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Dealing with suicide: how does research help?

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SUMMARY

1. Research is an integral part of suicide prevention strategies, helping to inform data collection, the identification of at-risk groups, individuals and situations.

2. Research may shape the training of gatekeepers of services and resources, and help bridge the gap between service providers and people needing support and/or treatment. It also provides the evidence base for effective interventions, a particularly challenging role given the complexities of suicide.

3. Northern Ireland's suicide rate has almost doubled since the late 1990s. This is an exceptional development in the context of trends in neighbouring jurisdictions.

4. The increase in suicides is mainly accounted for by males of working age in their middle years.

5. In the last five years the low suicide rate for men aged 65 or more has risen rapidly, doubling for the 75+ age group.

6. Suicides are unevenly spread geographically. Some areas saw very little increase in suicides between the early and late 2000s, while others more than doubled the rate. The gap between the highest and lowest risk of suicide by Westminster constituencies has widened.

7. Five explanations for the upward surge in suicides are considered none of which are entirely credible. The best explanation is that the trend is associated with the violent conflict of the past. There is convincing evidence that the cohort of children and young people who experienced the worst of the violence in the 1970s are the cohort with the highest and most rapidly increasing suicide rates in the decade after 1998.

8. Acknowledging the relevance of the conflict would be a major step forward in suicide prevention.

9. Better data collection will improve the identification of at-risk individuals, groups and communities, and help to address the disconnect between services and those in psychological crisis.

10. A 'legacy of conflict' perspective will enhance the training of gatekeepers of services and resources. If reflected in public health strategies it will help to address the problems associated with the harmful consumption of alcohol, prescription and illicit drugs.

Dealing with suicide: how does research help?[1]

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Research and suicide prevention

In 1996 the World Health Organisation published a framework for the development of national suicide prevention strategies (see Box 1).[2] At that time very few countries had coherent plans for addressing suicide, attempted suicide and self-harming – Australia, Finland, Norway, Sweden and Cuba being the exception. Ireland established a National Taskforce on Suicide in 1998 and England and Scotland published prevention strategies in 2002, followed by Northern Ireland in 2006. Research was a key element of the original WHO guidelines and remains so in its latest guide to *Public Health Action for the Prevention of Suicide.*[3]

Research informs suicide prevention strategies in a number of ways. Social scientists have traditionally focused on the causes of suicide and most of this work seeks to explain suicide as an individual pathology: it is often asserted that in 90 per cent of cases, those taking their own lives have a recognisable mental illness. Psychologists dominate this field – of the 30,000 academic papers on suicide published since 1980 less than 500 were written by sociologists. While this work helps to identify individuals at risk, it is less useful in establishing social patterns and pinpointing communities and population groups that are vulnerable to suicide. Social, economic and political changes are known to undermine protective factors of cohesive family and other

Box 1

Summary of
WHO Suicide Prevention Framework (1996)

1. Data collection to identify at-risk groups, individuals, and situations;
2. Promotion of public awareness about mental health, suicide and crisis management;
3. Training for gatekeepers and service providers;
4. Development of culturally appropriate protocols for media reporting of suicide;
5. Improvement in access to services for those at risk of, and affected by, suicide;
6. Reduction of access to lethal means;
7. Establishment of institutions/agencies to promote and coordinate research, training and service delivery with respect to suicidal behaviour.

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1. This briefing is based on the research in the following publications: a) Tomlinson, Michael W. (2006) *The Trouble with Suicide: Mental Health, Suicide and the Northern Ireland Conflict: A Review of the Evidence.* Belfast: Department of Health, Social Services and Public Safety (Northern Ireland) http://www.dhsspsni.gov.uk/suicide-prevention b) Tomlinson, Michael W. (2012) 'War, peace and suicide: the case of Northern Ireland', *International Sociology*, 27(4): 464-482. c) 'Suicidal Threads: early abuse weaves its way into the brain its way, with potentially tragic consequences', *Science News* 3 Nov 2012. Vol 182(9): 20. http://www.sciencenews.org/

2. United Nations (1996) *Prevention of Suicide: Guidelines for the Formulation and Implementation of National Strategies*. New York: U.N. Department of Policy Coordination and Sustainable Development, ST/ESA/245.

