342	36	665	63
Problem with alcohol	784	21	195	18
Problem with other substance	446	12	180	17
Problem with alcohol and other substance	214	6	78	7
Diagnosed mental disorder and problem with alcohol and /or other substance	440	12	215	20
Current depressed mood	1724	46	548	52
Current treatment for mental health problem **	1066	29	613	58
Interpersonal Relationship Problems				
Intimate partner problem	1088	29	282	27
Other relationship problem	97	3	28	3
Victim of interpersonal violence within past month	9	<1	17	2
Perpetrator of interpersonal violence within past month	199	5	13	1
Death of family member or friend within past five years	252	7	96	9
Suicide of family member or friend within past five years	50	1	15	1
Family stressor(s)***	131	13	51	17
History of abuse as a child***	2	<1	9	3
Life Stressors				
A crisis within the two weeks	1387	37	351	33
Physical health problem	935	25	280	26
Financial problem	502	14	121	11
Lost job / job problem	549	15	123	12
Recent criminal legal problem	467	13	49	5
Noncriminal legal problem	190	5	67	6
School problem	41	1	7	1
Eviction/Loss of home***	52	5	23	7
Suicidal Behaviors				
Disclosed intent to die by suicide	1363	37	397	38
Left a suicide note	1189	32	437	41
History of suicide attempt	606	16	365	35

* Includes diagnosed mental disorder, problem with alcohol and/or other substance, and/or depressed mood.

** Includes treatment for problems with alcohol and/or other substance

*** Data are not collected before 2009

Major depression / dysthymia (74%) was the most frequently diagnosed mental health condition, followed by anxiety disorder (14%) and bipolar disorder (14%) (Table 6). Women were more likely to have a diagnosed mental health disorder and more likely to be receiving treatment for mental health problems across all age groups.

Table 6. Number and percentage* of people experiencing mental illness among suicide victims by sex, Oregon, 2003-2010

Mental illness	Males (N=1296)		Females (N=665)		All (N=1961)	
	Count	%	Count	%	Count	%
Depression / Dysthymia	961	74	496	75	1457	74
Bipolar	149	11	121	18	270	14
Schizophrenia	64	5	26	4	90	5
Anxiety disorder	169	13	106	16	275	14
Posttraumatic stress disorder	27	2	15	2	42	2
Attention deficit disorder / Attention deficit and hyperactivity disorder	16	1	7	1	23	1
Eating disorder	0	0	1	<1	1	<1
Obsessive compulsive	4	<1	2	0	6	<1
Other	28	2	8	1	36	2
Unknown	64	5	10	2	74	4

* Percentages might exceed 100% because some victims might have more than one problem.

Death by month

The number of suicides in each month varied. On average there were approximately 48 suicide deaths per month. Overall the greatest number of suicides occurred in May (Figure 6), but there was not a clear seasonal pattern (Figure 7).

Figure 6. Number of suicides by month, Oregon, 2003-2010

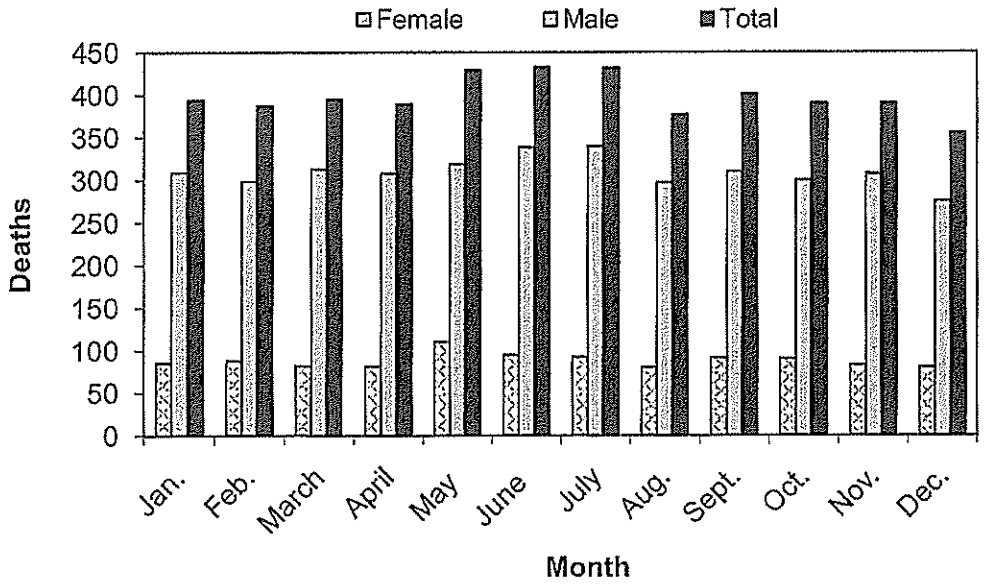
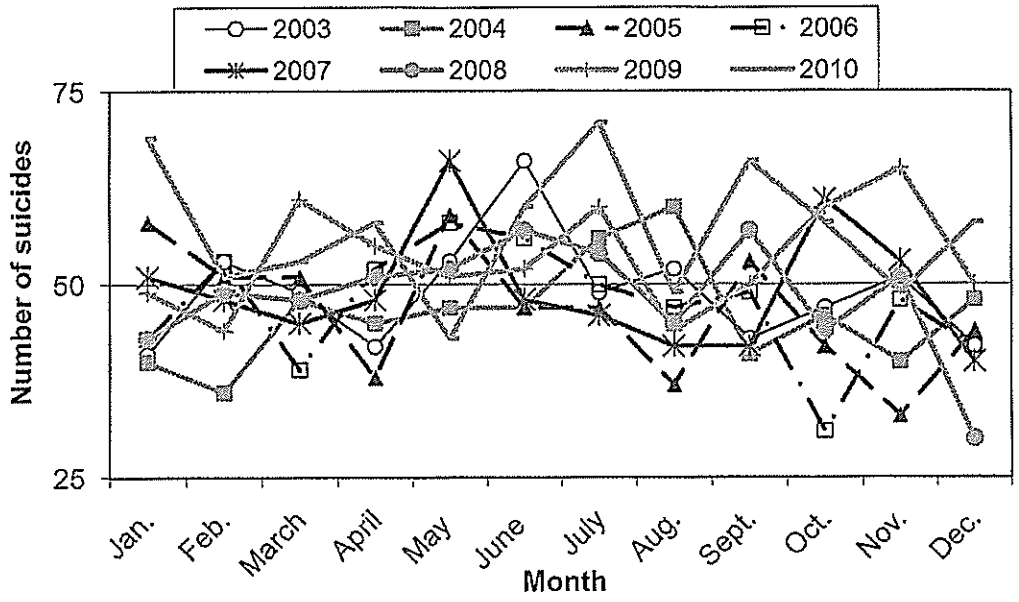


Figure 7. Suicides by month and year, Oregon, 2003-2010



Type of suicide

The majority of suicide incidents in Oregon involve one death. Multiple suicides (suicide pacts) occur rarely. From 2003-2010, there were five suicide incidents that involved more than one death, which counted for 0.2 percent of total suicide deaths. Seventy-five suicides (1.6%) were followed by a homicide (combined homicide-suicide).

Location of suicide

Suicides occur in a variety of locations; however, three in four suicides occurred at a house or apartment (Table 7).

