# Reducing risk following self-harm – the need for careful prescribing

Carolyn A Chew-Graham, Professor of General Practice Research<sup>1,2</sup>

Catharine Morgan, Research Associate<sup>3,4</sup>

Roger T Webb, Professor of Mental Health Epidemiology<sup>4,5,6</sup>

Angela Emery, member of Keele Research User Group<sup>1</sup>

Matthew J Carr, Research Fellow<sup>4,5</sup>

Evangelos Kontopantelis, Professor in Data Science and Health Services

Research<sup>3,4</sup>

Alison R Yung, Professor of Psychiatry 5.7

Darren M Ashcroft, Professor of Pharmacoepidemiology 4,6,8

Correspondence to: Carolyn Chew-Graham c.a.chew-graham@keele.ac.uk

Competing interests: CC-G, RW, DMA, EK, MC and CM are co-authors of a number of papers cited in this manuscript.

**Contributor and guarantor information** 

<sup>&</sup>lt;sup>1</sup> Research Institute, Primary Care and Health Sciences, Keele University, Staffordshire, ST5 5BG, UK

<sup>&</sup>lt;sup>2</sup> Midlands Partnership Foundation Trust, Staffordshire, UK

<sup>&</sup>lt;sup>3</sup> Division of Population Health, Health Services Research and Primary Care, University of Manchester, Manchester, UK

<sup>&</sup>lt;sup>4</sup> Manchester Academic Health Sciences Centre (MAHSC), Manchester, UK

<sup>&</sup>lt;sup>5</sup> Centre for Mental Health and Safety, Division of Psychology & Mental Health, University of Manchester, Manchester, UK

<sup>&</sup>lt;sup>6</sup> NIHR Greater Manchester Patient Safety Translational Research Centre, Manchester, UK

<sup>&</sup>lt;sup>7</sup> Centre for Youth Mental Health, University of Melbourne, Parkville, Victoria, Australia

<sup>&</sup>lt;sup>8</sup> Centre for Pharmacoepidemiology and Drug Safety, <u>Division of Pharmacy & Optometry</u>, University of Manchester, Manchester, UK

CCG is the guarantor. All authors contributed to writing the paper.

# Ethical approval

Not required

# Reducing risk following self-harm - the need for careful prescribing

Self-harm as a risk factor for suicide

Self-harm is the strongest risk factor for suicide. 1,2 Globally, suicide is the second most common cause of death among 10-24 year olds after road traffic incidents. Non-fatal self-harm is the strongest risk factor for subsequent suicide, and Recent evidence indicates that the incidence of self-harm may be increasing among adolescents. Older people who self-harm have an increased suicidal intent, and, although repetition rates are low compared with middle-aged adults, self-harm is more often fatal in older adults.

Tyrell and colleagues<sup>7</sup> identify antidepressants and analgesics as common drugs used in self-poisoning in young people. Overdose as a form of self-harm may be with prescription-only or sales-restricted drugs, often in combination with alcohol.<sup>8</sup> Older people who self-harm have an increased suicidal intent, <sup>6</sup> and, although repetition rates are low compared with middle-aged adults, self-harm is more often fatal in older adults.<sup>7</sup>-Depression is also a key risk factor for suicide.<sup>9</sup> Older adults with previously diagnosed co-morbid mental and physical health conditions have an increased risk of self-harm.<sup>6,10</sup>

# The Inverse Care Law

Recent evidence also suggests that the Inverse Care Law, 11 whereby quantity or quality of healthcare service provision is inversely associated with the level of healthcare need, operates in the clinical management of self-harm in all age groups. Thus, self-harm incidence is elevated across the life-course in practice populations in deprived areas. 4.10.12 In children and adolescents, 4 and among adults of working age, 13 the likelihood of referral to specialist services following self-harm was found to be lowest in practices in the most deprived localities, where incidence of self-harm was highest. Poisonings show a close relationship with deprivation, with the incidence of poisoning from all substances rising with increasing level of socioeconomic deprivation. 7

# Patient safety

The NICE guidance for the long-term management of self-harm (CG133)<sup>14</sup> states that: "When prescribing drugs for associated mental health conditions to people who self-harm, take into account the toxicity of the prescribed drugs in overdose...In particular, do not use tricyclic antidepressants, such as dosulepin, because they are more toxic". The clinical importance of this statement is indicated by the fact that it was only one of three (among a total of 57 recommendations in CG133) to be emphasised as a 'Do Not Do' recommendation.<sup>15</sup>