3. World Health Organisation (2012) *Public Health Action for the Prevention of Suicide: A Framework*. Geneva: WHO. http://www.who.int/mental_health/resources/suicide/en/index.html

social bonds. So it is essential to collect high quality social data on the incidence of suicide, suicide attempts and self-harming, and to make sense of changing patterns.

Research also plays an important role in understanding ‘situational’ factors. As the WHO guidelines put it: “A meticulous situation analysis that identifies the extent of the problem in a particular geographical area (whether an entire country or a specific subregion in a country) is a vital step.” Such analysis includes all aspects of a specific social situation: the means of suicide, the use of mental health services, access to services and the ability of services to respond to those in a life-threatening psychic crisis. Situational analysis explores the communication between vulnerable groups and individuals, how suicide ideation is transmitted and how mass media report and dramatise suicide. The local situation may involve specific ‘hotspots’ (such as bridges) or particularly harmful levels of consumption of depressants such as alcohol. There is a specific strand of suicide research that looks at war situations and stresses within military organisations.

The third role for research is in providing the evidence base for effective interventions. Suicide prevention strategies should include ‘a comprehensive monitoring and evaluation framework’ (WHO, 2012), although it is difficult to evaluate suicide prevention strategies at the national level. For example, a study which looked at suicide trends before and after the introduction of prevention strategies found few statistically significant results (some in the ‘wrong’ direction) for men and women in all age groups and in the 15-24 age group (see Table 1). Nevertheless it is desirable to set specific objectives linked to indicators, whether these are measuring inputs, process, impact or outcomes.

Table 1: *Impact of Suicide Prevention Strategies*

	Gender	Trend before (slope)	Trend after (slope)	Statistical significance of change
Suicide rates 15-24 age group				
Australia	F	Declining (-0.37)	Rising (+0.01)	X
	M	Declining (-0.07)	Declining (-0.31)	X
Finland	F	Rising (+0.28)	Rising (+0.21)	X
	M	Rising (+1.99)	Rising (+0.11)	X
Norway	F	Declining (-0.16)	Rising (+0.58)	✓√
	M	Declining (-0.20)	Rising (+0.34)	X
Sweden	F	Declining (-0.18)	Rising (0.31)	X
	M	Declining (-0.79)	Rising (+0.14)	X

Source: De Leo and Evans (2003) International suicide rates: recent trends and implications for Australia. Australian Institute for Suicide Research and Prevention. p. 86.

Suicide trends

Since 1998 the suicide rate in Northern Ireland has almost doubled, following a decade during which the rate declined from a low level of 10 per 100,000 of the population to 8.6. The overall rate is now 16.25. For men the rate is 25.24 per 100k and for women 7.58 (2012 figures based on three-year rolling averages). In global terms, this places Northern Ireland in the top quarter of the national league table of suicide rates.

Chart 1 shows the trends in suicide rates over the last 45 years. Registered suicides total 7,271 since 1965. Almost half that number (3,288 or 45 per cent) were recorded from 1998 to 2012. The overall trend falls into three distinct periods. From the late 1970s to the late 1980s the rate increases steadily (by 48 per cent). It then declines over a ten year period by 15 per cent. The trend turns upwards around 1997/1998 and climbs steeply to the current rate – a 90 per cent increase over 15 years. It may now be levelling off.

