REVIEW ARTICLE

Suicide and depression in childhood and adolescence

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Summary: Suicide and depression in children and adolescents are reviewed. The true incidence of suicide in the pediatric population is not known because of under-reporting; suicide is, however, considered as a leading cause of death in this age group. Suicide in young children often reflects an immature comprehension of the state of death, combined with a wish to alter an intolerable living situation or to punish individuals significant in his environment. At age 14 the incidence of suicide increases markedly. These acts of self-destruction reflect a developmental process that follows puberty. During this period the youth experiences an impoverishment of values and controls, as well as an intensification of emotions and needs, resulting in extreme disequilibrium. In the late adolescent, as in the adult, suicide occurs commonly in response to real or imagined loss. Specific guidelines are set out for the assessment and management of the depressed and suicidal youth. Community and medical measures of a prophylactic nature are recommended in the belief that the rising incidence of suicide can be halted through an intensification of efforts on the part of the medical profession.

Résumé: *Le suicide et la dépression dans l'enfance et l'adolescence*

L'article passe en revue la question du suicide et de la dépression chez l'enfant et l'adolescent. On ne connaît pas la véritable incidence du suicide parmi la clientèle pédiatrique pour la simple raison qu'on ne les rapporte pas toutes, mais le suicide est considéré comme une cause principale de décès chez ce groupe d'âge. Chez les jeunes enfants, le suicide traduit une incompréhension de la mort et est accompagné d'un désir de mettre fin à une situation intolérable ou de punir des individus qui occupent une place de premier plan dans leur milieu. A l'âge de 14 ans, l'incidence du suicide monte en flèche. Ces actes désespérés sont le reflet du stade de développement qui suit la puberté. Au cours de cette période critique, l'adolescent traverse une crise, celle de l'appauvrissement de son sens des valeurs, de la maîtrise de soi, une intensification de ses émotions et de ses besoins qui aboutit à un déséquilibre extrême. A la fin de la période d'adolescence, comme chez l'adulte, le suicide constitue souvent la réaction à une perte, imaginaire ou réelle. Une ligne de conduite particulière est mise sur pied pour évaluer et traiter l'adolescent déprimé et porté au suicide. Nous conseillons aux médecins et à la société d'adopter un certain nombre de mesures de nature préventive, dans l'espoir qu'il sera possible de mettre un frein à l'incidence croissante de suicide, grâce aux efforts accrus de la profession médicale.

Suicide in children and adolescents is considered a rare occurrence.[1] Hospital records, coroners' reports and doctors' statements appear to underestimate the true incidence of this psychiatric problem.[2] Frequently deaths by suicide are reported as being accidental because of pressure exerted by family and society in an attempt to avoid the cultural stigma associated with self-destruction.[3] Statistics indicating accidents as the leading cause of death in adolescence and childhood appear to include, with some degree of certainty, deaths by suicide.[4] In fact, suicide is listed as the world's fifth leading cause of death in the 15- to 19-year age bracket.[5] In North America alone it is the second most common cause of death in the 15- to 25-year age group.[6] Similarly, suicide has been shown to be the second most common cause of death (after accidents) in university-age students.[7] The number of deaths each year from suicide exceeds that from bronchitis, emphysema and asthma combined. The suicide death rate is greater than the individual death rates from hypertension, carcinoma of the breast, carcinoma of the nervous system, leukemia and rheumatic heart disease.[8] Most authors agree that death by suicide in children and adolescents is not rare, but because of cultural attitudes is recorded as such only rarely.

Suicide is defined as the deliberate act of self-injury with the intention that the injury should kill. Some authors differentiate between those who complete the suicide and those whose attempts end in failure, i.e. when the suicidal act does not bring about death.[9,10] The reason for differentiating attempts from completed suicides is that there appear to be two distinct populations in each group. Many more girls than boys attempt suicide yet more boys complete the suicide.[11] No more than 10% of those who attempt suicide go on to actually commit suicide, whereas the majority of those who are successful succeed on their first attempt.[12] There are approximately seven to eight times more attempts than completed suicides.[13] In children and adolescents specifically, attempted suicides have been estimated to occur as

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much as 50 to 100 times more frequently.[14,15]

Attempted and completed suicides are further differentiated from suicide gestures, which are acts of self-injury without the intention of dying from the injury. Such gestures and threats are means by which a person tries to communicate distress to those in his environment.[9] Those who complete suicide appear to be far more socially isolated, to be less likely to have their destructive actions thwarted by the intervention of others, than those whose attempt does not end in death.[16]

In general, focal suicides or partial self-destruction are synonymous with self-mutilation and accident-proneness, whereas multiple operations and addictions, including alcoholism, are in keeping with the concept of "chronic suicide" or progressive self-destruction.[17,18] The diabetic adolescent who inadequately controls his disease, refusing to follow his diet and injecting his insulin irregularly, is an example of "chronic suicide".

