

# WHO Guidelines for establishing and maintaining surveillance for suicide attempts and self-harm at global level

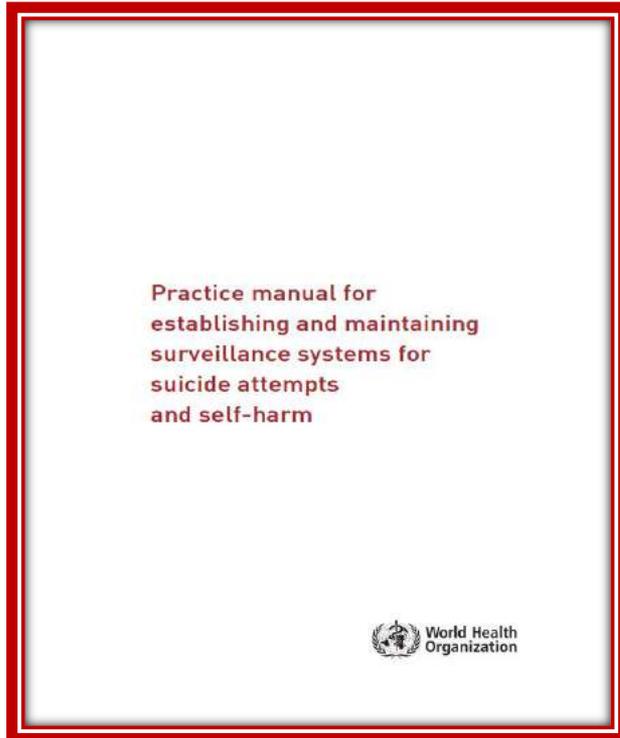
## Les Enjeux de la Surveillance pour la Prévention des Tentatives de Suicide

28<sup>th</sup> November 2017, Luxembourg



Professor Ella Arensman  
National Suicide Research Foundation,  
WHO Collaborating Centre on Surveillance and Research in Suicide Prevention  
School of Public Health  
University College Cork, Ireland  
International Association for Suicide Prevention

# Collaboration with WHO: Practice manual



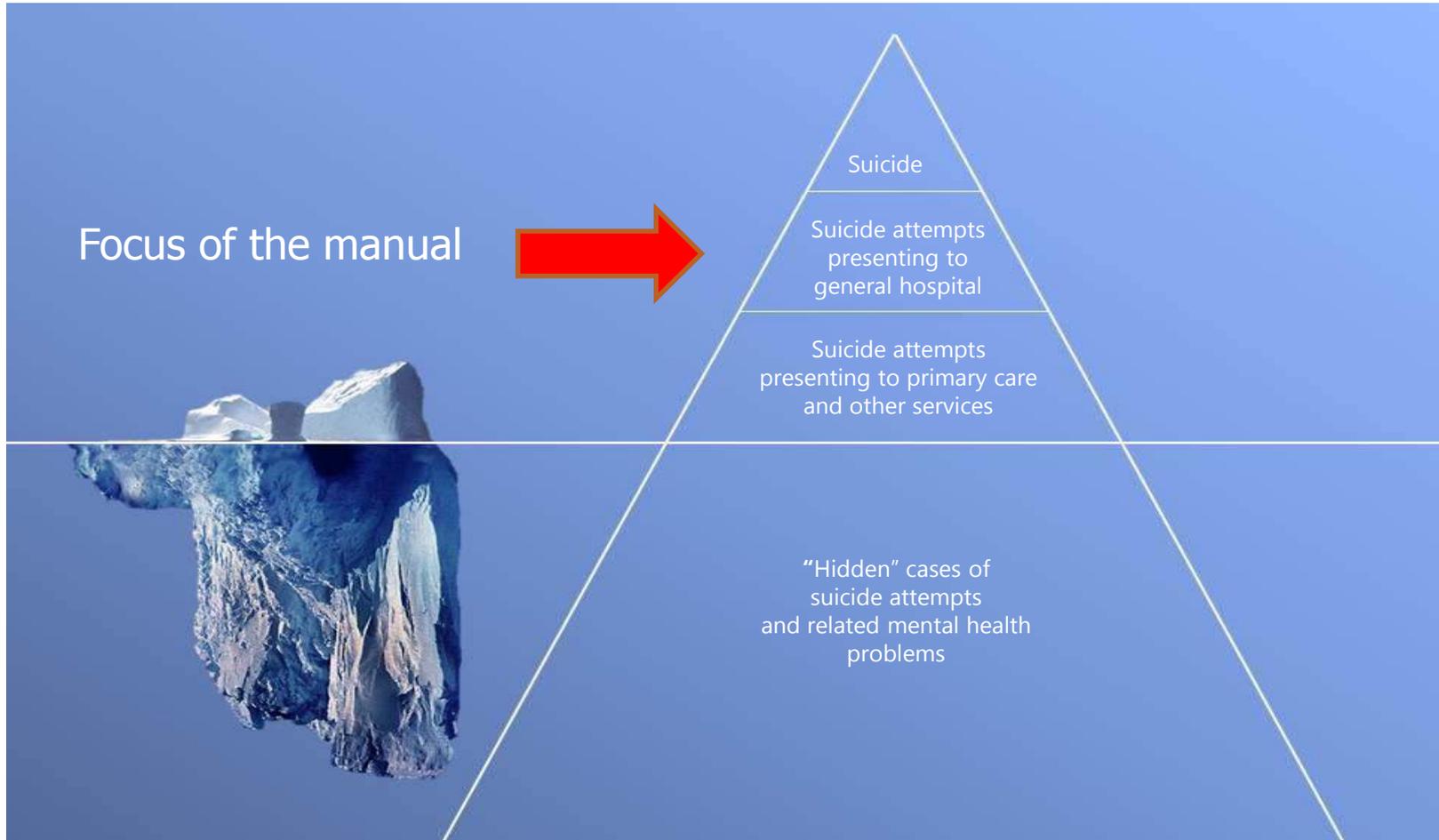
- WHO Global Report on Preventing Suicide identified a need for guidance on surveillance of suicide attempts presenting to general hospitals (WHO, 2014)
  - Limited number of countries with an established surveillance system for suicide attempts
  - Considerable between-system differences
  - Variation across countries with regard to openness to report suicide attempt data
  - Information on trends and patterns of attempted suicide presentation essential to informing effective suicide prevention strategies