Chart 1: *N. Ireland suicide rates by gender, 1967-2012*

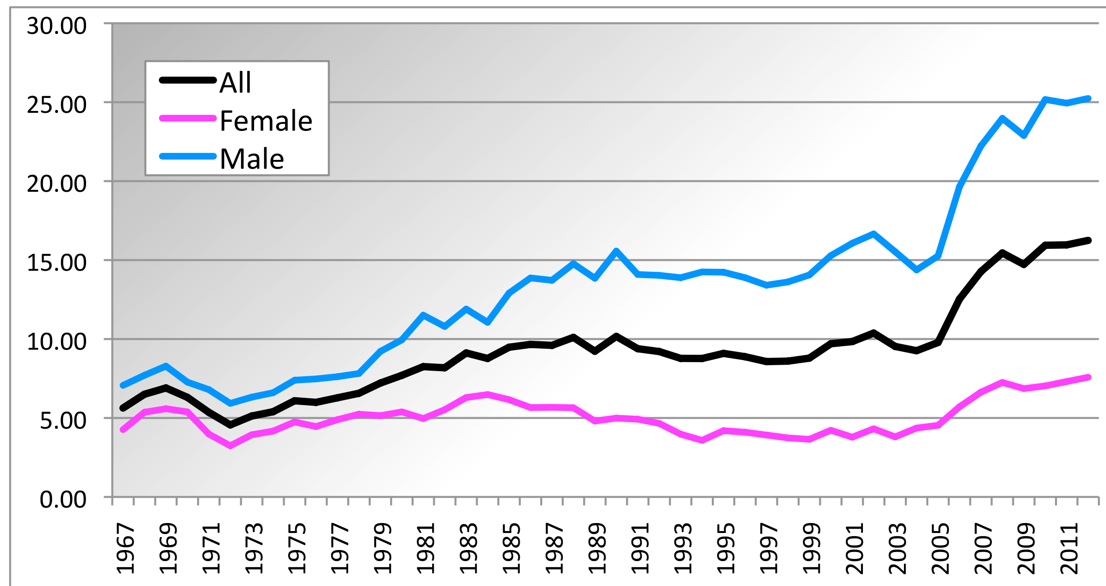
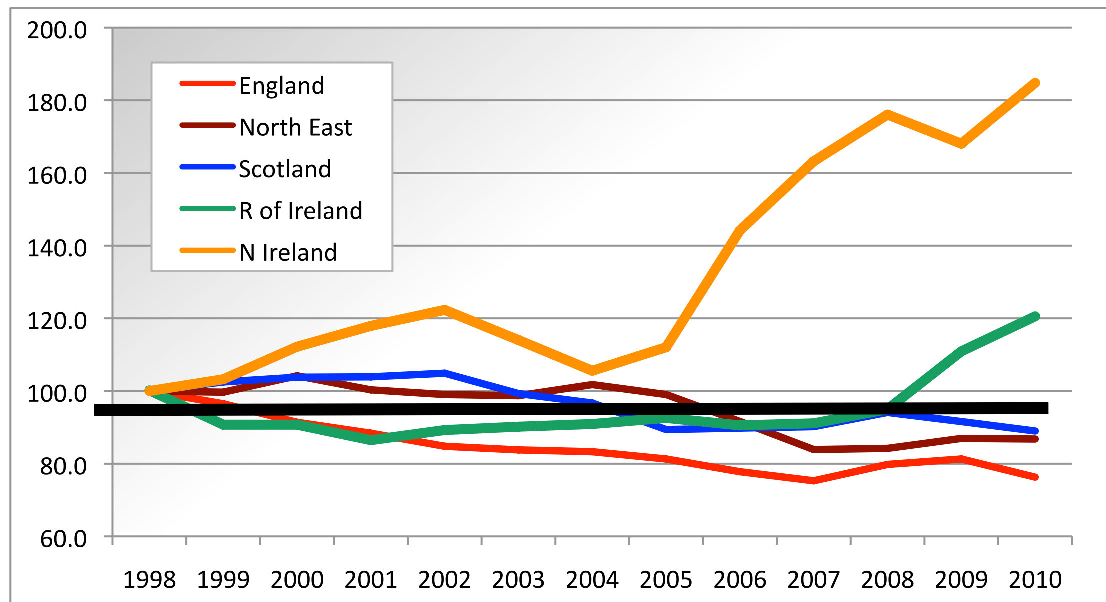


Chart 2: *N. Ireland male suicide trends compared, 1998-2010 (1998=100)*



To put the most recent period in comparative context Chart 2 compares the N. Ireland trend for men with male suicide rates of neighbouring jurisdictions, all based to 100 for 1998. Elsewhere, the trend is gently downwards except for the last few years during which the recession is thought to have had an impact, notably in the Republic of Ireland. The Northern Ireland trend is clearly exceptional.

