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Suicide in England in the COVID-19 pandemic: Early observational data from real time surveillance

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ABSTRACT

Background: There have been concerns that the COVID-19 pandemic may lead to an increase in suicide. The coronial system in England is not suitable for timely monitoring of suicide because of the delay of several months before inquests are held.

Methods: We used data from established systems of "real time surveillance" (RTS) of suspected suicides, in areas covering a total population of around 13 million, to test the hypothesis that the suicide rate rose after the first national lockdown began in England.

Findings: The number of suicides in April-October 2020, after the first lockdown began, was 121•3 per month, compared to 125•7 per month in January-March 2020 (-4%; 95% CI-19% to 13%, p = 0.59). Incidence rate ratios did not show a significant rise in individual months after lockdown began and were not raised during the 2-month lockdown period April-May 2020 (IRR: 1•01 [0•81–1•25]) or the 5-month period after the easing of lockdown, June-October 2020 (0•94 [0•81–1•09]). Comparison of the suicide rates after lockdown began in 2020 for the same months in selected areas in 2019 showed no difference.

Interpretation: We did not find a rise in suicide rates in England in the months after the first national lockdown began in 2020, despite evidence of greater distress. However, a number of caveats apply. These are early figures and may change. Any effect of the pandemic may vary by population group or geographical area. The use of RTS in this way is new and further development is needed before it can provide full national data.

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1. Introduction

The potential impact on suicide rates of the COVID-19 pandemic and the measures taken to control it have been the subject of substantial professional and public concern. Several surveys in the UK have found an adverse impact on mental health [1-6], and psychological, social and neuroscientific mechanisms may contribute [7].

* Corresponding author. E-mail address: Louis.Appleby@manchester.ac.uk (L. Appleby). Mental health charities have reported increased use of their helplines [8]. A number of risk factors for suicide are likely to have been exacerbated, including isolation, loss of social support, disruption to mental health care, economic adversity, trauma, bereavement, domestic violence and alcohol misuse [9]. There have been numerous predictions and claims in the media and on social media of a large rise in suicide as a result of "lockdown" restrictions [10].

In England suspected suicides are notified to the coroner and a suicide conclusion is then determined at inquest-since 2018, on the balance of probabilities [10]. Suspected suicides may not reach this

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Research in context

Evidence before this study

We searched PubMed and PsychINFO databases for peerreviewed articles published between 1st January 2020-31st December 2020, with a combination of keywords related to suicide ("suicide", "suicid*", "self-harm", "self-injur*", "mental health") and the COVID-19 pandemic ("COVID*", "coronavirus", "pandemic"). We applied no language, study design, or quality of publication restrictions to the search. Research articles, reviews, correspondence, comments and editorials were included in the search. Most studies we found were longitudinal and based on analyses of national and state-level data on suicide and surveys of mental health. The COVID-19 pandemic and the social restriction measures that have followed it ("lockdown") have had an adverse effect on mental health, leading to concerns that a rise in suicide would occur. Studies from several high income countries have now reported suicide rates for the early pandemic. Most, though not all, have reported no rise.

Added value of this study

We report the first suicide rates for England in the pandemic, based on real time surveillance (RTS) data from an area of total population around 13 million, around a quarter of the country. RTS records suspected suicides as they occur, allowing early monitoring of figures, before inquest. Several areas of England have already established RTS; their figures were combined to give overall numbers and rates. We found no rise in suicide rates in the seven months after the first lockdown began in 2020 compared to pre-lockdown months.

Implications of all the available evidence

Our findings add to the international evidence that suicide rates have not risen as a result of the pandemic or lockdown restrictions, despite higher levels of distress in published studies. However, these are early findings and may change as the pandemic and its economic consequences continue. The impact on suicide rates may vary across population groups and geographical areas and between high and low income countries.

standard of evidence. Official suicide statistics include some "narrative conclusions" and deaths from "undetermined" cause but not deaths judged at inquest to be accidental. The median time between a death and a suicide conclusion at inquest is 5,6 months [11]; some cases take over a year. The official coronial process is therefore unsuitable as a means of immediate monitoring of suicide. As a result, some areas have set up "real time surveillance" (RTS) of suicide. Precise details of RTS may vary between areas but there are common features: recording of suspected suicides as they occur; identification of deaths by the police, coroners or both; and multidisciplinary review of data. RTS allows early detection of rising suicide rates and changing patterns of risk, and immediate support for bereaved families.