Epidemiology

Suicide appears to vary with seasons of the year (more occur in the spring and early summer), and with the time of day.[19,20] Children tend to commit suicide most frequently from 3:00 p.m. to midnight whereas adult suicides mostly occur between midnight and dawn. Suicides in children take place more frequently at home.[11,14]

The incidence of suicide varies in different countries. In Canada there are approximately 11.3 suicides per 100,000 people per year.[8] Hungary, Austria, Germany, Japan and the Scandinavian countries, with the exception of Norway, have suicide rates two to three times higher than the rate for Canada. It appears that Moslem and Catholic countries have the lowest suicide rates, but it is not clear whether this is a reflection of underreporting due to the religious stigma involved, or whether the sense of stability prevalent in a more traditional religious community in fact decreases the suicide rate.[21,22]

Suicides occur more frequently in families experiencing some disruption. Most authors claim that factors such as broken homes, divorce, separation, abandonment, alcoholism and death are highly significant. Where the family is intact there may be a high degree of marital discord, physical aggression, or a lack of supportive response to the children's problems.[2,11] A family history of suicide is found more frequently in those children who commit suicide. School work and peer relationships appear to deteriorate prior to the suicide.

Children and adolescents use overdoses of drugs most frequently in their suicide attempts. The most widely used of these are diazepam, barbiturates, acetylsalicylic acid and antidepressants.[4,22] Commonly, the medications have been prescribed for the parents, or are household remedies intended for the family's use. Violent methods of destruction, such as jumping from heights or in front of subway trains are used much less often by this age group in comparison with adults.

There appear to be two specific peak ages at which suicide occurs in childhood and adolescence. Before the age of 14 suicide is rarely reported, but at 14 there is a marked increase in incidence. A subsequent peak of greater magnitude is observed in the 15- to 19-year age group. The marked increase at age 14 could reflect difficulties the youngster experiences at a specific developmental stage following puberty. Suicide in later adolescence, on the other hand, most clearly demonstrates the adolescent's increased ability and willingness to act upon his thoughts.

Suicide is most frequently one part of the general picture of depression in young people. At times, however, it occurs in conjunction with a psychotic process, as when the child responds to imperative auditory hallucinations demanding either that he kill himself or that he join a dead relative. This latter situation is much less common and accounts for only a minority of suicides.

Frequently suicide committed by young children represents an attempt to alter an intolerable living situation or to punish significant people in the environment. The child experiences the need to resolve or escape from a disturbing situation that appears to him to be beyond his capacity to manage. Often the young child does not view death as irrevocable, but conceptualizes death as an existence in another sphere, with the ability to observe the effects of his death on others.[23]

Psychopathology

The increase in the number of suicides at age 14 coincides with a developmental process in the early adolescent. During this stage (age 12 to 14 years), in the development to normal autonomy the youngster relinquishes his emotional attachment to his parents and begins to shift his affections towards peers, cultural heroes and adults of some prominence, such as coaches, counsellors and teachers. Consequent to relinquishing these family ties he retains as part of his personality only those parental values he holds in esteem. To some degree, therefore, the youngster then has fewer inner resources to fall back on during stressful times. Along with this process the early adolescent experiences an increase in the intensity of all his feelings such as anger, sadness and helplessness. Frequently adults claim that youngsters at this age tend to "overreact" when, in fact, they are actually experiencing emotions and reactions to events much more intensely than the adult.[24]