The upward trend, however, is uneven by gender, age and locality. While the female suicide rate rose by 108 per cent between 1999 and 2012 (i.e. slightly more than the male rate rise) the gap between male and female rates remains wide: the male rate was 1.5 times the female rate in 1978 but is now around 3.5 times (it was over 4 times between 2000 and 2002).

Table 2: *Age standardised suicide rates* by age group and gender, 2006 to 2011*

	2006	2007	2008	2009	2010	2011
Male						
15-24	24.0	26.3	28.1	25.4	31.9	33.0
25-34	30.1	33.5	37.0	37.2	40.6	43.2
35-44	30.9	34.7	38.9	37.8	40.9	36.0
45-54	31.5	34.0	35.5	32.0	35.6	32.5
55-64	20.0	23.8	23.8	21.3	20.4	22.6
65-74	10.7	12.7	14.0	15.7	17.3	17.3
75+	8.4	12.2	14.4	15.7	15.9	16.2
Female						
15-24	5.4	6.1	7.1	5.8	8.3	9.7
25-34	7.2	8.0	8.6	8.8	8.3	9.0
35-44	7.6	8.6	12.2	12.0	12.6	12.4
45-54	10.1	12.3	12.9	12.6	12.5	12.2
55-64	9.0	10.3	8.4	7.7	7.3	8.2
65-74	4.8	6.2	5.7	5.6	3.2	3.5
75+	2.9	2.9	2.4	2.4	2.8	3.2

*3 year rolling averages. Two highest rates highlighted.

Table 2 shows that for women it is the 45-54 age group that tends to have the highest suicide rate in recent years. For men it tends to be the 35-44 age group. The Table also shows interesting gender differences for the older age groups. Over the six year period, the suicide rate for the male 75+ age group doubled while the equivalent female rate was relatively stable. Further, the rates for the older female age groups (55 and over) are against the overall upward trend.

Charts 3 and 4 are designed to show which gender and age groups contribute most to the growth in suicides over the past fifteen years. For men and women respectively, the charts plot the share of all suicides accounted for by each age group for two 15-year periods, 1983 to 1997 and 1997 to 2011. The declining share of suicides attributed to the older 55+ age groups is clearly illustrated by the grey bars. The orange bars show the contribution of each age group to the 'excess' suicides that occurred in 1997-2011 compared to the first period.

Chart 3: *Share of all suicides by male age groups*

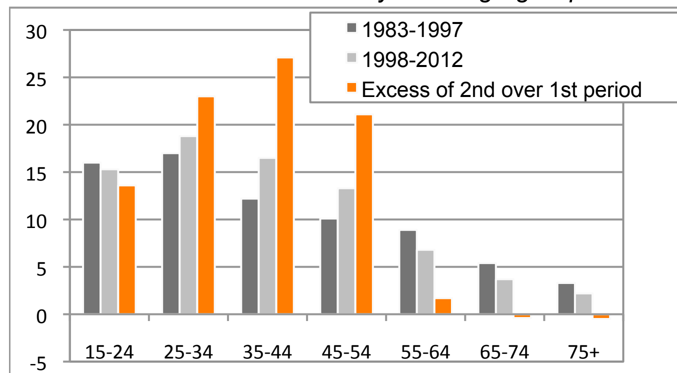
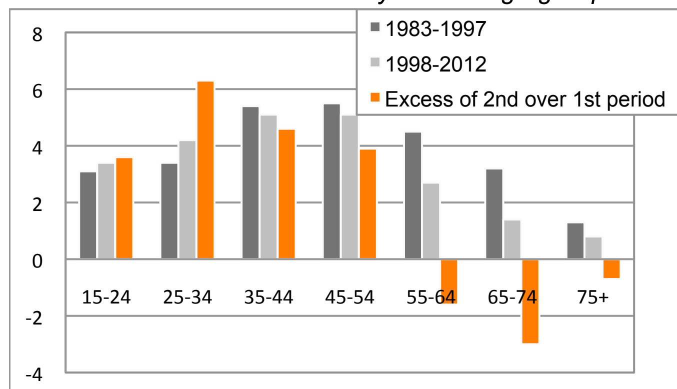