## Aim of Manual:

**To improve standardization within and between countries with regard to establishing and maintaining a surveillance system of hospital presented suicide attempts**

# The extent of suicidal behaviour, fatal and non-fatal

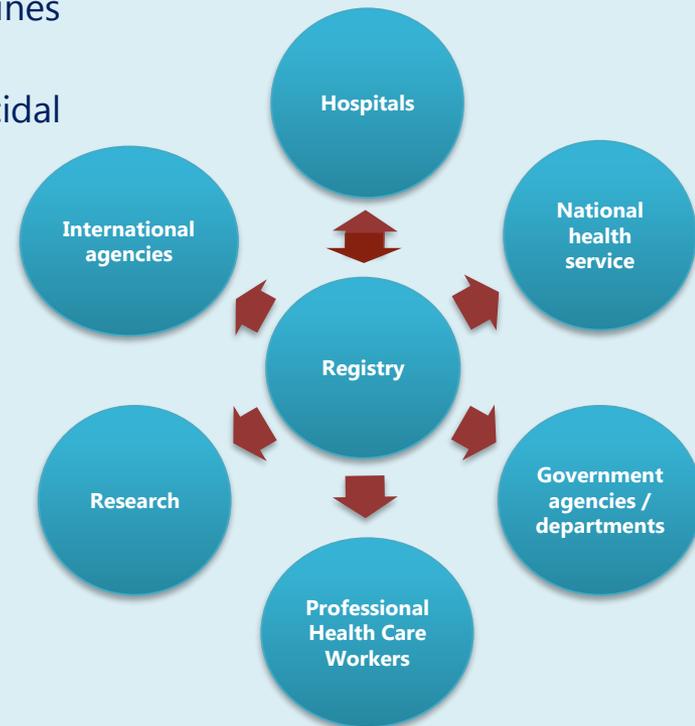


# Aim of the manual

To improve standardization within and between countries with regard to establishing and maintaining a surveillance system of hospital presented suicide attempts

# Benefits of surveillance systems for hospital treated suicide attempts

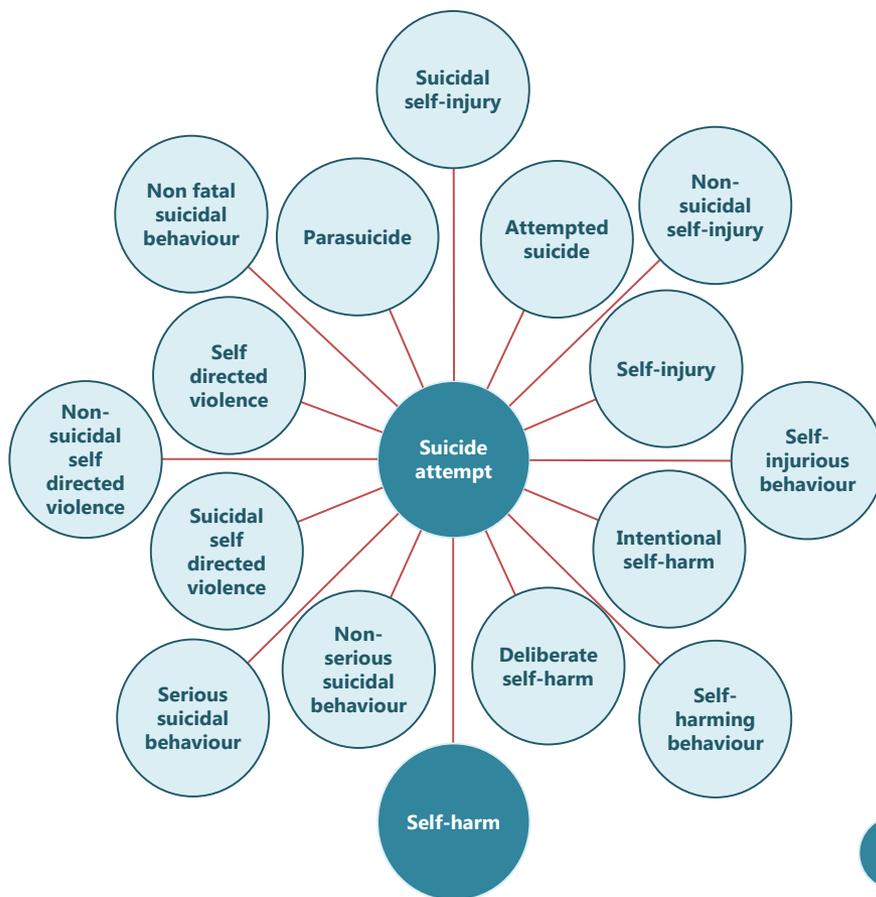
- Informing:
  - Service provision, resource deployment and guidelines for self-harm management
  - Assessment and interventions for non-fatal suicidal behaviour
- “Real Time Data”
- Evaluation of interventions
- Regional variations
- Clinical management of self-harm
- All attendances to hospital Emergency Departments



# Nomenclature, definitions and classification - Challenges

- Need for consistency in terminology and definitions in order to achieve comparable data on suicide attempts within and across countries
- Reaching agreement on the terminology and definition is complicated by the varying levels of suicidal intent and heterogeneity of motives reported by people engaging in self-harming behaviour (*Scoliers et al, 2009; McAuliffe et al, 2007; Hjelmeland et al, 2002*)
- Globally, more similarities between definitions compared to the wide ranging terminology
- Translating English language terms in other languages may have a different meaning
- Quantification of suicidal intent cannot be fully represented by one term and would be more suitable for classification (operational criteria).