The early adolescent's personality, rather than maturing progressively to adulthood, tends to fall back on previously acquired methods of handling problems. At these times parents tend to point out "You're acting like a 2-year old!" This developmental process produces an impoverishment of the youth's problem-solving capabilities and leads to his having available fewer and less sophisticated methods of resolving problems that could, in a stressful situation, give rise to thoughts of suicide as "the only way out". An increase in the suicide rate during this phase, therefore, tends not to result from a specific psychiatric illness, or reaction to a sad situation, but from the youth's view of himself as having fewer inner strengths and fewer solutions to difficulties, compounded by his intensified feelings.[25]

In later adolescence suicide follows much the same pattern as in adulthood. The youth reacts to a significant loss by wanting to keep part of that which was lost. When the loss is real, such as the death of a parent, the child may retain some of the lost parent's habits and mannerisms. An imagined loss, such as the thought of not passing a future examination, may result in the imagined loss of status and self-respect. In losing something the youth keeps as part of his character some attributes of the lost object even though he has ambivalent feelings towards what was lost. Feelings of anger, reproach and aggression which had formerly been directed to what is lost are now shifted onto the youth himself, and can result in self-destructive behaviour if the feelings are carried into actions.[26]

Clinical picture

In almost all children in whom suicidal threats, gestures and acts have been noticed, the child's parents, peers or teachers were aware the child had been experiencing difficulties. Children, unlike adults, do not generally manifest the specific symptomatology of depression. Whereas the typical adult depressive symptoms of early morning awakening, sleep disturbance, diurnal fluctuation in mood, somatic complaints, and specific feelings of

self-reproach, guilt and loss can be seen in late adolescence, only rarely (if ever) are they seen in younger people. Similarly, the depressed phase of manic-depressive illness is not seen until late adolescence, and if it occurs at all before that age it is assumed to appear as manic symptoms.[27] Child psychiatrists think of depression in terms of "depressive equivalents", which are symptoms of feeling sad that are unlike the usual picture one has of being sad. Common depressive equivalents are boredom, restlessness, fatigue, difficulties in concentrating and behavioural problems. These are the symptoms observed rather than an open admission of feeling sad because of a child's tendency to deny or hide his true feelings, as well as to express his thoughts and emotions through actions rather than words.[28] Much depressive behaviour has been labelled "acting out" which means, in fact, that the child is expressing his true feelings through his actions. It manifests itself in such behaviour as running away from home, delinquency, promiscuity, truancy, tardiness, bullying younger children and accident-proneness. The conclusion, therefore, is that clinically depression in children is not on the surface but is "masked", or expressed behaviourally.[29]

Suicide is often linked to a trivial event which triggers the child's self-destructive behaviour. A more careful analysis indicates that the seemingly meaningless event did produce an impulsive response in the child, but that there had been an ongoing depressive process that had surfaced only intermittently and had been expressed episodically and behaviourally. There is often a history of appearing sad, withdrawn and inhibited. The child expresses an extremely poor self-concept and has feelings of dissatisfaction, discontent and rejection. There may be somatic complaints and sleep disturbance.[30] It is important to note that in two series of 100 children, each complaining of abdominal pain, only 6 to 8% were found to have organic pathology.[31]

Teachers often report abrupt changes or reversals in classroom behaviour where a child has formerly not been a disturbance in class. The child is often easily irritated and has a low frustration tolerance. Instead of his usual behaviour he may exhibit clowning and be very active and restless. Drug and alcohol use can also represent, in the older child, symptoms of an ongoing depression.

In the young child, as a result of his not understanding the finality of death, self-destruction may be seen as a means of punishing parents or gaining their love and affection. After a heated battle the child stomps out of the room, threatening "Now I'll teach you, you'll be sorry", and because of his magical, incomplete comprehension of death, kills himself in a bid to punish his parents. The threat itself implies that the child believes he will somehow survive and be able to observe the effects his actions will have on his parents.[32]

Certain authors have reported that suicide in late adolescence is frequently associated with a psychotic illness. A bizarre clinical picture has been described.[33] Some youths have wanted to achieve "nirvana", some to be reunited with a dead relative or friend, while others acted in response to a hallucinatory command.

Also reported in the child psychiatric literature is the concept of "psychic contagion and suggestion", relating to the occurrence of a number of suicides or suicide attempts within a specific environment and within a short period of time. It appears that the knowledge of others having committed suicide points a distraught child in the same direction as his way of resolving his conflicts. The mass media, by illustrating the means by which another child has died, allow for imitation and identification and may reinforce ideas of suicide.[34]

Examination and treatment of the distressed child

Two distinct protocols of assessment are followed in managing the distressed child.