Despite this unequivocal recommendation, three recent studies conducted by the same <u>research groupteam</u>, in UK primary care patient cohorts, demonstrated a high frequency of tricyclic antidepressant (TCA) prescribing, medication that is known to be potentially fatally toxic in overdose. 16 Thus, 6.2% of adolescent (aged 10-19 years), 4 9.6% of adults aged 15-64 years, 13 and 11.8% of older adults 10 were prescribed a TCA within 12 months of their index self-harm episode. The proportion of cohort members aged 15-64 years prescribed a TCA did not fall discernibly across the 12 year observation period; thus, although CG133 was published in November 2011, during 2012-2013 almost 9 percent still received this highly toxic antidepressant. In that study, most patients (70.4%) had a diagnosis of depression prior to the date of their first TCA prescription during follow-up, and 10.4% had a diagnosis of depression recorded on the same day as this prescription was issued. 13 It is not known from these studies whether the TCAs were prescribed for depression or pain; although the latter would be unlikely in young people, this would be a possibility in older adults. Whatever the diagnostic label, however, the prescription of TCAs potentially compromises patient safety. In addition, opioid prescribing in the year following self-harm was reported: 10% in adults of working age. 12 Conversely, nearly 11% of persons aged 15-64 years who had self-harmed had a psychiatric diagnosis documented, but were not subsequently prescribed medication or referred to specialist services. 13 The observed trends for higher likelihood of psychotropic medication prescribing and lower likelihood of referral to specialist services with increasing levels of deprivation provides strong evidence for the Inverse Care Law. 11

# Improving care

Elevated self-harm risk in the first 28 days of starting and stopping antidepressants emphasises the need for careful monitoring of patients during these periods. <sup>17</sup> After self-harm in any patient, but particularly in an older adult, <sup>10</sup> consideration of referral for psychological therapy or psychiatric opinion, and consideration of alternative medication, with particular avoidance of TCAs, might reduce the risk of escalating self-harm behaviour and associated mortality risk. Clinicians working with more deprived practice populations might particularly be reminded to consider alternative management options to prescribing.

The Safer Prescribing toolkit produced by the National Confidential Inquiry into Suicide and Safety in Mental Health<sup>18</sup> highlights three points relevant to patient safety following self-harm: 1. encourage the safer prescribing of opioids; 2. ensure that there is a service in place for people with complex depression; 3. be alert to people with markers of risk such as frequent consultation, multiple psychotropic medication and specific drug combinations. The toolkit suggests that general practitioners should be aware of the dangers associated with the prescribing of TCAs.<sup>18</sup>

### Managing people following self-harm

Self-harm is a complex and often ingrained behaviour. <sup>14</sup> People who have harmed themselves may be fearful of disclosing their behaviour due to stigma and shame. <sup>19</sup> The clinician should show empathy for and understanding of the patient who has self-harmed, offering support, and exploring the needs and expectations of the individual. This should include an exploration of mood, social factors and risk of self-harm repetition, as well as considering the physical consequences of self-harm and injury. <sup>18,20</sup> Consideration of whether referral for further care is also needed, particularly in more deprived areas, and has the potential to reduce the inequality of access to care for people who have harmed themselves. <sup>10,13</sup> In addition, recognition of the role of third sector services in supporting people who self-harm is crucial and may plug the gap in service provision in more deprived areas. <sup>19</sup> What is vital, however, is the need to prescribe carefully, particularly avoiding the use of TCAs, which can be lethal in overdose. <sup>16</sup> While this is a clear 'Do Not Do'

NICE recommendation<sup>15</sup>, it is of concern that it is not being effectively implemented in practice. A simple alert on the primary care computer system would go a long way to reminding prescribers about the dangers of TCAs, and the NICE 'Do Not Do' recommendation, in people who have one or more self-harm episodes recorded in their notes.

We hope that our Editorial will highlight this patient safety concern <u>and stark example</u> of the <u>Inverse Care Law</u>, and draw attention to current recommendations for the management of people who have harmed themselves.