Table 7. Location of suicide incidents by sex, Oregon, 2003-2010

Type of location	Males	%	Females	%
House / Apartment	2761	74	849	80
Natural Area (e.g. field, river, woods)	242	7	65	6
Park / Public use area	139	4	30	3
Street / Road	157	4	32	3
Parking lot / Garage	71	2	7	1
Motor Vehicle	44	1	9	1
Motel / Inn /Hotel	54	1	31	3
Jail / Prison	42	1	2	<1
Highway	27	1	4	<1
Hospital	14	<1	6	<1
Commercial area	18	<1	0	<1
Supervised Resident Facilities	9	<1	3	<1
Railroad	12	<1	2	<1
Bank / Office building	10	<1	0	<1
Industrial or construction areas	11	<1	2	<1
College/University/School	6	<1	1	<1
Abandoned house, building	4	<1	0	<1
Synagogue, Church, Temple	3	<1	0	<1
Farm	4	<1	0	<1
Other	57	3	5	<1
Unknown	30	5	2	<1

Suicide by county

Suicide rates varied from 7.4 to 35.2 per 100,000 among the 36 counties in Oregon. The counties of Baker, Coos, Curry, Douglas, Grant, Harney, Jackson, Josephine, Klamath, Lincoln and Tillamook had a higher than state average suicide rate. The counties of Benton, Clackamas, Hood River, Washington, and Yamhill had a lower than state average suicide rate (Figure 8 and Table 8).

Figure 8: Suicide rate by County, Oregon, 2003-2010

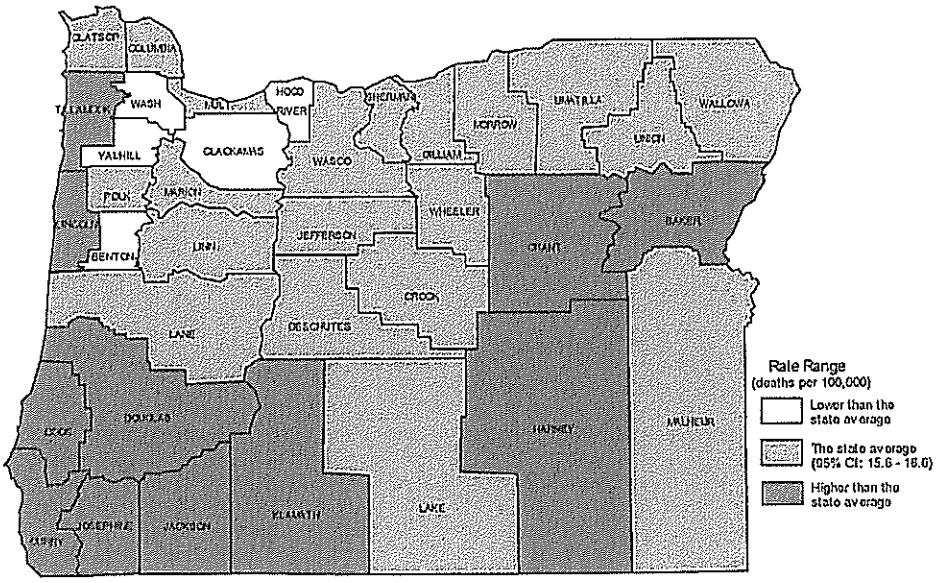


Table 8. Suicide deaths and crude rates by age group and county, Oregon, 2003-2010

County	All ages		<= 17	18-24		25-44		45-64		>=65	
	Deaths	Rate	Deaths	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Baker	37	28.9	0	2	20.5	8	32.0	12	29.7	15	54.7
Benton	77	11.9	2	13	8.0	26	18.5	25	16.2	11	15.2
Clackamas	404	13.6	6	32	13.0	134	17.3	170	19.2	62	17.0
Clatsop	50	17.0	0	4	14.4	14	21.1	22	24.4	10	20.9
Columbia	63	16.2	0	5	17.2	16	15.9	29	24.6	13	28.5
Coos	149	29.4	2	15	37.9	31	29.2	63	39.6	38	36.9
Crook	34	18.8	0	3	23.9	6	14.1	14	25.8	11	38.2
Curry	61	35.2	0	4	37.1	10	33.8	19	33.0	28	60.7
Deschutes	220	18.2	7	14	14.8	74	22.8	86	24.7	39	24.2
Douglas	168	20.3	1	15	23.6	39	21.9	66	26.7	47	28.8
Gilliam	3	22.6	1	1	117.9	0	0.0	1	22.8	0	0.0
Grant	19	34.2	1	1	26.0	4	38.0	5	27.2	8	68.4
Harney	18	33.3	0	0	0.0	7	62.8	5	29.7	6	59.7
Hood River	14	8.3	0	0	0.0	5	11.2	2	4.7	7	32.4
Jackson	336	21.3	11	26	19.0	88	23.5	150	33.3	61	23.4
Jefferson	24	14.9	0	6	42.6	10	25.8	4	9.6	4	19.3
Josephine	142	22.0	3	9	20.0	27	20.3	74	37.4	29	21.7
Klamath	125	23.6	2	9	18.8	40	32.0	46	31.0	28	33.7
Lake	15	26.1	0	2	48.5	3	24.8	7	38.3	3	27.4
Lane	481	17.6	6	42	10.6	165	25.3	179	23.9	89	23.3
Lincoln	87	23.7	2	4	14.8	18	25.0	43	33.5	20	28.0
Linn	138	15.4	2	14	19.6	43	18.9	47	19.3	32	23.5
Malheur	34	13.7	0	7	26.8	11	17.4	10	17.5	6	16.6
Marion	351	14.3	3	41	17.3	116	17.4	123	20.6	68	22.7
Morrow	9	9.9	0	0	0.0	2	9.0	4	16.7	3	28.5
Multnomah	842	15.2	12	71	14.7	312	17.0	345	24.1	102	17.8
Polk	74	12.5	2	3	3.7	27	20.2	28	19.1	14	15.0
Sherman	1	7.4	0	0	0.0	0	0.0	1	24.3	0	0.0
Tillamook	49	24.5	0	1	6.6	13	32.2	19	29.0	16	40.8
Umatilla	99	17.0	5	15	28.1	26	16.6	32	22.3	21	29.0
Union	43	21.7	1	3	10.0	15	36.5	12	22.7	12	39.5
Wallowa	12	22.1	0	1	26.6	3	30.9	7	37.7	1	8.1
Wasco	29	15.3	0	1	6.6	11	26.4	10	17.9	7	21.4
Washington	464	11.3	11	49	14.2	145	11.1	196	19.5	63	16.8
Wheeler	3	27.0	0	0	0.0	0	0.0	0	0.0	3	115.4
Yamhill	94	12.4	6	5	6.3	24	11.9	37	19.3	21	22.6
State	*4772*	*16.1*	*87*	*418*	*14.7*	*1475*	*18.4*	*1893*	*23.7*	*899*	*23.2*

Rates are per 100,000.

Be cautious to use rates calculated from small numbers less than 20 – rates are unstable.

Because of small number of deaths among ages <=17, the rates for this age group are not calculated.

