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RAPID RESEARCH IN COVID-19 PROGRAMME

AMBULANCE CALL-OUTS FOR PSYCHIATRIC EMERGENCIES DURING THE COVID-19 PANDEMIC

AIMS

We know that the Covid-19 pandemic and associated social distancing restrictions have had mental health implications for many people in Scotland, with a possible effect on services. The aim of this study was to investigate patterns of ambulance call-outs for psychiatric emergencies during the Covid-19 pandemic, addressing the following questions:

RQ1: Were there higher than expected numbers of ambulance call outs for psychiatric emergencies during the COVID-19 pandemic in Scotland?

RQ2. Were there differences from expected in reasons for call-out, patient care pathways and patient outcomes?

RQ3. Were there particular trends within any socio-demographic groups?

KEY FINDINGS

- There were 19% fewer ambulance call-outs for psychiatric emergencies (including self-harm) among 21% fewer patients in Scotland during the first 6 months of 2020 compared with that period in 2019.
- The reduction in call-outs was less pronounced for people in the most deprived quintiles.
- Overall, the reduction in call-outs was most marked in March and April 2020.
- Slightly higher proportions of call-outs in March to June 2020 resulted in no patient transfer. During this period, there were slightly lower proportions of call-outs that involved transfer to ED and discharge home, and slightly higher proportions that involved transfer to ED, followed by inpatient hospital admission.
- Patients with any psychiatric call-out in 2020 were more likely to have died by the end of the 6 month study period than those in 2019, but the numbers involved were small.

WHAT DID THE STUDY INVOLVE?

Every time there is an emergency ambulance call-out in Scotland, the Scottish Ambulance Service (SAS) collects a pre-determined set of information about the patient and the call. This data is linked, at patient level, to data routinely collected by other NHS services, including Emergency Department (ED) attendances, acute inpatient admissions, NHS24 calls and primary care Out of Hours services. The data are stored in the Unscheduled Data Care Mart (UCD). In this study, Public Health Scotland collated data from the UCD for all SAS calls in Scotland coded by paramedics on attendance as psychiatric emergencies (including self-harm) during the first 6 months of 2019 and 2020. All NHS contacts that were associated with the critical SAS call were identified, and the patient pathway was coded accordingly. For a specific NHS contact to be included in a pathway it had to occur within 24 hours of the previous NHS contact (or 48 hours for certain contacts).

WHAT WERE THE RESULTS AND WHAT DO THEY MEAN?

Total Call-Outs

There were 12,840 ambulance call-outs for psychiatric emergencies to 10,285 patients during the first 6 months of 2019 compared with 10,383 call-outs to 8,176 patients in 2020. The mean (median) age of callers was 37 years (36 years) in both years. The proportion of female patients was 44.8% in 2019 and 46.8% in 2020. The proportions who made only one SAS call were 85.1% and 85.8% in 2020 and 2019 respectively.

Overall there was a 19% reduction in call-outs in 2020 compared with 2019; a reduction that was more marked in March and April (28% and 26% reductions compared with those months in 2019) (Fig 1). The reduction was most marked in less deprived areas, with a 32% reduction in call-outs in the least deprived quintile, compared with a 14% reduction in the most deprived quintile. The reasons for the call-outs as coded by paramedics on attendance were broadly similar between the two years (Table 1), apart from less frequent use of the 'psychiatric, not alert' code in 2020. This may explain some of the overall reduction in psychiatric call-outs in 2020.

