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Intentional self-poisoning increase in the emergency department in Spain during the COVID-19 pandemic[☆]



Incremento de las intoxicaciones con fin suicida en los servicios de urgencias en España durante la pandemia COVID-19

Dear Editor,

Self-harm and suicide are important public health problems in adolescence, and suicide is the second leading cause of death in youth worldwide.¹ The method used most commonly in suicide attempts is intentional poisoning with medicines available in the home. These youth frequently have psychiatric disorders.²

Most of the visits made to paediatric emergency departments (PEDs) due to poisoning correspond to young children who have ingested toxic substances unintentionally.³ Suicidal intent accounts for approximately 14% of poisonings managed in PEDs worldwide⁴ and 7% in Spain,³ chiefly from age 12 years.

An alarm was raised during the coronavirus disease 2019 (COVID-19) pandemic of an increase in mental health disorders in both adults and the paediatric age group.⁵ However, to our knowledge, the impact of the pandemic on the volume of PED visits due to self-poisoning with suicidal intent in Spain has not yet been analysed at the national level.

The aim of our study was to assess the impact of the pandemic on visits to PEDs in Spain due to self-poisoning with suicidal intent.

We conducted a study based on a prospective register of the poisonings documented in 43 Spanish PEDs that participate in the Toxicology Surveillance Observatory of the Sociedad Española de Urgencias de Pediatría (Spanish Society of Paediatric Emergency Medicine) between 2014 and 2021. We collected data on visits due to exposure to potentially toxic substances on the 13th, 14th and 15th of each month in the period under study. The methods of the regis-

ter have already been described in a previous issue of this journal.⁶ For the purpose of the study, the prepandemic period ranged from January 2014 to February 2020 and the pandemic period from March 2020 to December 2021. The participating hospitals are listed in Appendix A. We conducted the statistical analysis with the software IBM SPSS Statistics for Windows, version 23.0 (IBM Corp.; Armonk, NY, USA). We summarised quantitative data as mean and standard deviation, and categorical data as percentages. We compared quantitative variables with the Student *t* test and categorical variables with the χ^2 and Fisher exact tests. We considered *P* values of less than 0.05 statistically significant. The study was approved by the Clinical Research Ethics Committee of the Basque Country.

During the period under study, there were 836 188 care episodes in the 43 PEDs. Of this total, 1909 were for exposure to potentially toxic substances, in 199 (10.4%) intentional exposure with suicidal intent. In the prepandemic period, there were 114 documented cases of self-poisoning with suicidal intent (7.5% of visits due to toxic substance exposure) compared to 85 (22.2%) during the pandemic ($P < .01$). In the prepandemic period, participating PEDs documented 1 case of self-poisoning with suicidal intent every 2 days compared to every 0.8 days in the pandemic. In the 2 years of the pandemic, the proportion of intentional poisonings with suicidal intent rose from 12.4% in 2020 to 28.2% in 2021. We did not find significant changes in the characteristics of cases of self-poisoning with suicidal intent between the prepandemic and pandemic periods, save for more frequent contact with prehospital emergency care services. We also found no differences in how these cases were managed in the PED setting, save for a more frequent administration of antidotes during the pandemic, and N-acetylcysteine was the most frequently used antidote in both periods. The majority of the cases corresponded to female patients and ingestion of medicines, chiefly benzodiazepines and analgesics, with one third of cases being of combined drug intoxication and more than half resulting in hospital admission. None of the patients died (Table 1).

Our study found a significant increase in cases of paediatric self-poisoning with suicidal intent in Spanish PEDs during the COVID-19 pandemic, a finding that would be consistent with an increase in mental health disorders during the pandemic. Previous publications had already warned of a global mental health crisis in youth that started long before

[☆] Previous presentation: oral communication at the XXVI Meeting of the Sociedad Española de Urgencias de Pediatría; June 16–18, 2022, Pamplona, Spain.

Table 1 Characteristics of cases of self-poisoning with suicidal intent managed in the pre-pandemic and pandemic periods.