A. The depressed child who may or may not have threatened suicide is most frequently assessed by the family physician or pediatrician. The physician can offer appropriate management by observing the following guidelines:

1. Serious consideration is given to all of the child's expressions of feelings, both verbal and behavioural.
2. A thorough school, peer, family and medical history is taken because clues to the child's problems are often thereby detected. This includes an adequate mental status assessment and a comparison with the child's previous state of mind as determined from the history. Frequently this step requires that the physician speak with the parents and teachers.
3. The child is followed in continuous assessment over a period of 4 to 12 weeks by means of regular visits during which the physician shows his interest by listening to and counselling the child without giving the impression of being hurried.
4. If the depression fails to remit, a psychiatric consultation should be arranged. The referring physician personally explains to the child the nature of, and reasons for, the psychiatric visit.

B. Following a suicide attempt the initial psychiatric assessment is frequently made by the doctor in the hospital emergency department, and should be carried out immediately after any medical problems resulting from the attempt are under control. Pertinent information should be obtained from parents, peers, siblings, teachers, doctors and psychiatrist in order to facilitate the decision-making process with regard to the child's treatment.

To decide whether or not hospitalization is needed to prevent the child from trying again, an appraisal of the seriousness of his intentions is made. The likelihood of an attempt being repeated can be determined with some degree of certainty by the answers to the following questions:

1. *Social set*

   Did the child take steps to prevent anyone from rescuing him? Was anyone else present in the room or house when the attempt was made? Did anyone know about the suicidal attempt either before or immediately after?

2. *Intent*

   Did the child write a suicidal note or letter? How detailed were his suicidal plans? The content of these notes often describes the true depth of his despair.

3. *Method*

   What means did the child select to kill himself? If pills were used did he take all of those available or just a few, and if just a few, why? Did he know the purpose of the pills?

4. *History*

   Is there a history of previous suicidal attempts and gestures; if so, what were they like? Is there a family history of suicide?

5. *Stress*

   What was the nature of the precipitating stressful event? How many alternative methods of responding to it were open to the child?

6. *Mental status*

   What is the child's present mental status, and how has it changed from the description of him by others before the attempt?

7. *Support*

   What kind of support would this

child receive from his family, friends, classmates and teachers if he is sent home?

Admission to an inpatient unit is recommended when the answers to the above questions do not remove doubts about the child's safety in the mind of the examining doctor. A therapeutic treatment plan can be initiated in the hospital and continued after discharge. The admission itself would remove the child from the stressful environment and would defuse the immediate situation. During the hospitalization the child's total evaluation could be completed in much more detail over a shorter period of time than on an outpatient basis.

In Britain, treatment at times has consisted of antidepressant medications.[35] There is no convincing evidence, however, that antidepressants alone are successful therapeutically in children, and it would appear that in adolescents, if there is a suicidal risk, the antidepressant medication could be used to overdose. Electroconvulsive therapy is seldom used for the treatment of depression in childhood.[36]

The objective of treatment is to prevent the child from using suicide either as a means of expressing his thoughts and feelings, or as a part of his repertoire of actions. Treatment therefore depends on developing an honest, frank and nonjudgemental relationship with the child in which the expression of his feelings through play or words would disclose alternative ways of relieving unwanted feelings. This same relationship allows the therapist to become a significant adult in the child's life, and alters behaviour through new learning and the provision of a new model for identification. Frequently parents and members of the child's family benefit from counselling in improving communications between themselves and the child.

Prevention

Prophylaxis is undertaken when the community makes use of existing adequately trained personnel both in hospitals and in schools. Frequently the child's teacher is best able to recognize the subtle behavioural changes resulting from depression, and because of his status in the community is the first person outside the family in a position to take action. Whether the teacher counsels the child or not, recommendations for professional counselling from the teacher will be specially regarded by the child and his family. Community mental health efforts can appropriately be directed toward the schools in utilizing and training the teacher to be the first line of defence in recognizing serious psychiatric problems such as suicide and depression.[37]