# Terms used to describe intentional self-harming behaviour



 Recommended terms



# Proposed terminology and definition

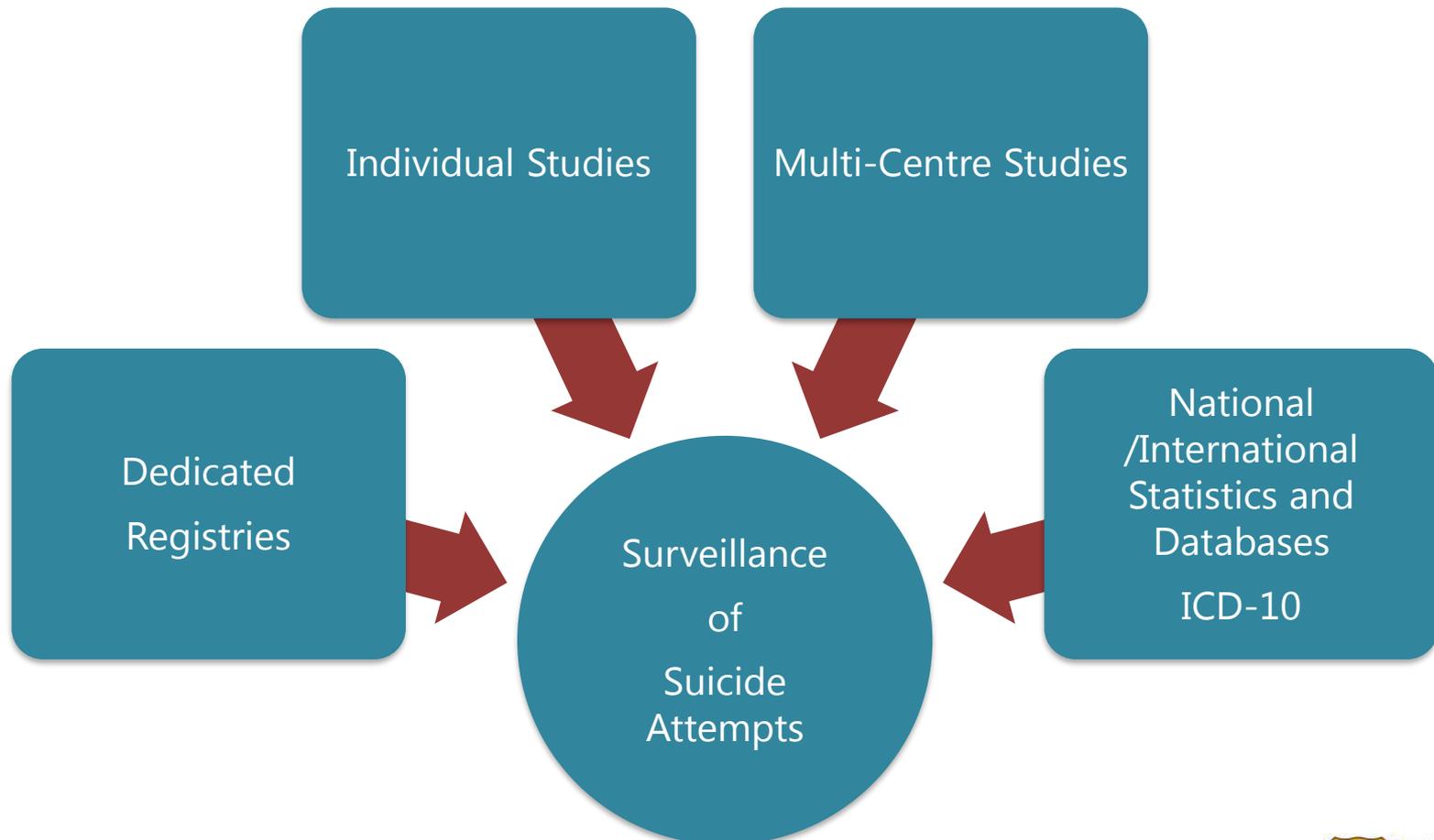
- The terms 'self-harm' or 'self-harming behaviour' offer the most common ground internationally
- However, this term cannot always be translated with the same meaning in other languages. Therefore, the term 'suicide attempt' might be preferred in such instances
- Proposed definition, which is common in several surveillance systems and monitoring studies:

*“A non-habitual act with non-fatal outcome that the individual, expecting, or taking the risk, to die or to inflict bodily harm, initiated and carried out with the purpose of bringing about wanted changes” (De Leo et al, 2004)*

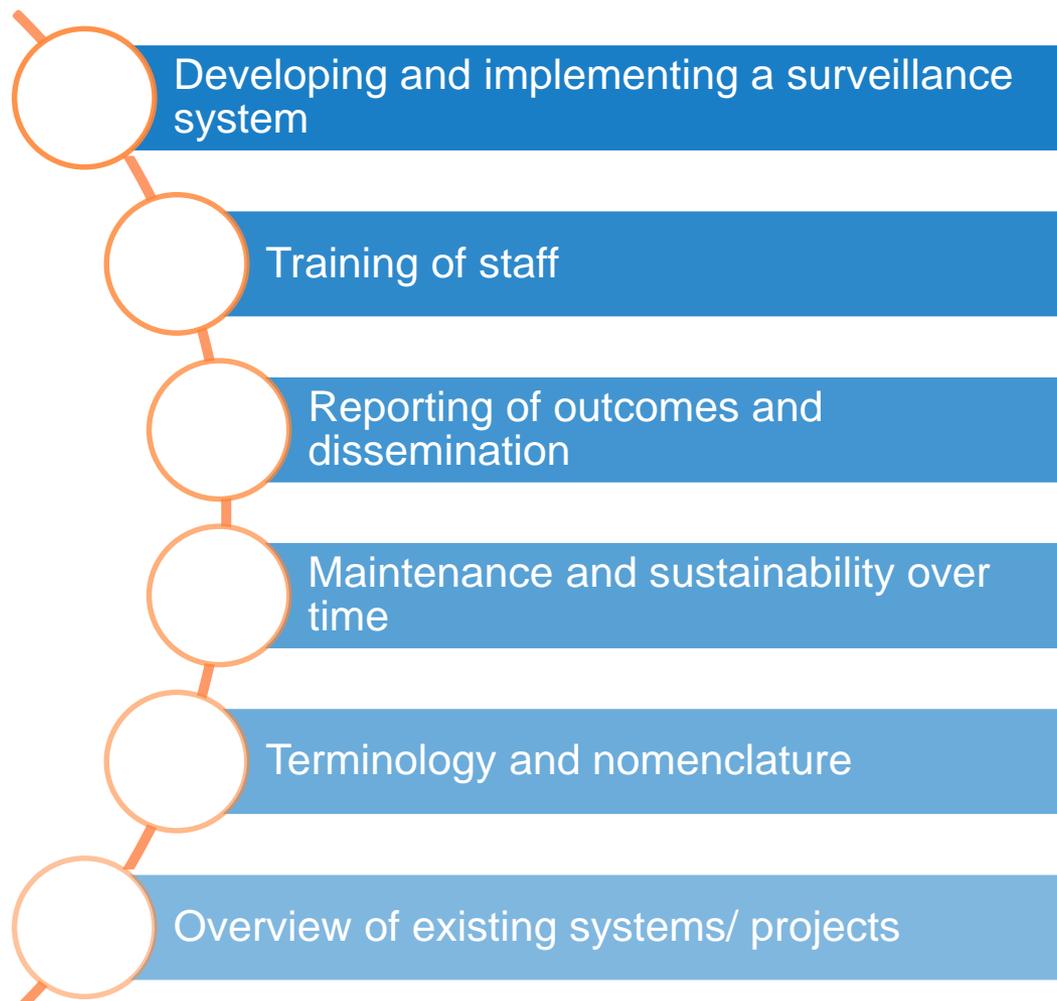
# Countries with a suicide attempt registry of any kind - based on IASP-WHO survey