However, RTS figures are not directly comparable to official suicide statistics, limiting comparisons with previous years. As RTS records suspected rather than confirmed suicides, the figures are likely to be higher but it is not known how much higher. The comparison is made more complex currently by the rise in suicide in England in 2018 and 2019 [12,13]; any rise in 2020 could reflect a continuation of this trend, unrelated to the pandemic. Many local RTS systems are in their early stages and comprehensiveness cannot be assumed. In England RTS has not previously been used for national monitoring.

The National Confidential Inquiry into Suicide and Safety in Mental Health (NCISH) supports local suicide prevention in England as part of an NHS England program, advising on data and evidence. The program is led locally by the NHS and public health agencies collaborating at the level of the current NHS regional structure, the Sustainability and Transformation Partnership (STP). There were initially over 40 STPs with an average population of around 1•3 million but some have merged into larger geographical entities. Several STPs taking part in the NHS England program have established RTS [14].

We therefore collated RTS-recorded suspected figures from these areas with the aim of identifying a rise in the suicide rate related to the pandemic and specifically to the first lockdown in 2020. There is no official definition of lockdown but the instruction to stay at home was announced on March 23, 2020, and was backed by legislation three days later. Easing of restrictions began in mid-May. A re-imposition of restrictions occurred from September and a second period of lockdown began on November 5, 2020. The focus of this study was the months from first to second lockdown, i.e. April to October 2020.

We were able to test the hypothesis that the suicide rate rose in the months following the onset of the first lockdown. In November 2020 we reported RTS-recorded suspected suicide numbers from six STPs on the NCISH website, covering the months from January to August 2020 [15]. We now present figures from a substantially larger geographical area, over a longer period, with an analysis of rates for evidence of change.

2. Method

We obtained RTS-recorded suspected suicide figures from STPs in England to examine for any change following the introduction of lockdown. STPs participating in the NHS England national suicide prevention program were approached. The STPs providing data are shown in the map (Fig 1). All were able to meet the following criteria: (1) availability of RTS-recorded monthly suicide data for January-October 2020, (2) figures available for the whole STP, to eliminate reporting bias from partial data, (3) figures consistent with previous coroner-confirmed suicide rates for each area (lowest comparative figure for RTS-recorded suicide for an STP was 84% of coroner-confirmed rates in 2016–18) [16]. In total there were 10 STPs (one area consisted of three STPs in a unified configuration) with a combined population of approximately 13 million, around a quarter of the population of England. The STPs were concentrated in the North and South-West of the country, where suicides have been consistently higher in recent years [12,13]. The majority of the participating STPs had a police-led RTS system with coroner involvement in some areas, and the start dates varied, ranging from August 2015 to April 2019 (further details in Supplementary Table 4)

Total figures for each calendar month, based on date of death, were obtained by combining data from all the participating STPs. Due to the lack of availability of demographic data, age and sex-specific results were not considered in the study. The primary comparison was between the pre-lockdown months (January-March 2020) and the months after lockdown began (April-October 2020), as inconsistencies in data collection were assumed to be less likely between adjacent time periods.