The medical profession can foresee medications remaining as widely used methods of self-destruction. Limited prescribing of barbiturates and the use of "less harmful" hypnotics have been recommended.[38] In Canada one would hope that benzodiazepines might be substituted for the more economical barbiturates. More frequent prescriptions for smaller quantities are recommended. The availability of larger pills, more difficult to swallow,[38] packaging hypnotics individually in aluminum foil to ensure extra time for thought while unwrapping the pill,[4] and the combination of a small amount of emetic with barbiturates as provided in Britain are all measures that may have a beneficial influence. Multidisciplinary teams to include toxicologists, pediatricians and psychiatrists are recommended to staff poison control centres at major children's and general hospitals in order to be better able to differentiate between true accidental poisoning and those suicide attempts that are not detected and do not receive appropriate treatment.

References

1. BAWKIN H: Suicide in children and adolescents. *J Pediatr* 50: 749, 1957
2. TOOLAN JM: Suicide and suicidal attempts in children and adolescents. *Am J Psychiatry* 118: 719, 1962
3. DUBLIN LI: *Suicide: a sociological and statistical study*. New York, Ronald, 1963
4. CONNELL HM: Attempted suicide in school children. *Med J Aust* I: 686, 1972
5. World Health Organization: *Statistics Annual for 1967*. Geneva, WHO, 1970
6. Statistics Canada: *Vital Statistics*, cat no 84-202. Ottawa, Information Canada, 1971
7. ROOK A: Student suicides. *Br Med J* I: 599, 1959
8. BROWN JH: Suicide the deserted field. *Can Psychiatr Assoc J* 18: 93, 1973
9. STENGEL E, COOK NG: *Attempted suicide*, Maudsley Monogr no 4, London, Oxford, 1958
10. BATCHELOR IRC, NAPIER MB: Attempted suicide in old age. *Br Med J* II: 1186, 1953
11. BERGSTRAND CG, OTTO U: Suicidal attempts in adolescence and childhood. *Acta Paediatr Scand* 51: 17, 1962
12. SHAW CR, SCHELKUN RF: Suicidal behaviour in children. *Psychiatry* 28: 157, 1965
13. STENGEL E: Recent research into suicide and attempted suicide. *Am J Psychiatry* 118: 725, 1962
14. TUCKMAN J, CANNON HE: Attempted suicide in adolescents. *Am J Psychiatry* 119: 228, 1962
15. JACOBZINER H: Attempted suicides in children. *J Pediatr* 56: 519, 1960
16. CARSTAIRS GM: Characteristics of the suicide prone. *Proc R Soc Med* 54: 262, 1961
17. MENNINGER KA: *Man against himself*. New York, HarBraceJ, 1938, p 11
18. MOLL AE: Suicide: psychopathology. *Can Med Assoc J* 74: 104, 1956
19. SANBORN DE III, CASEY TM, NISWANDER GD: Monthly patterns of suicide and mental illness. *Dis Nerv Syst* 30: 551, 1969
20. *Idem:* Suicide: seasonal patterns and related variables. *Dis Nerv Syst* 31: 702, 1970
21. LEWIS A: Statistical aspects of suicide. *Can Med Assoc J* 74: 99, 1956
22. JACOBZINER H: Attempted suicides in adolescents by poisoning. *Am J Psychother* 19: 247, 1965
23. GOULD R: Suicide problems in children and adolescents. *Ibid*, p 228
24. BLOS P: *On adolescence*. New York, Free Pr, 1962, p 170
25. ANTHONY EJ: Two contrasting types of adolescent depression and their treatment. *Am Psychoanal Assoc* 18: 841, 1970
26. FREUD S: Mourning and melancholia, in *The Complete Psychological Works of Sigmund Freud, 1917*. Standard ed, vol XIX, London, Hogarth, 1915, republished 1957
27. MALMQUIST CP: Depressions in childhood and adolescence. *N Engl J Med* 284: 887, 955; 1971
28. TOOLAN JM: Depression in children and adolescents. *Am J Orthopsychiatry* 32: 404, 1962
29. GLASER K: Masked depression in children and adolescents. *Am J Psychother* 21: 565, 1967
30. POZNANSKI E, ZRULL J: Childhood depression. *Arch Gen Psychiatry* 23: 8, 1970
31. APLEY J: *The child with abdominal pains*. London, Oxford; Blackwell, 1959
32. GLASER K: Suicidal children — management. *Am J Psychother* 25: 27, 1971
33. BALSER BH, MASTERSON J: Suicide in adolescents. *Am J Psychiatry* 116: 400, 1959
34. GLASER K: Attempted suicide in children and adolescents: psychodynamic observations. *Am J Psychother* 19: 220, 1965
35. CONNELL PH: Suicidal attempts in childhood and adolescence, in *Modern Perspectives in Child Psychiatry*, edited by HOWELLS JG, New York, Brunner/Mazel, 1971, p 403
36. SARGENT W, SLATER E: *An introduction to physical methods of treatment in psychiatry*. London, Livingstone, 1963, p 70
37. GOLOMBEK H, COUCHMAN R: *Sixty thousand children — the process of establishing a mental health program in a school community*. Presented to the Ont Psychiatr Assoc meeting, Jan 1974
38. BARRACLOUGH BM: Are there safer hypnotics than barbiturates? *Lancet* I: 57, 1974