FIG 1: Total call-outs by month/year

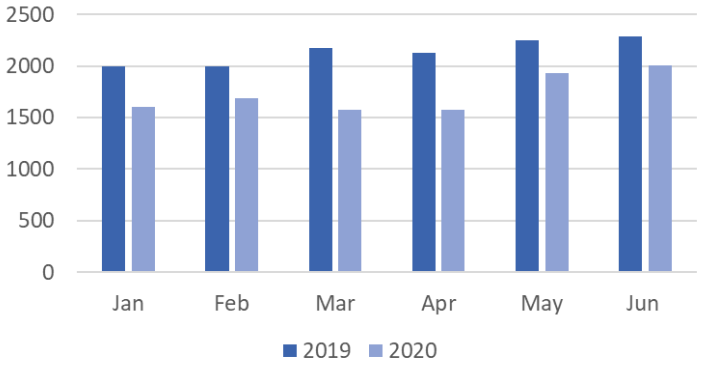
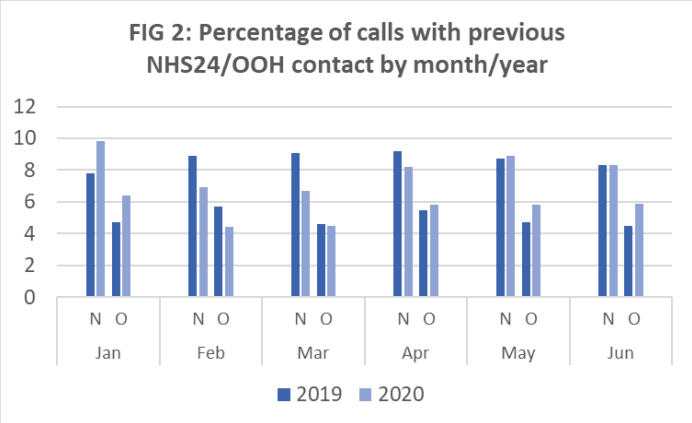


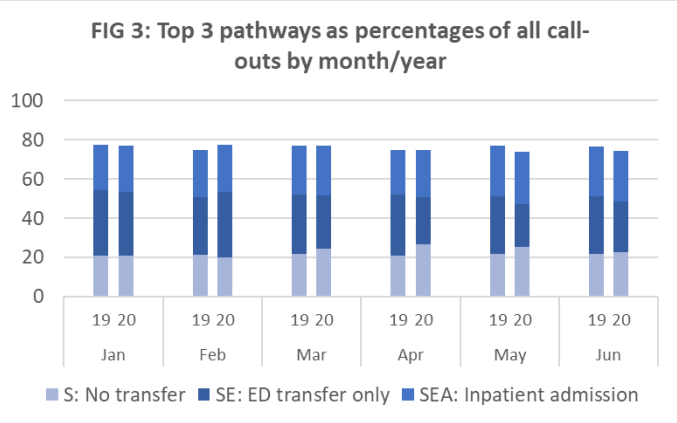
TABLE 1: Calls by presenting code

	2019	2020
Overdose/poisoning	9,259	7,493
Psychiatric, threatening suicide	1,733	1,819
Psychiatric, not alert	1,072	29
Psychiatric/serious haemorrhage	397	386
Psychiatric/minor haemorrhage	222	
Psychiatric, threatening to jump	191	139
Hanging	149	117
Psychiatric, non-suicidal without 1st party verification (alert and awake)	<10	79
Falls	<10	<10
Total	**12,840**	**10,383**

Previous contact with NHS24 and primary care Out of Hours service

For the 86% of call-outs in both years, there was no prior contact with NHS24 or primary care out-of hours services (OOH). However, there was a previous NHS24 call for 8.7% of call-outs 8.2% in 2019 and 2020 respectively; and previous OOH contact for 4.9% and 5.5% respectively, with some variations by month (Fig 2).