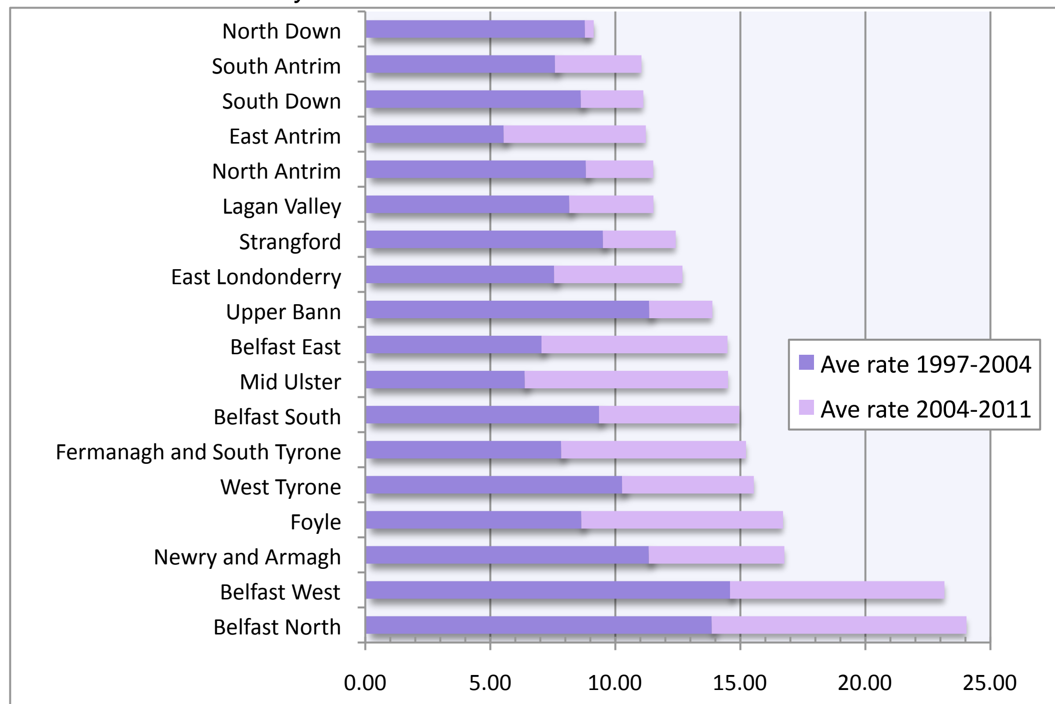
Chart 4: *Share of all suicides by female age groups*



Male suicides contribute disproportionately to the overall growth in suicides between the two periods and while the 25-34 age groups (male and female) have a higher share of 'excess' suicides than might be expected, it is the 35-44 and 45-54 male age groups that account for half of the growth (48.2 per cent).

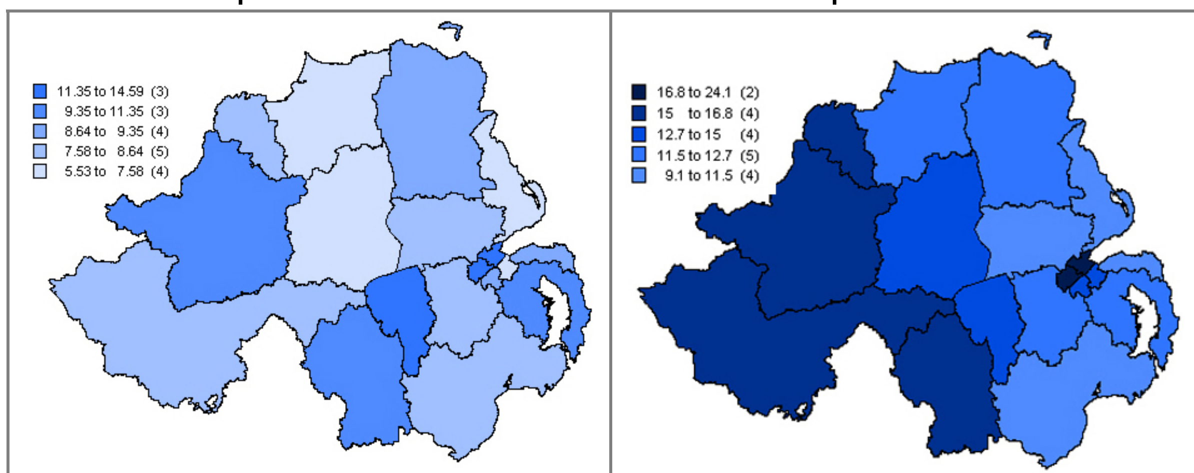
The recent increase in suicides has not impacted on all areas to the same extent. Suicide rates by Westminster constituencies for two periods, 1997 to 2004 and 2004 to 2011, are shown in Chart 5. In the first period East Antrim had the lowest average rate (5.5 suicides per 100,000 population) but in the second period that rate had more than doubled (103% increase). Similarly, Belfast East had a below average rate in the first period (7.1) and a rate of 14.5 for the second period (106% increase). The constituency with the biggest change between the two periods is Mid-Ulster (128% increase) and the constituency with the least change is North Down (4% increase). Upper Bann had the third highest suicide rate in period one and the tenth highest in period two. Belfast North and Belfast West had the highest average rates in both periods. In the second period Belfast North has an average suicide rate which is 2.63 times the North Antrim rate.