A secondary comparison of figures from April to October 2020 with equivalent figures from 2019 was a priori considered less valid because of (see Supplementary Table 4) (1) uncertainty over comprehensiveness of two RTS systems that had began data collection only in April 2019, (2) missing data in one STP for the period April-September 2019, (3) the possible continuation of the rising suicide rate from 2018 to 2019 into 2020. However, in order to compare figures for 2019 and 2020 in those STPs where data collection in 2019 was most likely to be comprehensive, we selected those STPs where 2019 RTS-recorded suspected suicide rates were at least 10% above the ONS (coroner-confirmed) rates for the average of the three previous

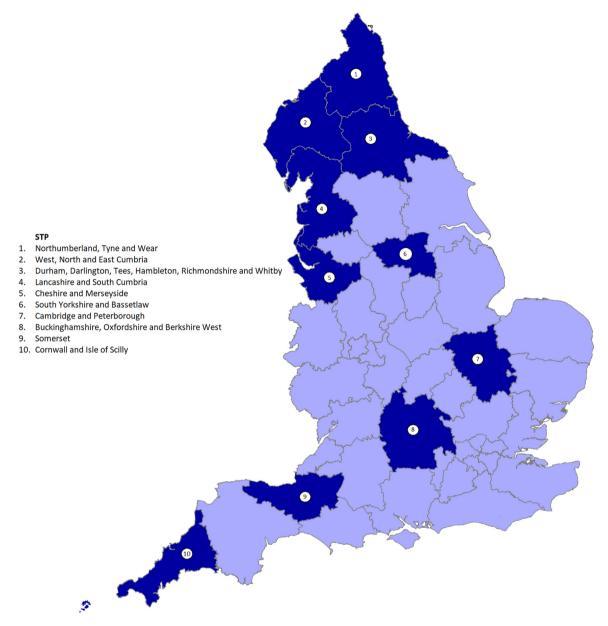


Fig. 1. Map highlighting 10 NHS sustainability and transformation partnerships with "real-time surveillance" suicide data in the study.

years 2016–2018. The figure of 10% was based on an earlier comparison of suspected and coroner-confirmed figures in England [17].

2.1. Statistical analysis

We examined the suicide rates (expressed as per 100,000 population) from RTS before and after the beginning of lockdown using Poisson regression. Our regression models were tested for overdispersion (where the variation is higher than expected in a Poisson model), and where evident, negative binomial regression models were fitted. These models allowed for the calculation of incidence rate ratios (IRR) with 95% confidence intervals (CI). We estimated 95% CI's using robust standard errors to account for any clustering effects across the STPs. Our denominator data were population estimates of individuals aged 10 or over in 2019 and 2020, which were linearly interpolated for individual STPs using previous population estimates available from the Office for National Statistics (ONS) between 2016 and 2018 [16]. ONS data showed a steady increase in mid-year population estimates in England between 2016 and 2019 therefore linear interpolation was considered to be an appropriate method of estimation and was used to obtain yearly estimates which were equally divided by 12 months. In estimating monthly suicide rates, the population denominators were adjusted for the number of days in the month to account for the fewer days in February and the 30-day months. To examine monthly changes in suicides in 2020, the first model compared the monthly suicide rate in January-October 2020, estimating IRRs for each month with January, as the first month, being the reference.

As RTS-recorded suspected suicide data were not available for previous years, in a second model we aimed to explore the effect of recurring temporal ("seasonal") variation using coroner-confirmed suicide data. We used Poisson regression to examine the monthly incidence of suicide deaths reported by the conventional coronial process between 2016 and 2018 for (1) the participating STPs with RTS data and (2) England overall. To compare the different processes we also used a negative binomial regression model fitted with an interaction between months and sources of data (RTS-recorded suspected suicides in 2020 and coroner-confirmed suicides in 2016–2018) to examine the changes in the monthly IRRs between the two suicide data processes (our null hypothesis was when

compared to January, for example, the IRR in March from RTS-based data in 2020 was similar to the IRR in March obtained using coroner-confirmed suicides in 2016–2018).

After combining months to distinguish the three time periods we also compared the incidence of suicide rates (with both RTS-recorded and coroner-confirmed data) before (January-March 2020), during (April-May 2020) and after (June-October 2020) the lockdown period, with IRRs relative to the pre-lockdown months.

Using Poisson regression we also compared the incidence of RTSrecorded suspected suicides in the months after lockdown began, April-October 2020, with the same period in 2019 for seven STPs whose 2019 rates met the 10% threshold for comprehensive data, as described above.