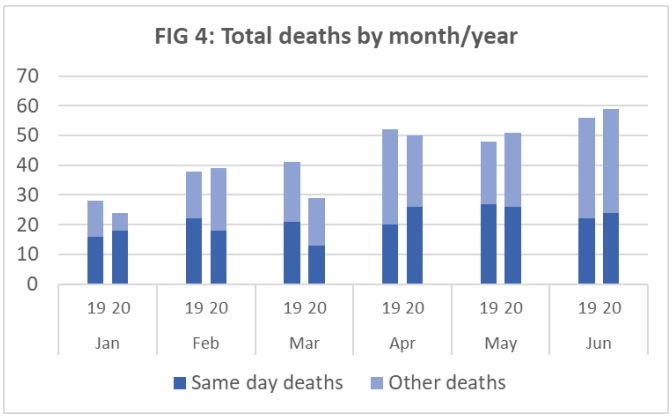
Care Pathways

There were 832 different care pathways for 93% of the call-outs for which full data were available. Around three-quarters of the call-outs involved one of three pathways after ambulance attendance: **S:** No transfer (22.4%). **SE:** Transfer to Emergency Department (ED) (29.1%). **SEA:** Transfer to ED, acute inpatient admission (24.6%).

The distribution of these most common care pathways were compared by month and year. There were slightly higher percentages of call-outs with no transfer in March to June 2020, compared with the equivalent months in 2019 (Fig 3). During this time, hospital avoidance pathways were introduced (and are still in place). For call-outs in 2020 that involved ED transfer, there were slightly lower percentages that resulted in discharge home, and slightly higher percentages that resulted in an inpatient hospital admission.

Outcomes

There were 263 (2.6%) deaths during the first 6 months of 2019 among 10,285 patients with at least one psychiatric call-out during this time. There were 252 deaths (3.1%) among the equivalent 8,176 patients in 2020. There were similar numbers of deaths in 2019 and 2020 for most months, despite the total numbers of patients with at least one call-out being substantially lower in 2020. This suggests that patients with a call-out in 2020 were more likely to die than those in 2019.



The patterns of death by month were similar in 2019 and 2020 (Fig 4), with the exception of March 2020, during which time there appeared to be fewer same day deaths (possibly because there were fewer call-outs). The numbers of deaths increase each month because each patient who has already had a call-out has an increasing length of follow-up time since that critical call-out. Same day deaths can be assumed to be a result of the psychiatric emergency. The other deaths could be due to any cause.

WHAT IMPACT COULD THE FINDINGS HAVE?

- Addressing patients' concerns surrounding Covid-19 such that they are not put off from seeking care will help to ensure that they receive treatment if required.
- Developing guidance for ambulance clinicians (and other clinicians in the out-of-hospital setting) as to thresholds for seeking clinical support, and access to appropriate care pathways, will ensure that patients receive the most appropriate treatment.

HOW WILL THE OUTCOMES BE DISSEMINATED?

Lay audience: Findings publicised via University Twitter accounts; a short article submitted to The Conversation. Academic audience: Article prepared for a peer-reviewed Journal. Policy and Practice: Results shared with Medical Director and R&D Group of SAS, Association of Ambulance Chief Executives, and Scottish Government National Suicide Prevention Leadership Group.

CONCLUSION

There were fewer ambulance call-outs for psychiatric emergencies during the first 6 months of 2020 compared with those months in 2019. This could be a more general trend, but more pronounced effects in March/April suggest that patient behaviour was affected, and would need to be explored in follow-up research. A higher proportion of patients were not transferred but remained at home; probably the result of adherence to hospital avoidance pathways. However, it is essential that patients experiencing a psychiatric emergency seek and receive appropriate treatment and care. The higher likelihood of death in 2020 could indicate possible adverse effects on patient outcomes, but could also be explained by higher proportions of higher-risk patients. This requires ongoing analysis of a larger sample for confirmation. This analysis of routinely-collected data has therefore generated several questions that can only be answered with further data collection.

RESEARCH TEAM & CONTACT

JOSIE EVANS, EDWARD DUNCAN, DAVID FITZPATRICK, CATH BEST, JADE HOOPER	Josie.evans@stir.ac.uk
Faculty of Health Sciences & Sport University of Stirling	01786-466352

ADDITIONAL INFORMATION

Funding received: £23,166. Project completed: November 2020