Chart 5: *Suicide rates by Westminster constituencies*



Average suicide rates by Westminster constituencies

Map 1: *1997-2004* **Map 2:** *2004-2011*



Explanations

There are six main explanations for the upward surge in suicides:

1. Changes in reporting and recording

This explanation is based on the notion that people and professionals are now much more willing to report and record deaths as suicides. The reorganisation of the Coroners Service for Northern Ireland in 2004, it is argued, led to more accurate (and higher) suicide statistics.[4] Recent deaths data, however, provide no support for this explanation.

2. Changes in mental illness and/or service provision

From the available data, this explanation is difficult to assess. There has been a significant decline in 'average available beds' in mental health hospitals (28 per cent decline in the last five years) but whether this has prevented the suicidal receiving appropriate help and treatment is unclear. According to the latest Confidential Inquiry Report, mental health clinicians suggested that a half of mental health patient suicides might have been prevented by better treatment compliance, closer patient supervision, and closer contact with the patient's family. The Report suggests that around five suicides of the "most preventable" kind (in-patients or those in close proximity to services) might be saved each year.[5] (p. 72-3)

3. Changes in behaviour: alcohol and drugs

The misuse of drugs and alcohol is closely associated with self-harming and completed suicides. Northern Ireland has become a mass-medicated society. The key issue is why consumption rates have changed. While the recession has had a moderating affect, the survey evidence is that alcohol consumption has risen dramatically since the 1990s such that more than one-third of working age men under 45 are drinking above safe limits.

4. Changes in protective factors: religion, family life and normative expectations

This is a complex area but there are some indications of a decline in religious practice. Household composition is changing with increasing numbers living alone. According to the 2011 Census, 28 per cent of all households are now comprised of people living alone. Sixty per cent of those living alone are of working age across Northern Ireland as a whole. Single working age people now make up almost 1 in 4 households (23 per cent) in Belfast.

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4. "I believe that the introduction of more robust recording processes following the restructuring of the coroner's office in 2004 partially explains this, and that the current figures are a true reflection of the actual suicide rate in Northern Ireland. In essence, there was probably under-reporting prior to 2005 and although our high rate of suicide is unwelcome, it is better to have an accurate picture of what is happening than to be working with artificially low figures." (Health Minister Edwin Poots, NI Assembly, 26th June 2012.)

5. The National Confidential Inquiry into Suicide and Homicide by People with Mental Illness: Northern Ireland Report, June 2011. http://www.dhsspsni.gov.uk/suicideandhomicideni.pdf

5. Economic change: recession and unemployment

Unemployment is an established risk factor for suicide especially among younger age groups (and men), with some research indicating that the current recession is directly responsible for increasing the numbers of suicides.[6] But it is an implausible explanation of the upward trend in suicides since 1998 as there was there was a sustained increase in employment for most of the period up to 2008 and a sense of economic prosperity not experienced for decades.