# Different methods used in surveillance of hospital treated suicide attempts



# Content of manual



## Aim

- To assess extent of problem of hospital-treated self-harm, globally

## Who is it for?

- Health professionals
- Data officers
- Researchers
- Statisticians
- Ministries of Health
- NGOs

# Development and implementation of a surveillance system for suicide attempts

## *Important aspects and elements:*

- Informing and engaging governments and relevant stakeholders
- Governance and requirements of coordinating agencies
- Costs and potential funding sources
- Setting up a surveillance system
  - Standard Operating Procedures
  - Case ascertainment
  - Data items
- Registration forms and data entry
  - Coding and data entry
- Ethical requirements, confidentiality and data protection

# Data items

- Core data items:

- Data collector
- Date of registration
- Hospital number
- Unique event number
- Unique person identification number
- Sex
- Date of birth
- Age
- Postal code/area code
- Date of presentation
- Time of presentation
- Mode of arrival at the hospital
- Seen by on arrival at the hospital
- Date of self-harm
- Day of the week of the self-harm
- Time of the self-harm

- Location of the self-harm
- Method(s) according to ICD-10 codes
- Medical severity of the self-harm
- Statement of intention to die
- History of self-harm
- Psychological/psychiatric assessment in the hospital
- Diagnosis
- Admission to hospital
- Discharge

- Optional data items, e.g:

- Nationality
- Country of origin
- Ethnicity
- Religion
- Marital status
- Employment status etc.

# Training of staff involved in data collection

## *Why is this important?*

- Available information in hospital records on cases of suicide attempts is limited and sometimes incomplete
- Achieving standardisation and uniformity within and across countries will contribute to improved accuracy and comparability of data on hospital referred suicide attempts globally

## *Innovative element of manual:*

- Active learning section involving a series of case vignettes and guidance based on inclusion and exclusion criteria following from the definition. In addition to cases, non-cases and ambiguous cases are also included.

# Inclusion criteria

- All methods of self-harm are included i.e., drug overdoses, alcohol overdoses, lacerations, illicit drug overdose, ingestion of pesticides, attempted drowning's, attempted hangings, gunshot wounds, etc. where it is clear that the attempt was intentionally inflicted;
- All individuals alive on admission to hospital following an act of attempted suicide are included;
- All methods of self-harm as per ICD-10 coding.
- Some individuals may use a combination of methods, such as overdose of medication together with self-cutting. If the individual has engaged in multiple methods of intentional self-harm at the time of presentation, all methods should be recorded.

# Exclusion criteria

- Alcohol overdoses/intoxication only BUT without the intention to self-harm and when no other methods of self-harm are combined;
- Accidental overdoses of street drugs where there is a clear link with regular drug use or addiction;
- Specific examples of self-harm without a deliberate intention to cause self-harm:
  - Individual put his/her foot through the door in anger.
  - Individual took usual medication twice by accident to relieve chronic back pain
  - Drugs taken to induce abortion
  - Self-referral due to thoughts/ideation e.g. had thoughts of drowning by jumping off bridge but took no action and went to emergency department for help.

# Vignette – example 1

**Admission notes:** 35-year-old man brought in by social worker. Alcohol intoxicated and suspected overdose as found with 5 empty 100 ml bottles of Calpol (liquid paracetamol). HIV+.

**Behaviour:** Sweating and nauseous, expressing suicidal intent due to HIV status\*

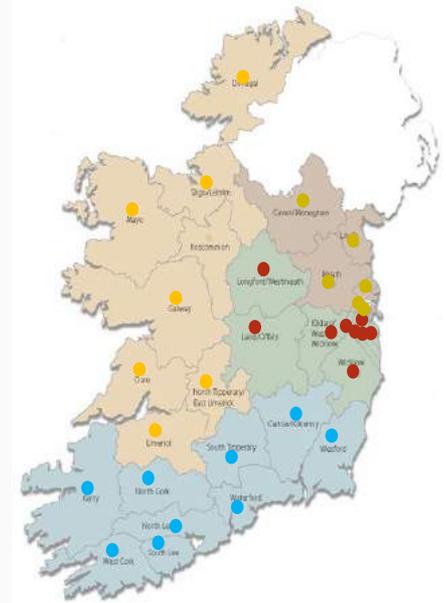
## Vignette – example 2

**Admission notes:** 28-year-old man with head injury. Profoundly autistic, accompanied by carer who explains he has a pattern of head-banging.