Suspected alcohol use and toxicology

According to medical examiner and/or police reports, approximately 25 percent of suicide victims might have used alcohol in the hours preceding their deaths. Not all suicide deaths are screened for alcohol or drug use. Toxicology tests showed over one third of tested cases were positive for alcohol and more than 40 percent of tested cases were positive for opiates, and benzodiazepines among the suicide deaths (Table 9).

Table 9. Number and percentage of suspected alcohol use and toxicology test results in suicide deaths, Oregon, 2009-2010

Toxicology variable	Investigated / Screened	Present	% positive
Alcohol			
Suspected alcohol use	1109	261	24
Alcohol present in the blood	385	147	38
Amphetamines	277	26	9
Cocaine	277	6	2
Marijuana	278	47	17
Opiate	278	117	42
Marijuana and Opiate	278	18	6
Antidepressant drug	277	119	43
Benzodiazepines	277	111	40

Occupation of victims

Occupation and the industry variables on death certificates were used to group data to examine occupational status among suicide victims. Five percent of suicide victims were unemployed. Table 10 lists types of occupation and specific occupations among suicide victims ages 18-64.

Table 10. Type of occupation among people ages 18-64 who died by suicide, Oregon, 2003-2010

Type of Occupation	Males (N=2881)	%	Females (N=905)	%
Classification				
Agriculture	54	2	5	1
Clerical	93	3	98	11
Craftsmen / Foremen and kindred	640	22	21	2
Laborers	280	10	14	2
Manager / Official	150	5	46	5
Operative	312	11	17	2
Professional technical	506	18	209	23
Service Workers	254	9	132	15
Sales	123	4	67	7
Other	207	7	224	25
Unknown	262	9	72	8
Specific group				
Army/Navy listed	35	1	2	<1
Housewife/Househusband, Homemaker	6	0	152	17
Police / Firefighter	61	2	6	1
Physician/Dentist/Nurse	25	1	37	4
Student age over 18 years	118	4	31	3
Unemployed	118	4	48	5

Educational level and marital status

Table 11 and Table 12 show educational attainment and marital status of suicide victims. Educational attainment was missing from 8 percent of the data (Table 11).

Table 11. Educational attainment among people who died by suicide by sex, Oregon, 2003-2010

Educational Level	Males		Females	
	Number	%*	Number	%*
8th grade or less	159	5	21	2
9-12th grade	433	13	117	12
High school or GED	1434	42	338	35
Some college or associate degree	815	24	295	30
Bachelor or graduate degree	556	16	200	21
Unknown	318	NA	86	NA

* Percentage is calculated according to available data.

Table 12. Marital status among people who died by suicide by sex, Oregon, 2003-2010

Marital status	Males		Females	
	Number	%*	Number	%*
Married	1285	35	349	33
Never Married	1125	30	239	23
Divorced	977	26	369	35
Widowed	240	6	82	8
Other /Unknown	106	NA	18	NA

* Percentage is calculated according to available data.

Table 11A. Educational attainment among people who died by suicide by age group and sex, Oregon, 2003-2010

Educational Level	Ages 18-24		Ages 25-44	
	%, males	%, females	%, males	%, females
	(N=329)	(N=61)	(N=1019)	(N=327)
8th grade or less	3	2	3	2
9-12th grade	22	16	11	12
High school or GED	44	52	47	34
Some college or associate degree	26	25	27	33
Bachelor or graduate degree	4	5	12	20

Educational Level	Ages 45-64		Ages >= 65	
	%, males	%, females	%, males	%, females
	(N=1286)	(N=445)	(N=700)	(N=117)
8th grade or less	2	2	11	11
9-12th grade	10	9	12	10
High school or GED	42	33	42	40
Some college or associate degree	26	32	16	18
Bachelor or graduate degree	21	24	19	21

Percentage is calculated according to available data.

Table 12A. Marital status among people who died by suicide by age group and sex, Oregon, 2003-2010

Marital Status	Ages 18-24		Ages 25-44	
	%, males	%, females	%, males	%, females
	N=339	N=63	N=1090	N=347
Married	5	3	34	38
Never Married	92	89	42	29
Divorced	3	8	23	32
Widowed	0	0	<1	1

Marital Status	Ages 45-64		Ages >= 65	
	%, males	%, females	%, males	%, females
	N=1374	N=480	N=761	N=130
Married	39	35	48	35
Never Married	18	11	6	5
Divorced	41	48	21	18
Widowed	3	5	26	43

Percentage is calculated according to available data.

Characteristics of different life stages

Adolescents ages 10-17

Suicide among adolescents accounted for approximately 2 percent of suicides. The rate of suicide among adolescents was 3.2 per 100,000. The rate ratio between men (4.7 per 100,000) and women (1.6 per 100,000) was 2.9.

Firearms were the most common mechanism of death among boys (45%), followed by hanging / suffocation (39%) and poisoning (8%). Among girls, hanging / suffocation was the most common mechanism (57%), followed by firearms (29%) and poisoning (14%) (Table 2A).

Table 2A. Mechanism of suicide among adolescents ages <=17 by sex, Oregon, 2003-2010

Method	Males	%	Females	%	Total	%
Firearm	30	45	6	29	36	41
Poisoning	5	8	3	14	8	9
Hanging / suffocation	26	39	12	57	38	44
Fall	1	2	0	0	1	1
Sharp instrument	0	0	0	0	0	0
Drowning	0	0	0	0	0	0
Motor Vehicle	2	3	0	0	2	2
Other MV	2	3	0	0	2	2
Other/Unknown	0	0	0	0	0	0

Approximately 70 percent of youth suicide victims had a diagnosed mental disorder, alcohol and /or substance use problems, or depressed mood at time of death; 27 percent of girls and 12 percent of boys had previously attempted suicide. About one third of suicide victims were under treatment for mental health problems at time of death. Alcohol and/or other substance use problems were reported among 9 to 14 percent of male victims. Some suicides occurred impulsively. A crisis within the two weeks was reported for nearly 50 percent of suicide victims. The most common circumstances reported were a problem with boyfriend / girlfriend, family stressors and school problems (Table 5A next page).

Nearly one third of adolescents who died by suicide had disclosed their intent to kill themselves before they died.

Table 5A. Frequencies of circumstances surrounding suicide incidents among adolescents ages <=17, Oregon, 2003-2010

Circumstances	Males (N=65)		Females (N=22)	
	Count	%	Count	%
Mental Health Status				
Mentioned mental health problems *	43	66	15	68
Diagnosed mental disorder	21	32	11	50
Problem with alcohol	6	9	0	0
Problem with other substance	9	14	1	5
Problem with alcohol and other substance	5	8	1	5
Diagnosed mental disorder and problem with alcohol and /or other substance	2	14	1	5
Current depressed mood	34	52	8	36
Current treatment for mental health problem **	19	29	9	41
Interpersonal Relationship Problems				
Broken up with boyfriend/girlfriend	14	22	7	32
Other relationship problem	5	8	1	5
Victim of interpersonal violence within past month	1	2	0	2
Perpetrator of interpersonal violence within past month	2	3	0	0
Death of family member or friend within past five years	4	6	1	5
Suicide of family member or friend within past five years	0	0	1	5
Family stressor(s)***	5	38	3	50
History of abuse as a child***	0	0	0	0
Life Stressors				
A crisis within the two weeks	33	51	11	50
Physical health problem	0	0	0	0
Financial problem	0	0	0	0
Lost job / job problem	0	0	0	0
Recent criminal legal problem	10	15	1	5
Noncriminal legal problem	1	2	1	5
School problem	19	29	4	18
Eviction/Loss of home***	0	0	0	0
Suicidal Behaviors				
Disclosed intent to die by suicide	19	29	9	41
Left a suicide note	18	28	10	45
History of suicide attempt	8	12	6	27

* Includes diagnosed mental disorder, problem with alcohol and/or other substance, and/or depressed mood.