All analyses were performed using STATA 15•1 software for Windows.

2.2. Role of the funding source

The funders played no part in the design, data collection or interpretation of the study.

3. Results

RTS-recorded suspected suicide numbers, rates and IRRs in 2020 for the participating STPs are shown in Table 1 and suicide rates per 100,000 population are shown in Fig. 2. The number of RTS-recorded suspected suicides after lockdown began (April-October 2020) was 121•3 per month, compared to the pre-lockdown (January-March 2020) number of 125•7 per month, an absolute fall of 4% (-4%; 95% CI: -19% to 13%; p = 0.59). Suicide rates were highest in May 2020 (14•1 [95% CI: $11\cdot8-16\cdot6$]) and July 2020 ($15\cdot3[12\cdot9-17\cdot9]$), but we found no consistent trend over the study period. When compared with January 2020, the highest IRRs for RTS-recorded suspected suicides were in the months March (IRR: $1\cdot05[0\cdot85-1\cdot30]$), May (IRR: $1\cdot07 [0\cdot92-1\cdot24]$) and July (IRR: $1\cdot15 [0\cdot92-1\cdot43]$); these did not reach statistical significance (Table 1). Compared to January 2020, we found significantly lower rates in October ($0\cdot77 [0\cdot61-0\cdot96]$).

Coroner-confirmed suicides, rates and IRRs, showing temporal patterns for the previous years 2016-2018 in the participating STPs, are shown in Table 1. Suicide rates were highest in the months June (11•8 [10•5-13•1]) and July (11•7 [10•5-13•0]) in 2016-2018, When compared to January, the highest incidence across the participating STPs was also found in the months of May (IRR: 1•06 [0•85-1•35]), June (IRR: 1•09 [0•93-1•23]] and July (IRR: 1•07

Table 1.

Monthly suicide numbers, rates and IRRs using RTS-recorded data in 2020 and coroner-confirmed data between 2016 and 2018.

Month	Number	Rate (95% CI)	IRR (95% CI)	p-value					
RTS-recorded suicides (2020): 10 STPs									
Jan*	131	13•3 (11•1–15•7)	1•00						
Feb	113	12•2 (10•1-14•7)	0.91 (0•71-1•16)	0•43					
Mar	133	13•5(11•3-16•0)	1.05 (0•85-1•30)	0•68					
Apr	114	11•9(9•8-14•3)	0.91 (0•68-1•22)	0•52					
May	139	14•1 (11•8–16•6)	1.07 (0•92-1•24)	0•37					
Jun	118	12•3 (10•2-14•8)	0.94 (0•82-1•08)	0•39					
Jul	151	15•3 (12•9-17•9)	1.15 (0•92-1•43)	0•23					
Aug	115	11•6 (9•6-14•0)	0.88 (0•72-1•08)	0•22					
Sep	112	11•7 (9•6-14•1)	0.88 (0•76-1•03)	0•10					
Oct	100	10•1 (8•2-12•3)	0•77 (0•61–0•96)	0•02					
Coroner-confirmed suicides (2016–2018): 10 participating STPs									
Jan*	312	10•8 (9•6-12•1)	1•00						
Feb	296	11•2(10•0-12•6)	1•03 (0•85-1•24)	0•79					
Mar	309	10•7 (9•5-12•0)	0•98 (0•80-1•19)	0•81					
Apr	321	11•5(10•3-12•8)	1•05 (0•90-1•24)	0•52					
May	336	11•6(10•4-12•9)	1•06 (0•85–1•35)	0•61					
Jun	329	11•8(10•5-13•1)	1•09 (0•93–1•23)	0•30					
Jul	337	11•7 (10•5-13•0)	1•07 (0•94–1•23)	0•31					
Aug	301	10•4 (9•3-11•7)	0•96 (0•81-1•12)	0•58					
Sep	301	10•8 (9•6-12•1)	0•99 (0•86-1•13)	0•88					
Oct	292	10•1 (9•0-11•3)	0•93 (0•79–1•09)	0•37					
Coroner-confirmed suicides (2016–2018): England									
Jan*	1228	10•2 (9•6-10•8)	1•00						
Feb	1109	10•1 (9•5-10•7)	0•98 (0•90-1•06)	0•63					
Mar	1208	10•0 (9•5-10•6)	0•98 (0•91-1•06)	0•59					
Apr	1238	10•6 (10•0-11•2)	1•04 (0•96-1•11)	0•33					
May	1329	11•0 (10•5-11•6)	1•07 (0•98-1•17)	0•11					
Jun	1229	10•5 (10•0-11•2)	1•03 (0•96-1•10)	0•45					
Jul	1263	10•5 (9•9-11•1)	1•02 (0•94-1•10)	0•61					
Aug	1277	10•6(10•0-11•1)	1•04 (0•96-1•12)	0•36					
Sep	1139	9•8 (9•2-10•4)	0•95 (0•88-1•04)	0•27					
Oct	1193	9•9 (9•4-10•5)	0•97 (0•90-1•04)	0•35					
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RTS = real-time surveillance; STP = sustainability and transformation partnerships; CI = confidence intervals, IRR = incidence rate ratio,.