6. Legacy of conflict

The most neglected explanation is that the surge in suicides post-1998 is associated in some way with the violent conflict of the past. There is good evidence of a population-wide conflict-related affect: the cohort of children and young people who experienced the worst period of violence from 1970 to 1977 is the cohort experiencing the highest and most rapidly increasing suicide rates in the decade after 1998. The worst years of the violence affected older people less than the youngest groups. All age cohorts increased their suicide rates between the first and second decades of the conflict but by different factors (Table 3). From the second decade onwards, average suicide rates declined for most cohorts, except the youngest; and the older the cohort, the greater the decline – suggesting age-related resilience.

Table 3: *Average suicide rates for age cohorts by decade*

Age at first decade of conflict	First decade 1968–1978	Second decade 1978–1988	Third decade 1988–1998	Fourth decade 1998–2008	Percentage change between first and second decade	Percentage change between second and fourth decade
	Men					
Cohort 1 aged < 5			19.7	29.8		
Cohort 2 aged 5–14		12.8	23.1	25		+95
Cohort 3 aged 15–24	6.8	15.9	17.6	23.3	+134	+47
Cohort 4 aged 25–34	7.7	17.4	16.7	14.3	+126	–17
Cohort 5 aged 35–44	11.4	17.1	18.9	11.6	+50	–32
Cohort 6 aged 45–54	13.8	20.2	14.9	9.7	+46	–52
	Women					
Cohort 1 aged < 5			3.6	6.7		
Cohort 2 aged 5–14		3.4	4	7.2		+111
Cohort 3 aged 15–24	2.8	6.3	7.7	8.7	+125	+38
Cohort 4 aged 25–34	4.3	7.8	9.4	5.2	+81	–33
Cohort 5 aged 35–44	7.8	11.4	6.3	4.1	+46	–64
Cohort 6 aged 45–54	9.5	12.8	6	2.2	+35	–83

There are number of reasons why Northern Ireland's violent conflict may be the decisive factor in raising suicide rates in recent years. The first is that conflicts often involve

6. Walsh, B. and Walsh, D. (2011) 'Suicide in Ireland: The Influence of Alcohol and Unemployment', *Economic and Social Review,* 42(1): 27-47. Barr et al (2012) estimate that male suicides increase by 1.4% for every 10% increase in the number of men unemployed. Barr, B. et al (2012) 'Suicides associated with the 2008-10 economic recession in England: time trend analysis,' *British Medical Journal*, 345; e5142.

extreme situations with impacts on combatants, security personnel and civilians. Children caught up in adverse, violent situations will be less psychologically resilient in later life. Secondly, the cohort of children that grew up with the conflict were the most acculturated to division and conflict, and to externalized expressions of aggression. The consequence of peace is that such expressions of aggression and violence are no longer socially or politically approved and, arguably, become internalized instead. Thirdly, the conflict shaped the economy and labour market in distinct ways, sharpening divisions within sectors and between the employed and unemployed. It also shaped family life by adding particular pressures to relationships, contributing to separation and divorce, and increasing social isolation.

Implications

Recognition that recent suicide trends are a legacy of the conflict alters the perspectives that shape suicide prevention as well as the identification of at-risk individuals, groups and communities. Experience of conflict and its consequences, the cohorts, occupational groups and communities most involved in the conflict, are all absent from current prevention strategies. Acknowledging the relevance of the conflict would be a major step forward in suicide prevention.

The limited data routinely published on deaths by suicide restrict the full appreciation of social factors behind completed suicides. While the Confidential Inquiry provides in-depth analysis of the circumstances of individuals who have been in contact with mental health services, this covers under a third of suicides. Resources permitting, there is much that could be done to improve the sociological autopsy of suicide, thereby sharpening the understanding of risk and the disconnect between mental health services and those in psychological crisis.

A ‘legacy of conflict’ perspective also has implications for suicide awareness training which should be continuous and sustained (WHO, 2012). This will be more or less relevant depending on social and occupational context, but will be applicable to the wide-range of ‘gatekeepers’ of services and resources.

Mass medication – whether through alcohol, prescription drugs or illicit drugs – is an established feature of the transition to peace. It is intrinsic to ‘coming to terms with the past’. Therefore public health strategies, particularly those aimed at middle to older groups, need to reflect this.