** Includes treatment for problems with alcohol and/or other substance

*** Data are not collected before 2009

Youth ages 18-24

Suicide among youth accounted for approximately 9 percent of suicides. The rate of suicide among youth ages 18-24 was 17.3 per 100,000. The rate ratio between men (28.4 per 100,000) and women (5.6 per 100,000) was 5.1.

Firearms were the most common mechanism of death among men (60%), followed by hanging / suffocation (27%) and poisoning (5%). Among women hanging / suffocation was the most common mechanism (44%), followed by poisoning (27%) and firearms (24%) (Table 2B).

Table 2B. Mechanism of suicide among youth ages 18-24 by sex, Oregon, 2003-2010

Method	Males	%	Females	%	Total	%
Firearm	210	60	16	24	226	54
Poisoning	16	5	18	27	34	8
Hanging / suffocation	94	27	29	44	123	29
Fall	14	4	1	2	15	4
Sharp instrument	2	1	1	2	3	1
Drowning	5	1	1	2	6	1
Motor Vehicle	2	1	0	0	2	<1
Other MV	4	1	0	0	4	1
Other/Unknown	5	1	0	0	5	1

Approximately 80 percent of female victims had a diagnosed mental disorder, alcohol and /or substance use problems, or depressed mood at time of death; nearly 50 percent of women had previously attempted suicide and were under treatment for mental health problems at time of death. Alcohol and/or other substance use problems were reported among 17 to 26 percent of female victims. In contrast, male victims' mental health problems were likely to be undiagnosed and untreated. Less than one fourth of male victims were under treatment for mental health problems. A crisis within the two weeks was reported for about 40 percent of victims. The most common circumstances reported were a problem with an intimate partner, accounting for approximately 40 percent of male victims and 50 percent of female victims, followed by family stressors (21%) and criminal legal problems (14%) among men (Table 5B next page).

Among 418 youth who died by suicide, 94 (22%) were students, 26 were veterans, and 10 were police officers/firefighters.

Nearly 90 percent of suicide victims ages 18-24 were single, never married (Table 12A page 24).

Table 5B. Frequencies of circumstances surrounding suicide incidents among youth ages 18-24, Oregon, 2003-2010

Circumstances	Males (N=352)		Females (N=66)	
	Count	%	Count	%
Mental Health Status				
Mentioned mental health problems *	236	67	51	77
Diagnosed mental disorder	114	32	40	61
Problem with alcohol	60	17	11	17
Problem with other substance	53	15	17	26
Problem with alcohol and other substance	22	6	5	8
Diagnosed mental disorder and problem with alcohol and /or other substance	29	8	20	30
Current depressed mood	143	41	34	52
Current treatment for mental health problem **	83	24	35	53
Interpersonal Relationship Problems				
Intimate partner problem	138	39	33	50
Other relationship problem	17	5	1	2
Victim of interpersonal violence within past month	1	<1	4	6
Perpetrator of interpersonal violence within past month	31	9	3	5
Death of family member or friend within past five years	11	3	2	3
Suicide of family member or friend within past five years	10	3	1	2
Family stressor(s)***	16	21	2	13
History of abuse as a child***	1	1	0	0
Life Stressors				
A crisis within the two weeks	142	40	29	44
Physical health problem	16	5	9	14
Financial problem	27	8	7	11
Lost job / job problem	36	10	8	12
Recent criminal legal problem	51	14	2	3
Noncriminal legal problem	13	4	1	2
School problem	19	5	0	0
Eviction/Loss of home***	5	6	0	0
Suicidal Behaviors				
Disclosed intent to die by suicide	134	38	24	36
Left a suicide note	106	30	24	36
History of suicide attempt	70	20	31	47

* Includes diagnosed mental disorder, problem with alcohol and/or other substance, and/or depressed mood.

** Includes treatment for problems with alcohol and/or other substance

*** Data are not collected before 2009

Young adults ages 25-44

Suicides among young adults ages 25-44 accounted for approximately 31 percent of all suicides. The suicide rate among young adults ages 25-44 was 19.4 per 100,000. The rate ratio between men (29.0 per 100,000) and women (9.4 per 100,000) was 3.1.

Firearms were the most common mechanism of suicide among men (51%), followed by hanging / suffocation (27%) and poisoning (15%). Among women poisoning was the most common mechanism of death (42%), followed by firearms (32%) and hanging / suffocation (19%) (Table 2C).

Table 2C. Mechanism of suicide among young adults ages 25-44 by sex, Oregon, 2003-2010

Method	Males	%	Females	%	Total	%
Firearm	577	51	112	32	689	47
Poisoning	165	15	146	42	311	21
Hanging / suffocation	302	27	67	19	369	25
Fall	31	3	10	3	41	3
Sharp instrument	20	2	4	1	24	2
Drowning	18	2	7	2	25	2
Motor Vehicle	3	<1	1	<1	4	<1
Other MV	2	<1	1	<1	3	<1
Other/Unknown	6	1	3	1	9	1

Over 70 percent of suicide victims ages 25-44 had a diagnosed mental disorder, alcohol and /or substance use problem, or depressed mood at time of death; 44 percent of women and 22 percent of men had previously attempted suicide. Alcohol and/or other substance use problems were reported among 19 to 26 percent of suicide victims. Sixteen percent of male suicide victims and 24 percent of female suicide victims had a mental disorder and substance use problem. Less than one third of male victims and only 60 percent of female victims were under treatment for mental health problems at the time of death. Suicides are often precipitated by one or more stressful events. A crisis within the two weeks was reported for 40 percent of suicide victims. The most common circumstances reported among men were a problem with an intimate partner (44%), lost job / job problem (20%), crime legal problems (18%), financial problem (15%) and family stressors (19%). Among women, they were a problem with an intimate partner (39%), family stressors (19%), physical health problems (17%), lost job / job problem (14%), and financial problem (11%) (Table 5C next page).

Over 80 percent of suicide victims graduated from high school (Table 11A page 23).

Over 40 percent of male suicide victims were single, never married (Table 12A on page 24).