* January is the reference month in negative binomial regression when comparing IRRs.

 $[0\bullet94-1\bullet23]$), though this was not statistically significant. The results were similar in coroner-confirmed suicides across England in 2016–2018, with the highest rate in May $(11\bullet0 [10\bullet5-11\bullet6])$, suggesting this was an expected seasonal pattern (Table 1). There were no differences in IRRs between RTS-recorded (2020) and coroner-

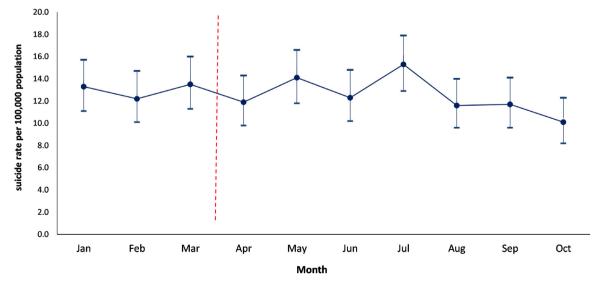


Fig. 2. Suicide rates (with 95% confidence intervals) using "real-time surveillance" data in 10 participating STPs in 2020. Dotted line indicates the beginning of the lockdown.

Table 2.

Suicide number, rates and IRRs using RTS-recorded and coroner-confirmed data during three time periods: pre-lockdown, during lockdown and after lockdown (Pre-lockdown as baseline).

Time period	Number	Rate (95% CI)	IRR (95% CI)	<i>p</i> -value
RTS-recorded suicides (2020): 10 ST	Ps			
Pre-lockdown (Jan-Mar)*	377	13•0 (11•7-14•4)	1•00	
During lockdown (Apr-May)	253	13•0 (11•5-14•7)	1•01 (0•81–1•25)	0•96
After lockdown (Jun-Oct)	596	12•2 (11•3–13•2)	0•94 (0•81-1•09)	0•40
Coroner-confirmed suicides (2016-	2018): 10 participatin	g STPs		
Pre-lockdown (Jan-Mar)*	917	10•9 (10•2-11•6)	1•00	
During lockdown (Apr-May)	657	11•6 (10•7-12•5)	1•06(0•96-1•17)	0•28
After lockdown (Jun-Oct)	1560	10•9 (10•4-11•5)	1•01 (0•95-1•06)	0•81
Coroner-confirmed suicides (2016-	2018): England			
Pre-lockdown (Jan-Mar)*	3545	10•1 (9•8-10•4)	1•00	
During lockdown (Apr-May)	2567	10•8 (10•4-11•3)	1•07 (1•02–1•12)	0•01
After lockdown (Jun-Oct)	6101	10•3 (10•0-10•5)	1•01 (0•98–1•05)	0•42

RTS = real-time surveillance; STP = sustainability and transformation partnerships; IRR = incidence rate ratio; CI = confidence intervals;.