POSTGRADUATE COURSES

PAS & MAP REGIONAL WORKSHOP. Professional Activity Study and Medical Audit Program workshop for training in medical audit studies. Saint John, N.B. July 16, 1974. Information: Commission on Professional and Hospital Activities, 1968 Green Rd., Ann Arbor, Mich. 48105

THE PHYSICS OF BIOLOGICAL MEMBRANES. Alta Lake, B.C. August 5-16, 1974. Deadline for receipt of applications May 31, 1974. Information: K. Colbow, Physics Department, Simon Fraser University, Burnaby, B.C. V5A 1S6

ARF ADVANCED SUMMER COURSE. Toronto. August 11-16, 1974. Information: Course Director, Advanced Summer Course, Addiction Research Foundation, 33 Russell St., Toronto, Ont. M5S 2S1

WORKSHOP ON BIOSTATISTICS. University of Ottawa. August 24-30, 1974. Designed for biomedical research workers. Information: Dr. J. M. Last, Dept. of Epidemiology and Community Medicine, Royal Ottawa Hospital, 1145 Carling Ave., Ottawa, Ont. K1Z 7K4

PAS & MAP REGIONAL WORKSHOP. Professional Activity Study and Medical Audit Program workshop for training in medical audit studies. Edmonton, Alta. August 27, 1974. Information: Commission on Professional and Hospital Activities, 1968 Green Rd., Ann Arbor, Mich. 48105

ALCOHOLISM AND DRUG ABUSE. The Montreal General Hospital. September to October 1974. Information: The Secretary, Post-Graduate Board, The Montreal General Hospital, 1650 Cedar Ave., Montreal, P.Q. H3G 1A4

CLINICAL DAY — DIABETES. Royal Victoria Hospital, Montreal. September 18, 1974. Information: The Secretary, Post-Graduate Board, Royal Victoria Hospital, 687 Pine Ave. W., Montreal, P.Q. H3A 1A1

PRINCIPLES OF EPIDEMIOLOGY AND THE PRACTICAL APPLICATION OF THESE PRINCIPLES. Ottawa. September 23 to October 4, 1974. Annual course sponsored by the Bureau of Epidemiology, Laboratory Centre for Disease Control and the Dept. of Epidemiology and Community Medicine, University of Ottawa. Information: Dr. L. C. Neri, Chief, Non-Communicable Diseases, Bureau of Epidemiology, Laboratory Centre for Disease Control, Health Protection Branch, Health and Welfare Canada, Ottawa, Ont. K1A 1B7

METABOLIC DISEASE, EMPHASIZING DIABETES. Health Sciences Building, University of Saskatchewan, Saskatoon. September 26-28, 1974. Sponsored by the Royal College of Physicians and Surgeons. Information: Mrs. M. P. Sarich, Continuing Medical Education, 408 Ellis Hall, Saskatoon, Sask. S7N 0W8

OFFICE PSYCHIATRY — 1974. Chateau Laurier, Ottawa. September 30 to October 1, 1974. Sponsored by the Royal College of Physicians and Surgeons, the Canadian Psychiatric Association and the Dept. of Psychiatry, University of Ottawa. Information: Dr. F. H. Lowy, Chief, Dept. of Psychiatry, Ottawa Civic Hospital, 1053 Carling Ave., Ottawa, Ont. K1Y 4E9