Table 5C. Frequencies of circumstances surrounding suicide incidents among young adults ages 25-44, Oregon, 2003-2010

Circumstances	Males (N=1124)		Females (N=351)	
	Count	%	Count	%
Mental Health Status				
Mentioned mental health problems *	826	73	302	86
Diagnosed mental disorder	420	37	229	65
Problem with alcohol	291	26	84	24
Problem with other substance	208	19	82	23
Problem with alcohol and other substance	94	8	42	12
Diagnosed mental disorder and problem with alcohol and /or other substance	181	16	84	24
Current depressed mood	535	48	189	54
Current treatment for mental health problem **	328	29	211	60
Interpersonal Relationship Problems				
Intimate partner problem	500	44	137	39
Other relationship problem	29	3	13	4
Victim of interpersonal violence within past month	5	<1	11	3
Perpetrator of interpersonal violence within past month	86	8	7	2
Death of family member or friend within past five years	45	4	28	8
Suicide of family member or friend within past five years	15	1	6	2
Family stressor(s)***	40	13	18	19
History of abuse as a child***	0	0	5	5
Life Stressors				
A crisis within the two weeks	445	40	139	40
Physical health problem	92	8	59	17
Financial problem	171	15	40	11
Lost job / job problem	230	20	48	14
Recent criminal legal problem	198	18	30	9
Noncriminal legal problem	77	7	38	11
School problem	13	1	2	1
Eviction/Loss of home***	14	4	8	8
Suicidal Behaviors				
Disclosed intent to die by suicide	438	39	139	40
Left a suicide note	324	29	139	40
History of suicide attempt	251	22	153	44

* Includes diagnosed mental disorder, problem with alcohol and/or other substance, and/or depressed mood.

** Includes treatment for problems with alcohol and/or other substance

*** Data are not collected before 2009

Adults ages 45-64

Suicides among adults ages 45-64 accounted for approximately 39 percent of suicides. Forty-six percent of suicides among women occurred in this age group. The suicide rate among adults ages 45-64 was 24.5 per 100,000. The rate ratio between men (37.0 per 100,000) and women (12.4 per 100,000) was 3.

Firearms were the most common mechanism of death among male victims (59%), followed by poisoning (18%), and hanging / suffocation (15%). Among women, poisoning was the most common mechanism of death (48%), followed by firearms (31%) and hanging / suffocation (12%) (Table 2D).

Table 2D. Mechanism of suicide among adults ages 44-64 by sex, Oregon, 2003-2010

Method	Males	%	Females	%	Total	%
Firearm	835	59	151	31	986	52
Poisoning	253	18	234	48	487	26
Hanging / suffocation	209	15	57	12	266	14
Fall	40	3	14	3	54	3
Sharp Instrument	31	2	16	3	47	2
Drowning	17	1	12	2	29	2
Motor Vehicle	3	<1	1	<1	4	<1
Other MV	3	<1	0	0	3	<1
Other/Unknown	14	1	3	1	17	1

Approximately 75 percent of male victims and 85 percent of female victims ages 45-64 had a diagnosed mental disorder, alcohol and /or substance use problem, or depressed mood at the time of death; 32 percent of women and 15 percent of men had previously attempted suicide. Alcohol and/or other substance use problems were reported among 12 to 27 percent of suicide victims. About one third of male victims and 65 percent of female victims were under treatment for mental health problems at time of death. The precipitated factors among ages 45-64 were varied, but both men and women had similar circumstances surrounding suicide incidents. A crisis within the two weeks was reported for nearly one third of victims. The most common circumstances reported among this age group were a problem with an intimate partner, physical health problems, lost job / job problem, and financial problem (Table 5D next page).

Over 50 percent of female suicide victims had at least a college or associate degree, and half female victims were divorced (Table 11A page 23, Table 12A page 24).

Table 5D. Frequencies of circumstances surrounding suicide incidents among adults ages 45-64, Oregon, 2003-2010

Circumstances	Males (N=1405)		Females (N=488)	
	Count	%	Count	%
Mental Health Status				
Mentioned mental health problems *	1025	73	414	85
Diagnosed mental disorder	560	40	332	68
Problem with alcohol	378	27	95	19
Problem with other substance	168	12	77	16
Problem with alcohol and other substance	89	6	30	6
Diagnosed mental disorder and problem with alcohol and /or other substance	203	14	103	21
Current depressed mood	677	48	252	52
Current treatment for mental health problem **	479	34	310	64
Interpersonal Relationship Problems				
Intimate partner problem	384	27	100	20
Other relationship problem	32	2	10	2
Victim of interpersonal violence within past month	2	<1	2	<1
Perpetrator of interpersonal violence within past month	65	5	3	1
Death of family member or friend within past five years	92	7	48	10
Suicide of family member or friend within past five years	19	1	7	1
Family stressor(s)***	54	13	24	16
History of abuse as a child***	1	<1	3	2
Life Stressors				
A crisis within the two weeks	497	35	134	27
Physical health problem	320	23	139	28
Financial problem	263	19	63	13
Lost job / job problem	273	19	65	13
Recent criminal legal problem	188	13	16	3
Noncriminal legal problem	86	6	26	5
School problem	9	1	0	0
Eviction/Loss of home***	31	8	13	9
Suicidal Behaviors				
Disclosed intent to die by suicide	496	35	176	36
Left a suicide note	496	35	218	45
History of suicide attempt	214	15	158	32

* Includes diagnosed mental disorder, problem with alcohol and/or other substance, and/or depressed mood.

** Includes treatment for problems with alcohol and/or other substance

*** Data are not collected before 2009

Older adults ages 65 and over

Suicides among older adults accounted for approximately 19 percent of suicides. The suicide rate was 23.2 per 100,000 among older adults. The rate ratio between men (44.9 per 100,000) and women (6.0 per 100,000) was 7.4, which was the highest among all age groups.

Firearms were the dominate mechanism of death among men (84%); poisoning and hanging / suffocation accounted for 6 percent respectively. Among women, poisoning was the most common mechanism of death (37%), followed by firearms (36%) and hanging / suffocation (15%) (Table 2E).

Table 2E. Mechanism of suicide among older adults ages >= 65 by sex, Oregon, 2003-2010

Method	Males	%	Females	%	Total	%
Firearm	648	84	47	36	695	77
Poisoning	49	6	49	37	98	11
Hanging / suffocation	44	6	20	15	64	7
Fall	5	1	4	3	9	1
Sharp instrument	12	2	4	3	16	2
Drowning	5	1	6	5	11	1
Motor Vehicle	3	<1	0	0	3	<1
Other MV	0	<1	0	0	0	0
Other/Unknown	2	<1	1	<1	3	<1

Approximately 60 percent of older suicide victims had a diagnosed mental disorder, alcohol and /or substance use problem, or depressed mood at time of death. Compared to other young age groups, few older adults had a history of suicide attempt and problems with alcohol and substance use. Only about 20 percent of male victims and one third of female victims were receiving treatment for mental health problems at time of death. The notable circumstances reported among older adult suicides were physical health problems, which were reported among 66 percent of men and 56 percent of women, followed by a death of family member or friend within past five years (13%) (Table 5E next page).

Among 507 older adults with physical health problems, 88 percent of had declining health; 59 percent had a loss of autonomy or independence; 31 percent had visited a physician within 30 days. The most frequently reported physical illnesses were cancer (26 percent), chronic pain (25 percent), and heart disease (16 percent). Among 73 elder women with physical health problems, 54 percent had declining health; 48 percent had a loss of autonomy or independence; 19 percent had visited a physician within 30 days. The most frequently reported physical illnesses were chronic pain (27 percent), cancer (15 percent) and heart disease (10 percent).

Of suicide victims among older adults who lost a family member or friend within past five years, nearly a half experienced their spouse's death in the past year.

Among older adults who died by suicide, 44 percent of men and 56 percent of women lived alone; nearly 50 percent of males were married; 43 percent of females were widowed (Table 12A page 24).