* pre-lockdown as reference in negative binomial regression.

confirmed (2016–2018) figures with an overall interaction effect found to be not significant (Likelihood-ratio χ^2 (18) = 14•4, *p* = 0•70).

Table 2 shows suicide numbers, rates and IRRs for RTS-recorded and coroner-confirmed suicides for three time periods representing pre-lockdown, during and after lockdown periods. There was no change in the RTS-recorded suspected suicide rates during lockdown (IRR: 1•01 [0•81 (0–1•25]) or after lockdown (0•94 [0•81–1•09]) (Table 2). The incidence in coroner-confirmed suicide rates for the equivalent periods in 2016–2018 in participating STPs (IRR: 1•06 [0•96–1•17] and 1•01 [0•95–1•06]) and for England (IRR: 1•07 [1•02–1•12] and 1•01 [0•98–1•05]) were similar, though for England this was significantly higher in the months equivalent to lockdown.

There was no difference in suicide rates for April-October between 2019 (N = 633; 12•0 [11•1–12•9]) and 2020 (N = 637; 12•0 [11•1–12•9]) for the seven STPs that reached the 10% threshold for data comprehensiveness. Differences in individual months are shown in table 3.

4. Discussion

We are reporting the first suicide figures for England since the onset of the pandemic, obtained through local real time surveillance, covering around a quarter of the country. We have found no rise in suicide in the seven months that followed the first national lockdown in 2020. This is consistent with most reports from other high income countries [18–20]. It is also consistent with the finding of no rise in self-harm in England based on both hospital attendance and on a national community survey [1,21,22]. These figures do not confirm the frequent media predictions of an escalation in suicide rates as a

RTS-recorded suicide numbers, rates and IRRs from seven participating STPs with data in 2019 and 2020 from April to October.

		2019		2020		
Month	Number	Rate	Number	Rate	IRR* (95% CI)	p-value
Apr	77	10•4 (8•2–13•0)	80	10•7 (8•5–13•3)	1•03 (0•66-1•61)	0•89
May	85	11•1 (8•9-13•7)	114	14•8 (12•2-17•8)	1•33 (0•97-1•84)	0•08
Jun	100	13•5 (11•0-16•4)	89	11•9 (9•6-14•7)	0•88 (0•74-1•06)	0•19
Jul	104	13•6 (11•1-16•5)	113	14•7 (12•1-17•6)	1•08 (0•72-1•63)	0•71
Aug	86	11•2 (9•0-13•9)	85	11•0 (8•8-13•6)	0•98 (0•76-1•27)	0•89
Sep	90	12•1 (9•8-14•9)	89	11•9 (9•6-14•7)	0•98 (0•76-1•27)	0•90
Oct	91	11•9 (9•6-14•6)	67	8•7 (6•7-11•0)	0•73 (0•58-0•92)	0•01
Total	633	12•0 (11•1-12•9)	637	12•0 (11•1-12•9)	1•00 (0•92-1•09)	1•00

RTS = real-time surveillance; STP = sustainability and transformation partnerships; IRR = incidence rate ratio; CI = confidence intervals;.

* obtained using April 2019 as reference in a Poisson regression model with a month x year interaction.

result of lockdown and they emphasise the importance of responsible reporting of suicide [23].

However, there are a number of caveats. These are early findings: we are still in mid-pandemic. It is too soon to examine the effect of any economic downturn – serious economic stresses as a consequence of COVID-19 may represent the greatest risk of a rise in the suicide rate. These overall figures may mask increases in suicide in population groups or geographical areas, just as the impact of the acute pandemic has not been uniform across communities. Recent studies in the US have found racial differences, with rising suicide rates in black but not white populations [24–26]. Reports from Japan have shown a rise in women and young people [27,28]. Similarly, a rise in suicide in Hong Kong after the 2003 epidemic of severe acute respiratory syndrome (SARs) was confined to older adults [29].