**Behaviour:** Not communicative. No eye contact. Rocking back and forth and reluctant to allow head examination.

## National Self-Harm Registry Ireland

- ❖ Operated by the National Suicide Research Foundation via the Department of Health and Children
- ❖ Full coverage since 2006 (36 hospitals)
- ❖ Pop (2013 est): 4,593,300

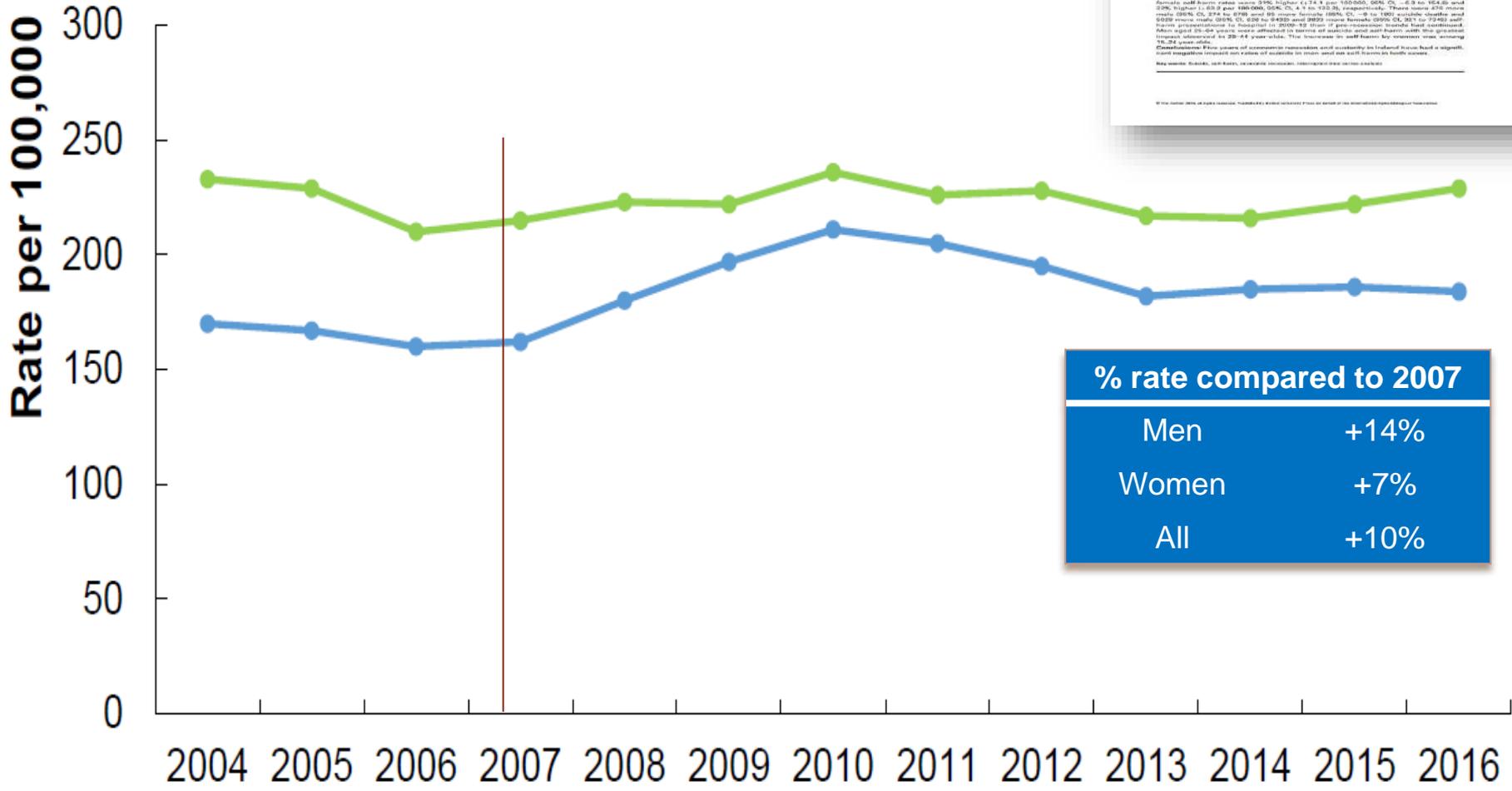


## Northern Ireland Registry of Self-Harm

- ❖ Established in **2007** as a pilot project in the Western area
- ❖ Expanded to all trust areas (12 hospitals) since April 2012
- ❖ Pop (2013 est): 1,829,700



# Trends in self-harm, 2004-2016



% rate compared to 2007	
Men	+14%
Women	+7%
All	+10%

**Impact of the economic recession and subsequent austerity on suicide and self-harm in Ireland: An interrupted time series analysis**  
 Paul Corcoran,<sup>1,2\*</sup> Eva O'Sullivan,<sup>1</sup> Eila Arnesen,<sup>1,3</sup> Anthony P Fitzgerald,<sup>4</sup> and Ross J Perry<sup>1</sup>