Table 5E. Frequencies of circumstances surrounding suicide incidents among older adults ages 65 and older, Oregon, 2003-2010

Circumstances	Males (N=768)		Females (N=131)	
	Count	%	Count	%
Mental Health Status				
Mentioned mental health problems *	414	54	81	62
Diagnosed mental disorder	181	24	53	40
Problem with alcohol	49	6	5	4
Problem with other substance	8	1	3	2
Problem with alcohol and other substance	4	1	1	1
Diagnosed mental disorder and problem with alcohol and /or other substance	25	3	7	5
Current depressed mood	335	44	65	50
Current treatment for mental health problem **	157	20	48	37
Interpersonal Relationship Problems				
Intimate partner problem	52	7	5	4
Other relationship problem	13	2	3	2
Victim of interpersonal violence within past month	1	<1	0	0
Perpetrator of interpersonal violence within past month	15	2	0	0
Death of family member or friend within past five years	100	13	17	13
Suicide of family member or friend within past five years	6	1	0	0
Family stressor(s)***	16	8	3	8
History of abuse as a child***	0	0	1	3
Life Stressors				
A crisis within the two weeks	270	35	38	29
Physical health problem	507	66	73	56
Financial problem	41	5	11	8
Lost job / job problem	10	1	2	2
Recent criminal legal problem	20	3	0	0
Noncriminal legal problem	13	2	1	1
School problem	0	0	0	0
Eviction/Loss of home***	2	1	2	5
Suicidal Behaviors				
Disclosed intent to die by suicide	275	36	49	37
Left a suicide note	247	32	46	35
History of suicide attempt	63	8	16	12

* Includes diagnosed mental disorder, problem with alcohol and/or other substance, and/or depressed mood.

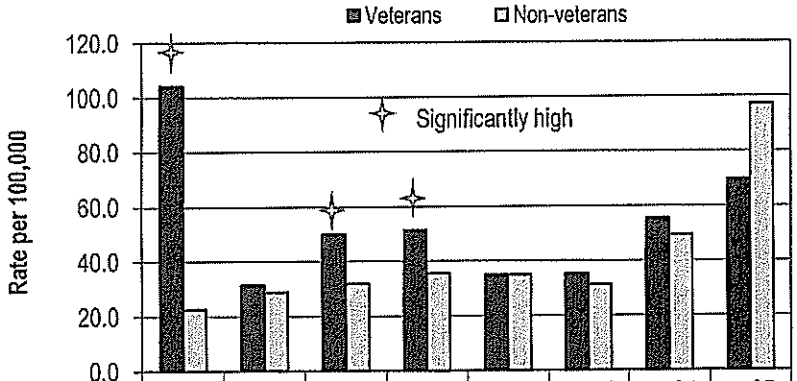
** Includes treatment for problems with alcohol and/or other substance

*** Data are not collected before 2009

Suicide among veterans

Approximately 26 percent of suicides occurred among veterans in Oregon. Ninety-six percent of veteran suicides were male. Based on the estimates of veterans in Oregon[1], figure 9 shows male suicide rates by age group. There were statistically significant differences in rates of suicide between veterans and non-veterans among ages 18-24, 35-44 and 45-54. Overall male veterans had a much higher suicide rate than non-veteran males (44.6 vs. 31.5 per 100,000).

Figure 9. Age-specific suicide rates among male veterans and non-veterans, Oregon, 2003-2010



	18-24	25-34	35-44	45-54	55-64	65-74	75-85	>=85
Veterans	104.3	31.4	50.0	51.6	34.9	35.3	55.5	69.7
Non-veterans	22.7	28.6	31.8	35.7	34.9	31.4	49.4	97.2

Age group

Firearms were a dominant mechanism of suicide among male veterans, accounting for 74 percent of male suicidal deaths, which were much more common than that of non-veteran males (57 percent).

Nearly 75 percent of male veterans ages 18-64 who died by suicide had a diagnosed mental disorder, alcohol and /or substance use problem, or depressed mood at time of death; 17 percent of them had previously attempted suicide. Alcohol and/or other substance use problems were reported among 13 to 24 percent of those veterans. A crisis in the two weeks was reported among about 36 percent of victims. Only one third of victims were reported to be receiving treatment for mental health problems at the time of death. The most common circumstances reported among male veterans were a problem with an intimate partner (34%), physical health problems (20%), lost job / job problem (18%), financial problem (17%) and crime legal problems (14%) (Table 5F next page).

[1] United States Department of Veteran Affairs. VetPop 2007 State data tables: http://www.va.gov/VETDATA/Veteran_Population.asp Accessed on July 26, 2012.

The circumstances of suicide among male veterans were similar to those non-veterans except veteran victims reported more physical health problems (Table 5F).

Table 5F. Frequencies of circumstances surrounding suicide incidents among male veterans and non-veterans ages 18-64, Oregon, 2003-2010

Circumstances	Veterans (N=661)		Non-veterans (N=2185)	
	Count	%	Count	%
Mental Health Status				
Mentioned mental health problems *	487	74	1586	73
Diagnosed mental disorder	251	38	837	38
Problem with alcohol	160	24	562	26
Problem with other substance	84	13	341	16
Problem with alcohol and other substance	36	5	168	8
Diagnosed mental disorder and problem with alcohol and /or other substance	91	14	319	15
Current depressed mood	332	50	1016	46
Current treatment for mental health problem **	215	33	671	31
Interpersonal Relationship Problems				
Intimate partner problem	228	34	792	36
Other relationship problem	16	2	60	3
Victim of interpersonal violence within past month	2	<1	6	0
Perpetrator of interpersonal violence within past month	45	7	137	6
Death of family member or friend within past five years	40	6	108	5
Suicide of family member or friend within past five years	11	2	33	2
Family stressor(s)***	18	11	89	14
History of abuse as a child***	0	0	2	<1
Life Stressors				
A crisis in the past two weeks	239	36	839	38
Physical health problem	129	20	296	14
Financial problem	110	17	346	16
Lost job / job problem	120	18	416	19
Recent criminal legal problem	95	14	339	16
Noncriminal legal problem	42	6	132	6
School problem	1	0	21	1
Eviction/Loss of home***	11	7	37	6
Suicidal Behaviors				
Disclosed intent to die by suicide	231	35	831	38
Left a suicide note	219	33	697	32
History of suicide attempt	110	17	423	19

* Includes diagnosed mental disorder, problem with alcohol and/or other substance, and/or depressed mood.

** Includes treatment for problems with alcohol and/or other substance

*** Data are not collected before 2009

Among older veterans age 65 and over who died by suicide, approximately 55 percent of them had a diagnosed mental disorder, alcohol and /or substance use disorder, or depressed mood at the time of death. Compared to the young veterans, few older veterans had a history of suicide attempt and problems with alcohol and substance. The notable circumstance among older veterans were physical health problems, which were reported among 67 percent of male veterans, followed by death of family member or friend within past five years (13%) (Table 5G next page).

The circumstances of suicide among older male veterans were almost identical to those non-veterans (Table 5G next page).

There were differences in marital status among males between veterans and non-veterans. Compared with non-veterans, veterans who died by suicide were more likely to be married and widowed (Table 12B).