There are inevitably limitations to the study. First, there is at this stage no demographic breakdown of the RTS figures available to us. Secondly, there may be biases in the participating STPs, although as they were from parts of the country with higher pre-COVID suicide risk, it might be assumed that their populations had greater vulnerability. There may also be biases in how individual RTS systems judge a death to be a suspected suicide. Thirdly, RTS is new at national level and no data are available for comparison from previous years. The fact that RTS is recently established in several of our participating STPs has also limited the comparison between 2019 and 2020, so that our primary comparison is with only the most recent pre-lockdown months, in order to reduce inconsistency over time. Fourthly, selecting STPs showing a 10% increase in RTS-recorded suicide figures in 2019 may have made regression to the mean more likely in 2020 and may have introduced bias, although suicide rates in most of these areas have remained high over several years. Fifthly, the analysis of monthly suicide figures may not have sufficient power to detect relevant differences. Because data were available to us by calendar month, we have made the assumption that any increase in suicide rates after the start of lockdown would be apparent from April 2020. Finally, we cannot be certain of the comprehensiveness of the 2020 data, although the corresponding suicide rates here are higher than previous official figures, as they would be in well-functioning RTS based on suspected suicide deaths.

How do we reconcile these findings with higher levels of distress reported during the pandemic, based on surveys and calls to helplines? Suicide is complex and rates do not simply follow levels of mental disorder. Most obviously, population studies of depression tend to find higher rates in women [30] whereas suicide rates in most countries are higher in men [31]. It may be that lockdown, as well as presenting greater risks to some, brought greater protections to others in the form of vigilance and support from families, friends and neighbours, and reduced access to certain suicide methods. More broadly, the national crisis may have led to an increase in social coherence - as is believed to have occurred in past conflicts [32–34]. In the first lockdown there may have been a sense that the crisis would soon pass, preventing the despair that is an important cognitive step towards suicide [35]. If these explanations are correct, there is reason to be concerned in 2021 as social divisions appear entrenched and we face a further period of lockdown. Vigilance over suicide prevention remains a vital part of how we respond to COVID-19 in the long term.

Real time surveillance offers a valuable way of monitoring and responding to suicide rates at a time of crisis when rapid changes in risk may occur. However, there is a need for improvements in data collection and quality standards generally before it can provide a full national picture. In our experience, essential features should be: involvement of coroners because of their legal responsibilities in relation to all suspected suicides; a core dataset; a national protocol for data sharing; timely collation of data from all participating sites; early support for bereaved families; local and national oversight of emerging findings. There is also a need to examine the relationship between suspected suicides notified under RTS and those deaths confirmed as suicides at inquest, to improve comparability and offer a more detailed understanding of how judgements are reached in both systems.

Contributors

NR was responsible for data acquisition. SI was responsible for data analysis. LA, NR, SI, PT, CR and NK were responsible for analysis and interpretation, and for writing up data and drafting the manuscript. LA, PT, CR, and NK were responsible for study conception and design. LA, PT, and NK provided guidance to the study. All authors read and approved the final manuscript and were jointly responsible for the decision to submit for publication. LA is the guarantor for the study.

Declaration of Competing Interest

All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: LA chairs the National Suicide Prevention Strategy Advisory Group (NSPSAG) at the Department of Health and Social Care in England; NK is a member of the Group, chaired the guideline development group for the 2012 National Institute for Health and Clinical Excellence (NICE) guidelines on the longer-term management of self-harm, currently chairs the guideline development group for the NICE depression in adults' guidelines, is currently the topic advisor on the new NICE guideline on self-harm, and reports grants from the Department of Health and Social Care, National Institute of Health Research and NICE. All authors work with NHS England on the National Quality

Improvement initiatives for suicide and self-harm. LA, NK, and PT report grants from the Health Quality Improvement Partnership. Views expressed in the paper are those of the authors and not those of NICE or the Department of Health and Social Care.

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Data availability statement

Currently data access is restricted, although the aggregate anonymised data collected could be made available with the permission of the participating STPs.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.lanepe.2021.100110.

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