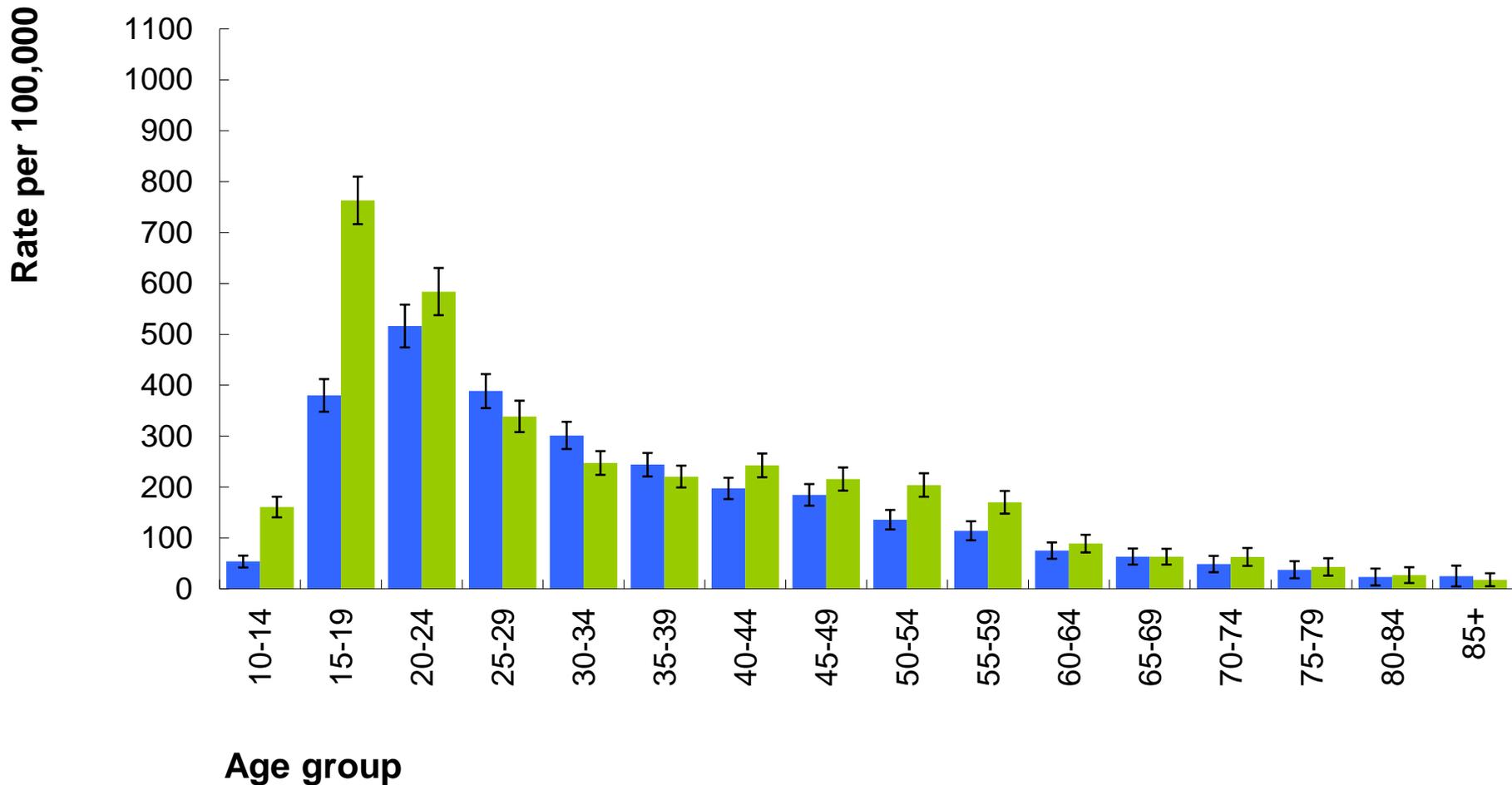
<sup>1</sup>National Suicide Research Foundation, and <sup>2</sup>Department of Epidemiology and Public Health, Western Gateway Building, University College Cork, Cork, Ireland  
<sup>3</sup>Department of Psychiatry, University of Oslo, Oslo, Norway  
<sup>4</sup>Department of Psychiatry, University of Cambridge, Cambridge, UK

**Abstract**  
 Background: The recent economic recession has been associated with increases in suicide and self-harm in many countries. Data are lacking on the impact of recession on suicide and self-harm in Ireland. Objective: To assess the impact of economic recession and austerity on suicide and self-harm in Ireland. Methods: Using interrupted time series analysis, we have assessed the impact of economic recession and austerity on suicide and self-harm in Ireland. Results: By the end of 2015, the suicide rate was 12.1 per 100 000, 90% higher than in 2007. The self-harm rate was 10.2 per 100 000, 50% higher than in 2007. Conclusions: The economic recession and subsequent austerity have had a significant impact on suicide and self-harm in Ireland. The increase in self-harm by women was striking. Our findings suggest that the impact of economic recession and austerity on suicide and self-harm in Ireland is significant. Further research is needed to understand the mechanisms underlying these trends.





# Self-harm by age and gender, 2016



■ Men

■ Women  
**UCC**  
University College Cork, Ireland  
Coláiste na hOllscoile Corcaigh

# Alcohol involvement in self-harm

- Alcohol was present in 31% of self-harm presentations to hospital EDs in 2016
- Increased risk of:
  - Attending out-of-hours and at weekends
  - Leaving without being seen
  - Arriving by ambulance
  - Associated with repeat attendances
  - Not receiving an assessment

The involvement of alcohol in hospital-treated self-harm and associated factors: findings from two national registries

Eve Griffin<sup>1</sup>, Ella Arensman<sup>1,2</sup>, Ivan J Perry<sup>2</sup>, Brendan Bonner<sup>3</sup>, Denise O'Hagan<sup>3</sup>, Caroline Daly<sup>1</sup>, Paul Corcoran<sup>2,4</sup>

<sup>1</sup>National Suicide Research Foundation, University College Cork, Cork, T12 SP62, Ireland  
<sup>2</sup>Department of Epidemiology and Public Health, University College Cork, Cork, T12 SP62, Ireland  
<sup>3</sup>Public Health Agency, Belfast, BT2 8BK, Northern Ireland  
<sup>4</sup>Department of Obstetrics and Gynaecology, University College Cork, Cork, T12 YH02, Ireland  
Address correspondence to Eve Griffin, E-mail: egriff@nsrcf.com

## ABSTRACT

**Background** Alcohol is often involved in hospital-treated self-harm. Therefore it is important to establish the role of alcohol in self-harm as well as to identify associated factors, in order to best inform service provision.

**Methods** Data on self-harm presentations to hospital emergency departments in Ireland and Northern Ireland from April 2012 to December 2013 were analysed. We calculated the prevalence of alcohol consumption in self-harm. Using Poisson regression models, we identified the factors associated with having consumed alcohol at the time of a self-harm act.

**Results** Alcohol was present in 43% of all self-harm acts, and more common in Northern Ireland (50 versus 37%). The factors associated with alcohol being involved were being male, aged between 25 and 64 years, and having engaged in a drug overdose or attempted drowning. Presentations made out-of-hours were more likely to have alcohol present and this was more pronounced for females. Patients with alcohol on board were also more likely to leave without having been seen by a clinician.