Table 12B. Marital status among males ages >=18 who died by suicide who died by suicide by veteran status, Oregon, 2003-2010

Marital status	Veterans		Non-veterans	
	Number	%*	Number	%*
Married	511	44	769	32
Never Married	157	14	895	38
Divorced	340	29	627	26
Widowed	147	13	92	4
Other /Unknown	20	NA	47	NA

* Percentage is calculated according to available data.

Table 5G. Frequencies of circumstances surrounding suicide incidents among male veterans and non-veterans ages >=65, Oregon, 2003-2010

Circumstances	Veterans (N=514)		Non-veterans (N=246)	
	Count	%	Count	%
Mental Health Status				
Mentioned mental health problems *	270	53	140	57
Diagnosed mental disorder	110	21	70	28
Problem with alcohol	30	6	16	7
Problem with other substance	6	1	2	1
Problem with alcohol and other substance	2	0	2	1
Diagnosed mental disorder and problem with alcohol and /or other substance	16	3	9	4
Current depressed mood	226	44	107	43
Current treatment for mental health problem **	94	18	62	25
Interpersonal Relationship Problems				
Intimate partner problem	35	7	17	7
Other relationship problem	9	2	4	2
Victim of interpersonal violence within past month	1	0	0	0
Perpetrator of interpersonal violence within past month	12	2	3	1
Death of family member or friend within past five years	69	13	31	13
Suicide of family member or friend within past five years	3	1	3	1
Family stressor(s)***	9	8	7	9
History of abuse as a child***	0	0	0	0
Life Stressors				
A crisis within the two weeks	181	35	88	36
Physical health problem	346	67	157	64
Financial problem	25	5	14	6
Lost job / job problem	4	1	5	2
Recent criminal legal problem	14	3	6	2
Noncriminal legal problem	7	1	5	2
School problem	0	0	0	0
Eviction/Loss of home***	0	0	1	1
Suicidal Behaviors				
Disclosed intent to die by suicide	189	37	84	34
Left a suicide note	173	34	71	29
History of suicide attempt	45	9	18	7

* Includes diagnosed mental disorder, problem with alcohol and/or other substance, and/or depressed mood.

** Includes treatment for problems with alcohol and/or other substance

*** Data are not collected before 2009

Discussion

Suicide is a major public health problem in Oregon. The Oregon public health division has set reducing suicide as a top priority[1]. Traditional suicide prevention strategy is primarily focused on early intervention and referral to treatment. Oregon initiated suicide early intervention efforts targeting youth and young adults in 1998. To date, Oregon's suicide prevention efforts have primarily focused on early intervention - identifying those who suffer and connecting them with resources. Heath care reform will complement and build on these efforts as integrating behavioral health and primary care is a priority in transforming healthcare delivery in Oregon. However, early intervention with individuals and referral for mental health treatment alone will not reduce the problem of suicide[1,2]. Recent research has demonstrated that the risk for suicide is established early in life as children experience adverse familial, social, and environmental conditions. Suicide attempts could be attributed to having had several adverse childhood experiences. Prevention research has proven that preventing or mitigating the impact of adverse familial and social conditions can reduce a range of serious and costly co-occurring psychological, behavioral, and physical health problems[2,3]. One example – first grade implementation of the Good Behavior Game can prevent suicide ideation, substance use problems, smoking, antisocial personality disorder, delinquency, and incarceration for violent crimes through the age 21[4]. To prevent suicide, upstream, primary prevention is needed[1-4].

Recommendations

4. Develop a new statewide suicide prevention strategy that prioritizes:

    a. A system of comprehensive primary prevention that implements evidence-based, upstream, primary prevention strategies that foster successful development and prevent psychological and behavioral problems (i.e. nurse family partnership, Paxis Good Behavior Game, Communities that Care, evidence-based parenting programs, mindfulness practice, and other evidence-based practices).

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[1] Oregon Public Health Division Strategic Plan 2012-2017. Oregon Health Authority. It is available at http://public.health.oregon.gov/about/documents/phd-strategic-plan.pdf

[2] U.S. Department of Health and Human Services (HHS) Office of the Surgeon General and National Action Alliance for Suicide Prevention. 2012 National Strategy for Suicide Prevention: Goals and Objectives for Action. Washington, DC: HHS, September 2012.

[3] O'Connell M.E., Boat T., and Warner K.E., Editors. Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities. 2009. The National Academies Press, Washington, D.C.

[4] Biglan A., Flay B.R., Embry D.D., Sandler I.N. The Critical Role of Nurturing Environments for Promoting Human Well-Being. American Psychologist. 2012, 67(4):257-272

b. Identify and implement evidence-based and culturally appropriate practices that address depression and suicidality among adult males to:

    i. enable men to identify depression as a manageable health condition, and
    ii. promote community, business, family and individual tools to support successful self management.

c. Develop integrated behavioral health and primary care solutions to address depression and suicidal thoughts and behaviors among older adults.

5. Complete statewide implementation of comprehensive suicide prevention in high schools.

6. Expand suicide intervention skills efforts that will have an impact on adults, particularly men and veterans throughout Oregon.

Resources

The state prevention program recommends two intervention skills training programs:

1. QPR (Question, Persuade, Refer)
2. ASIST (Applied Suicide Intervention Skills Training)

High Schools are encouraged to implement a comprehensive suicide prevention program known as RESPONSE.

Crisis lines can be useful tools if those suffering acute crisis know how to reach them. The state prevention program recommends broad dissemination of crisis line information. There is a national lifeline and there are county crisis contacts.

1. National Suicide Prevention Lifeline
2. Oregon County Crisis Lines

National organizations provide a wide variety of information, consultation, training, advocacy, research, program evaluation, and other support. There are four organizations that specialized services in suicide prevention:

1. Suicide Prevention Resource Center (SPRC)
2. American Association of Suicidology (AAS)
3. American Foundation for Suicide Prevention (AFSP)
4. Make Connection – shared experiences and support for veterans

The state Public Health Division Injury and Violence Prevention Program collects, analyzes, and disseminates data on suicide, suicide attempts, and suicide ideation from a variety of sources. The program epidemiologist and research analyst are good resources for communities and individuals who have questions about incidence, prevalence, and risk factors associated with suicide among Oregon populations. These technical scientists maintain a variety of data resources and they publish reports about suicide on the program website.

The state data reports can be found on the program web pages:

1. Oregon Violent Death Reporting System
2. Adolescent Suicide Attempt Data System Reports and Reporting Forms
3. Oregon Healthy Teen Survey

The youth suicide prevention program provides a listserv, Youth Suicide Prevention Network (YSPNetwork) that members use to disseminate new research, data reports, make announcements about training, education, new resources, and other program efforts, and query the group. To subscribe to the list: YSPNetwork.

Glossary

The following definitions refer to terms identified in this report from The State Violent Death Reporting System Workgroup[1], NVDRS coding manual[2] and ORVDRS' annual report[3].

Age-adjusted mortality rate: A mortality rate statistically modified to eliminate the effect of different age distributions in the different populations.

Age-specific mortality rate: A mortality rate limited to a particular age group. The numerator is the number of deaths in that age group; the denominator is the population in that age group.

Alcohol problem: A suicide circumstance in which the victim is perceived by self or others as having a problem with or being addicted to alcohol. A victim who is participating in an alcohol rehabilitation program or treatment, including self-help groups and 12-step programs, and has been clean and sober for less than five years is also considered as having this circumstance.