#### References

- 1. World Health Organization (WHO). *Preventing suicide: a global imperative*. WHO, 2014. http://www.who.int/mental\_health/suicide-prevention/world\_report\_2014/en/
- 2. Cooper J, Kapur N, Webb R, et al. Suicide after deliberate self-harm: a 4-year cohort study. Am J Psychiatry 2005;**162(2)**:297-303.
- 3. Patton GC, Coffey C, Sawyer SM, *et al.* Global patterns of mortality in young people: a systematic analysis of population health data. *Lancet* 2009;**374(9693)**:881-892.
- 4. Morgan C, Webb RT, Carr MJ, *et al.* Incidence, clinical management, and mortality risk following self-harm among children and adolescents: cohort study in primary care. *BMJ*. 2017;**359**:j4351.
- Oude Voshaar RC, Cooper J, Murphy E, Steeg S, Kapur N, Purandare NB. First episode of self-harm in older age: a report from the 10-year prospective Manchester Self-Harm project. J Clin Psychiatry 2011; 72: 737–43.
- 4.6. Hawton K, Harriss L. How often does deliberate self-harm occur relative to each suicide? A study of variations by gender and age. *Suicide Life Threat Behav* 2008;**38(6)**:650-660.
- 2.7. Tyrell EG, Kendrick K, Sayal K, Orton E. Poisoning substances used by young people: a population-based cohort study. *Br J Gen Pract* 2018;**68(675)**:e703-e710.
- 8. Daly C, Griffin E, Ashcroft D, Webb R, Perry I, Arensman E. Frequently used drug types and alcohol involvement in intentional drug overdoses in Ireland: a national registry study. Eur J Public Health 2018;28(4):681-686
- 9. Harris EC, Barraclough B. Suicide as an outcome for mental disorders. A meta-analysis. *Br J Psychiatry* 1997;170:205–28.
- 3.10. Morgan C, Webb RT, Carr MJ, *et al.* Self-harm in a primary care cohort of older people: incidence, clinical management, and risk of suicide and other causes of death. *Lancet Psychiatry* 2018;**5(11)**:905-912.
- 4.11. Tudor Hart J. The inverse care law. *Lancet* 1971;**297(7696)**:405-412.
- Carr MJ, Ashcroft DM, Kontopantelis E, *et al.* The epidemiology of self-harm in the UK primary care patient population, 2001-2013. *BMC Psychiatry* 2016; **16**:53.
- 6.13. Carr MJ, Ashcroft DM, Kontopantelis E, et al. Clinical management following self-harm in a UK-wide primary care cohort. J Affect Disord. 2016;197:182-188.
- 7.14. National Institute for Health and Care Excellence (NICE). Self-harm: longer term management. CG133. <a href="https://www.nice.org.uk/guidance/">https://www.nice.org.uk/guidance/</a> (accessed 01/10/2018).
- 8-15. NICE. Do Not Do Recommendation. https://www.nice.org.uk/ donotdo/when-prescribing-drugs-for-associated-mental-health-conditions-to-people-who-selfharm-take-into-account-the-toxicity-of- the-prescribed-drugs-in-overdose-for-example-when-considering-antidepressants (accessed Oct 1, 2018).

- 9.16. Hawton K, Bergen H, Simkin S, et al. Toxicity of antidepressants: rates of suicide relative to prescribing and non-fatal overdose. *British Journal of Psychiatry* 2010;**196(5)**:354-358.
- 40.17. Coupland C, Hill T, Morris R, Arthur A, Moore M, Hippersley-Cox J. Antidepressant use and risk of suicide and attempted suicide or self harm in people aged 20 to 64: cohort study using a primary care database. Antidepressant use and risk of suicide and attempted suicide or self harm in people aged 20 to 64: cohort study using a primary care database. BMJ 2015;350:h517.
- 44.18. Safer Services: A toolkit for specialist mental health services and primary care: 10 key elements to improve safety. <a href="http://www.champspublichealth.com/sites/default/files/media\_library/Safer%20services%20A">http://www.champspublichealth.com/sites/default/files/media\_library/Safer%20services%20A</a> %20Toolkit.pdf (accessed 03/11/18)
- 12.19. Troya IM, Dikomitis L, Babatunde O, Bartlam B, Chew-Graham CA. Understanding self-harm in older adults: a qualitative study. *Under review*.
- 13.20. http://www.connectingwithpeople.org (accessed 03/11/2018)

We would like to recommend that the following list is published alongside the editorial.

### Self-help and support

**Samaritans**: Telephone and email support for anyone who is worried, upset, or suicidal; 08457 90 90 90; ROI 116 123; email: **jo@samaritans.org**.

**PAPYRUS HOPELine UK:** a professionally staffed helpline providing support, practical advice and information to young people worried about themselves, and to anyone concerned that a young person may harm themselves. Tel: 0800 068 41 41.

**Get Connected:** offers help by telephone and email for people under 25 who self-harm. Tel: 0808 808 4994.

**Selfharm.co.uk:** a project dedicated to supporting young people who are affected by selfharm. Email: info@selfharm.co.uk.

**Self Injury Support**: provides a young women's text and email service, any age helpline for women who self-harm, UK-wide listings for self-harm support and self-help tools. Email: info@selfinjurysupport.org.uk.