**Conclusions** This study has highlighted the prevalence of alcohol in self-harm presentations, and has identified factors associated with presentations involving alcohol. Appropriate out-of-hours services in emergency departments for self-harm presentations could reduce the proportion of presentations leaving without being seen by a clinician and facilitate improved outcomes for patients.

**Keywords** alcohol, emergency care, mental health

## Introduction

The relationship between alcohol and suicidal behaviour is well established.<sup>1,2</sup> A recent study found that premature, alcohol-related deaths were nine times more likely among those who engage in self-harm compared to the general population.<sup>3</sup> Furthermore, acute alcohol consumption is linked to impulsive suicidal behaviours.<sup>4,5</sup> One in ten self-harm patients have an alcohol dependency and alcohol misuse is associated with between 23 and 36% of acts.<sup>6,7</sup> Alcohol is often consumed prior to or during an act of self-harm, with reported involvement ranging from 26 to 60%.<sup>1-8</sup>

Alcohol consumed during a self-harm act poses specific challenges for the management and assessment of self-harm patients in acute hospital settings. Having alcohol on board may lead to delayed assessment following a self-harm act as

well as posing difficulties for medical staff in treating such patients.<sup>9</sup> Co-morbidity and dual diagnoses add further complexity. Therefore, it is important to establish a profile of self-harm patients who present to emergency departments (EDs) following self-harm where alcohol is involved.

In this study, data from the National Self-Harm Registry Ireland and the Northern Ireland Registry of Self-Harm are utilized. We have previously established the incidence of

Eve Griffin, Senior Postdoctoral Researcher

Ella Arensman, Senior Lecturer

Ivan J Perry, Professor of Public Health

Brendan Bonner, Head of Health and Social Well-being Improvement (West)

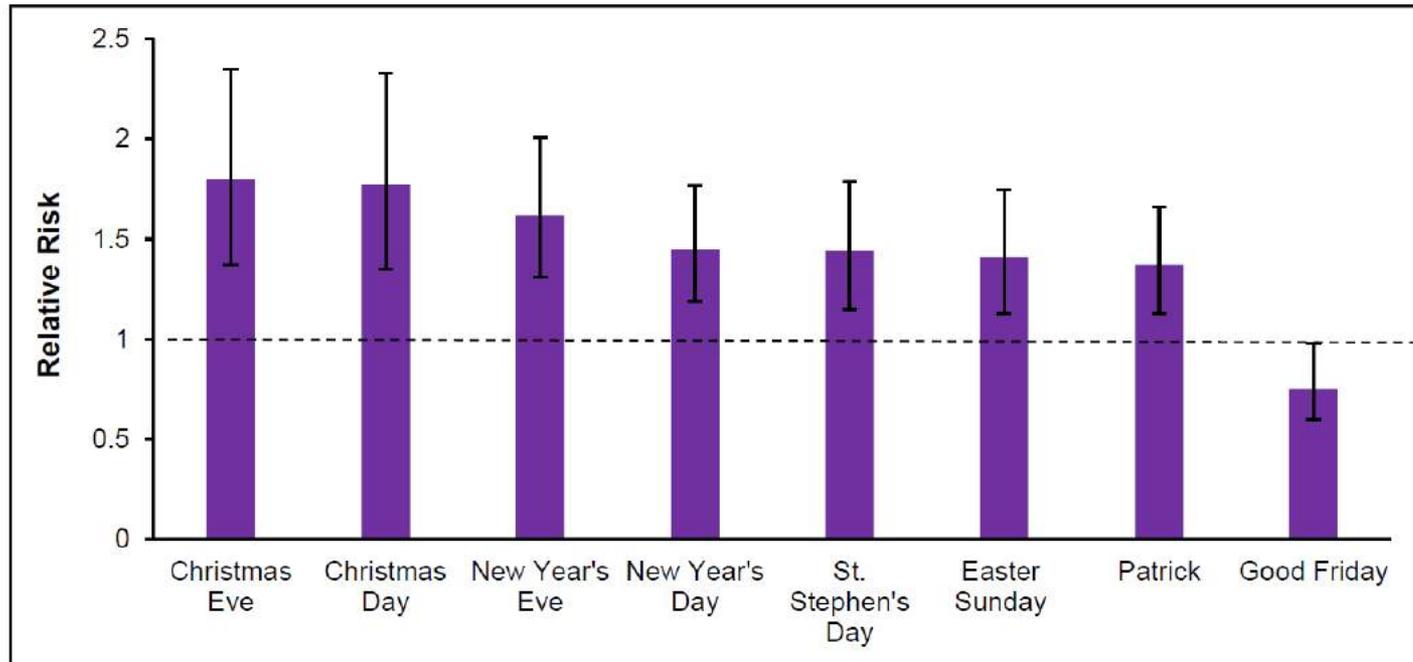
Denise O'Hagan, Consultant in Public Health Medicine

Caroline Daly, PhD Researcher

Paul Corcoran, Senior Lecturer

# Self-harm on public holidays

- Mean number of presentations increased on public holidays
- More likely to involve alcohol
- More likely to attend out-of-hours
- More first attenders



# Impact of the Registry on policy and clinical practice

## Clinical management of self-harm

- Improve psychosocial and psychiatric assessment
- Improve access to evidence-based interventions

## Restricting access to means

- Frequently used medication (e.g. minor tranquilisers, street drugs)
- Role of alcohol misuse in self-harm presentations

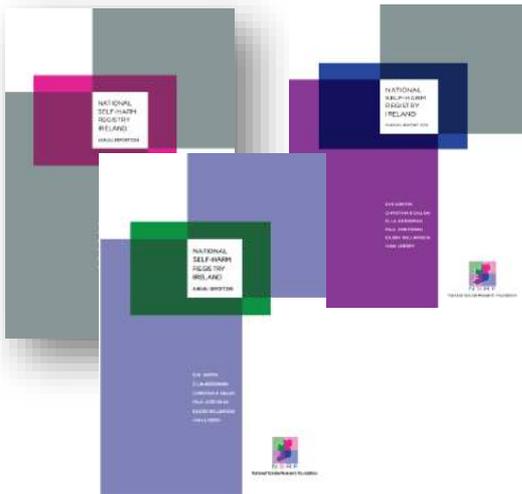
## High-risk groups

- Increase in presentations by homeless
- Presentations associated with high lethal self-harm methods, and those with frequent self-harm repetition