Atypical antipsychotic drugs: A group of antipsychotic tranquilizing drugs used to treat psychiatric conditions such as schizophrenia. Atypical antipsychotics include drug such as Clozapine, Olanzapine, Quetiapine, Risperidone and Ziprasidone.

Benzodiazepines: A class of drugs used to treat anxiety, insomnia, and seizures. Benzodiazepines include drug such as Alprazolam, Clonazepam, Diazepam, and Lorazepam.

Blunt instrument: Clubs, bats, boards, or other objects that can be used to inflict an injury.

Crude mortality rate: The mortality rate from all causes of death for a population. It is calculated by dividing the number of deaths in a population in a period by resident population.

Criminal legal problem: A suicide circumstance in which the victim was facing a recent or impending arrest, police pursuit, or an impending criminal court date, and the consequence was relevant to the suicide event.

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[1] Sanford C and Hedegaard H (editors). Deaths from Violence: A Look at 17 States – Data from the National Violent Death Reporting System. December 2008

[2] Centers for Disease Control and Prevention. National Violent Death Reporting System (NVDRS) Coding Manual (2010).

[3] Shen X, Millet L. 2012. Violent Deaths in Oregon: 2010. Oregon Health Authority, Portland, Oregon.

Crisis: A suicide circumstance in which an acute precipitating event appears to have contributed to the suicide (e.g., the victim was just arrested; divorce papers were served that day; the victim was about to be laid off; the person had a major argument with a spouse the night before).

Depressed mood: A suicide circumstance in which the person was noted by others to be sad, despondent, down, blue, unhappy, etc. This circumstance can apply whether or not the person has a diagnosed mental health problem.

Drowning: A mechanism of death resulting from submersion in water or other liquid.

Eviction: A suicide circumstance in which the victim had recently been, was in the process of being evicted or foreclosed on, or was confronted with an eviction, foreclosure, or other loss of housing, and this appears to have contributed to the death.

Falls: A mechanism of death resulting from a fall, push or jump from a high place.

Family stressors: A suicide circumstance in which the victim was experiencing significant problems related to family home environment involving more than an intimate partner or family members other than intimate partners.

Financial problem: A suicide circumstance in which the victim was experiencing monetary issues such as bankruptcy, overwhelming debts, a gambling problem, or foreclosure of a business.

Firearm: Any weapon (including a starter gun) which is designed to or may readily be converted to expel a projectile by the action of an explosive (e.g., gun powder).

Hanging/suffocation/strangulation:
Mechanisms of injury resulting in airway obstruction in which the victim died from lack of oxygen.

Homicide-suicide: It is defined as one person killing one or more others then taking his/her own life within 24 hours.

Incident: All victims and suspects associated with a given incident are in one record. A violent death incident can be made up of any of the following: a) One isolated violent death. b) Two or more homicides, including legal interventions, when the deaths involve at least one person who is a suspect or victim in the first death and a suspect or victim in the second death. c) Two or more suicides or undetermined manner deaths, when there is some evidence that the second or subsequent death was planned to coincide with or follow the preceding death. d) One or more homicides or unintentional firearm deaths combined with one or more suicides, when the suspect in the first death is the person who commits suicide. e) Two or more unintentional firearm deaths when the same firearm inflicts two or more fatal injuries and the fatal injuries are inflicted by one shot or burst of

shots. For categories (b), (c) and (d), the fatal injuries must occur within 24 hours of each other.

Intent to commit suicide: The victim had previously expressed suicidal feelings to another person, whether explicitly (e.g., "I'm considering killing myself") or indirectly (e.g., "I know how to put a permanent end to this pain").

Intimate partner: A current or former girlfriend, boyfriend, date or spouse. The definition of intimate partner includes first dates.

Intimate partner problem/violence: A suicide or homicide circumstance in which the victim was experiencing problems with a current or former intimate partner, such as a divorce, break-up, argument, jealousy, conflict, or discord.

Job: A suicide circumstance in which the victim was either experiencing a problem at work (such as tension with a co-worker, poor performance reviews, increased pressure, feared layoff) or was having a problem with joblessness (e.g., recently laid off, having difficulty finding a job).

Mechanism: The primary instrument used by a victim or suspect that contributed to someone's death.

Mental health problem (Current mental illness): A suicide circumstance in which the victim was identified as having a mental health illness, such as depression, schizophrenia, obsessive-compulsive disorder, etc. The mental health problem must have been diagnosed by someone who is professionally trained.

Mental health treatment: A suicide circumstance in which the victim had a current prescription for a psychiatric medication or saw a mental health professional within the two months prior to death. Treatment includes seeing a psychiatrist, psychologist, medical doctor, therapist or other counselor for a mental health or substance abuse problem; receiving a prescription for an antidepressant or other psychiatric medication; or residing in an inpatient or halfway house facility for mental health problems.

Motor vehicle: A mechanism of death resulting from a crash of any motorized vehicle.

Opioids/Opiates: A group of psychoactive chemicals that work by binding to opioid receptors. Opioids include prescription drugs (Codeine, Fentanyl, Hydrocodone, Methadone, Morphine, and Oxycodone) and illicit drug (Heroin).

Other relationship problem: A suicide circumstance in which the person was experiencing problems or conflict with a family member, friend or associate (other than an intimate partner) that appeared to have contributed to the suicide.

Perpetrator: Person or persons suspected of having killed another person in an incident, whether intentionally (any method/weapon) or unintentionally (firearm only) or assisted in the homicide.

Physical health problem: A suicide circumstance in which the victim was experiencing terminal disease, debilitating condition, or chronic pain, that was relevant to the suicide event.

Poisoning: A state of illness caused by the presence of any harmful or toxic substance that has been ingested, inhaled, applied to the skin or resulted from any other form of contact.

Reliability of rates: Some rates in this report are based on a small number of deaths. Chance variation is a common problem when the numbers being used to calculate rates are extremely small. From year to year, large swings can occur in rates, which do not reflect real changes. The rates based on small numbers (less than 20) may be unstable due to random chance factors, and should be used with caution.

Resident: The decedent was an official inhabitant of the state (or territory) including those portions of a Native American reservation within the state at the time of injury, according to the death certificate.

Sharp instruments: Objects that can be used to inflict a penetrating injury, such as knives, razors, machetes or pointed instruments such as a chisel or broken glass.

Substance problem: A suicide circumstance in which the victim was noted as using illegal drugs (such as heroin or cocaine), abusing prescription medications (such as pain relievers or Valium), or regularly using inhalants (e.g., sniffing gas) even if the addiction or abuse is not specifically mentioned. The exception to this is marijuana use. For marijuana, the use must be noted as chronic, abusive, or problematic (e.g., "victim smoked marijuana regularly," "victim's family indicated he had been stoned much of the past months").

Suicide: A death resulting from the intentional use of force against oneself. A preponderance of evidence should indicate that the use of force was intentional.

Suicide attempt history: A suicide circumstance in which the victim was known to have previously tried to end his/her own life, regardless of the severity of the injury inflicted.

Suicide note: A suicide circumstance in which the victim left a message, e-mail, video, or other communication that he or she intended to end his/her own life. A will or folder of financial papers near the victim does not constitute a suicide note.

Victim: Person or persons who died in a suicide, violence-related homicide, legal intervention, as the result of a firearm injury, or from an undetermined manner.