## Benefits, research and innovation

- Improving benefits of data via linkage studies
- Enhancing core data of Registry

# Enhancing the impact of Registry outcomes on policy and clinical practice



**Characteristics of small areas with high rates of hospital-treated self-harm: deprived, fragmented and urban or just close to hospitals? A national registry study**  
 E. Griffin, E. Aisneasa, J. Perry, B. Bonner, D. Denise, C. Carline, P. Paul, C. Corcoran

**Background:** The National Self-Harm Registry (NSHR) is a national registry of hospital-treated self-harm in Ireland. The NSHR provides a unique opportunity to explore the characteristics of small areas with high rates of hospital-treated self-harm. This study aimed to identify the characteristics of small areas with high rates of hospital-treated self-harm in Ireland.

**Methods:** Data from the NSHR were analysed to identify small areas with high rates of hospital-treated self-harm. The characteristics of these small areas were compared to those of small areas with low rates of hospital-treated self-harm.

**Results:** Small areas with high rates of hospital-treated self-harm were more likely to be deprived, fragmented, and urban or just close to hospitals.

**Conclusion:** Small areas with high rates of hospital-treated self-harm are more likely to be deprived, fragmented, and urban or just close to hospitals.

**Impact of the economic recession and subsequent austerity on suicide and self-harm in Ireland: An interrupted time series analysis**  
 Paul Corcoran, Eva Griffin, Eila Aisneasa, Anthony Fitzpatrick, and Sara Perry

**Background:** The economic recession in Ireland has led to a period of austerity, which has had a significant impact on mental health services. This study aimed to explore the impact of the economic recession and subsequent austerity on suicide and self-harm in Ireland.

**Methods:** An interrupted time series analysis was conducted to explore the impact of the economic recession and subsequent austerity on suicide and self-harm in Ireland.

**Results:** There was a significant increase in suicide and self-harm in Ireland during the period of the economic recession and subsequent austerity.

**Conclusion:** The economic recession and subsequent austerity have had a significant impact on suicide and self-harm in Ireland.

**The involvement of alcohol in hospital-treated self-harm and associated factors: findings from two national registries**  
 Eva Griffin, Eila Aisneasa, Ivan Perry, Brendan Bonner, Denise O'Hagan, Carline Daly, Paul Corcoran

**Background:** Alcohol is a common factor in hospital-treated self-harm. This study aimed to explore the involvement of alcohol in hospital-treated self-harm and associated factors.

**Methods:** Data from the NSHR and the National Self-Harm Registry (NSHR) were analysed to explore the involvement of alcohol in hospital-treated self-harm and associated factors.

**Results:** Alcohol was involved in a significant proportion of hospital-treated self-harm cases. Associated factors included being male, young, and having a history of self-harm.

**Conclusion:** Alcohol is a significant factor in hospital-treated self-harm, and associated factors include being male, young, and having a history of self-harm.

**2016 statistics at a glance**

**Presentations** **11,485** **Persons** **8,909**

**RATES:**

**206** per 100,000 **1 in every 485** had a self-harm act

**Male: 20-24 year-olds** (516 per 100,000) **1 in every 194**

**Female: 15-19 year-olds** (763 per 100,000) **1 in every 131**

**PEAK RATES WERE AMONG YOUNG PEOPLE**

**TIME:**

**Peak time**

**Midnight** **7pm** **3am**

**Almost half of presentations were made between 7pm-3am**

**Monday, Tuesday and Sunday** had the highest number of self-harm presentations

**METHOD:**

**2 in every 3** involved overdose **1 in every 3** involved alcohol **One-quarter** involved self-cutting

**67%** **34%** **29%** **27%**

**Men** **Women**

**TREATMENT:**

**71%** received an assessment in the ED **76%** received a follow-up recommendation after discharge **13%** left the ED without being seen

**GEOGRAPHY:**

**291** per 100,000 **155** per 100,000

**Urban** **Rural**

**Higher incidence of self-harm in urban areas**

**+10%** Rate in 2016 10% higher than 2007

# Challenges

- ? Data systems not uniform across hospitals
- ✓ Standardised case ascertainment approach in each hospital, including multiple sources (e.g. triage and psychiatric notes)
  
- ? Hospital policy on visitation times/ space
- ✓ Data Registration Officers (DROs) must be flexible in working in the ED
- ✓ DRO will visit in the evening/at weekends
  
- ? Assuring data quality
- ✓ Annual cross-validation of consecutive cases
- ✓ Team meetings and up-skilling of DROs (at least 2 per year)
  
- ? Motivating hospitals
- ✓ Quarterly reporting on hospital data
- ✓ Presentations for staff
- ✓ Allowing access to data for research

*Any country-specific needs / challenges?*

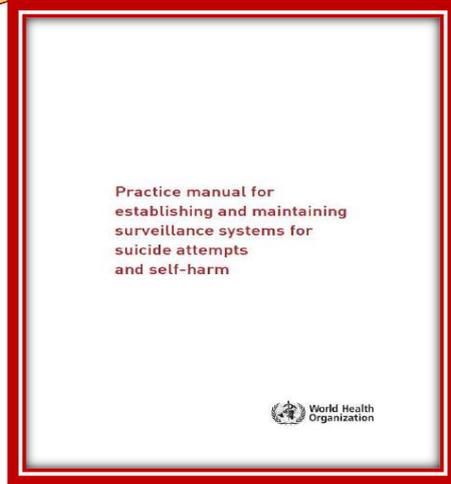
# Acknowledgements

## World Health Organization:

Dr Shekhar Saxena

Dr Alexandra Fleischmann

Ms Sutapa Howlader



## National Suicide Research Foundation and School of Public Health, University College Cork

Ms Eileen Williamson, Dr Eve Griffin

Dr Paul Corcoran

Ms Grace O'Regan

Ms Justina Hurley

Mr Niall McTernan

Dr Christina Dillon