	Prepandemic n = 114	Pandemic n = 85	P
Sex (n = 196): female	96 (85%)	74 (89.2%)	NS
Age <14 years	36 (31.6%)	33 (38.8%)	NS
Setting (n = 170): home	86 (86%)	66 (94.3%)	NS
First attempt (n = 184): no	46 (43.4%)	37 (47.4%)	NS
Substance: drug	104 (91.2%)	80 (94.1%)	NS
Analgesics/antipyretics	44 (38.6%)	40 (47.1%)	
Paracetamol	32 (28%)	28 (32.9%)	
Benzodiazepines	39 (34.2%)	32 (37.6%)	
Combined drug intoxication	42 (36.8%)	30 (35.3%)	
Previous contact with emergency department (n = 193)	21 (19.4%)	28 (32.9%)	<.05
Accompanying person (n = 190): parent	93 (83.8%)	67 (84.8%)	NS
Transport vehicle (n = 191): ambulance	40 (36.4%)	35 (43.2%)	NS
Symptoms: yes	64 (56.1%)	57 (67.1%)	NS
Diagnostic tests (n = 196)	87 (76.3%)	73 (89%)	<.05
Treatment in emergency department	59 (51.8%)	58 (68.2%)	
Decontamination	35 (30.7%)	30 (35.3%)	NS
Antidote	9 (7.9%)	16 (19%)	<.05
Hospital admission	52 (45.6%)	48 (56.5%)	NS

Prepandemic period: January 2014 to February 2020. Pandemic period: March 2020 to December 2021. NS, not significant.

the pandemic,¹ and the pandemic may have made it more evident.

One of the potential limitations of the study could be the difficulty documenting cases in the pandemic, especially at the beginning, due to the current health care and social circumstances. In fact, in the early stages of the pandemic there was a marked overall decrease in PED visits.

Our study demonstrates the need to take urgent measures to promote, protect and care for the mental health of children and adolescents, taking into account that the prevention of self-harm and suicide requires both universal aimed at youth in general and specific measures targeting high-risk groups.¹

Appendix A. Members of the Working Group on Poisonings of the Sociedad Española de Urgencias de Pediatría

Hospital Universitario (H.U.) Tajo: García-Vao C.; Hospital (H.) Quirón Bizkaia: Oliver P; H.U. Arnau de Vilanova: Pociello N; H.U. Basurto: Humayor J.; H. Cabueñes: Rodríguez P, García A; H.U. Carlos Haya: Oliva S.; Complejo Hospitalario (C.H.) Navarra: Palacios M, Clerigué N.; C.H. de Jaén: Campo T.; Complejo Asistencial Universitario de León: Andrés AG, Muñoz M; Centro de Salud Parc Taulí: Baena I, Comalrena de Sobregau C; H.U. Cruces: Echarte P, Zumalde A; H.U. Doce de Octubre: Mesa S.; H.U. Donostia: Muñoz JA.; H.U. Dr. Peset: Rodríguez A.; H. Francesc de Borja: Angelats CM, Sequi JM, Villaplana I.; Fundació Sant Hospital de la Seu d'Urgell: Astete J.; H.U. Fundación Alcorcón: Barasoain A.; H.U. Gregorio Marañón: Vázquez P.; H. Infanta Cristina: Rodríguez MD.; H. Infanta Elena: Gómez C, Nuñez T.; H. Terrassa: Pinyot M.; H. Laredo: Jorda A, Canduela V.; H. Mendaró: Herrero L.; H.U. Mutua Terrassa: Pizzá A.;

H.U. Niño Jesús: Molina JC.; H. Materno-Infantil Las Palmas de Gran Canaria: Mangione L. H. Materno-Infantil Badajoz: Hurtado P; Complejo Asistencial de Ávila: García E; H. Montepíncipe, H. Sanchinarro, H. Torrelodones, H. Puerta del Sur: Lalinde M.; H. Príncipe de Asturias: García MA; H.U. Puerta de Hierro: Benito C, Armero P.; H. Rey Juan Carlos: Sabrido G; H.U. San Agustín: Melguizo MC.; H.U. Río Hortega: Benito H; H. Sant Joan de Dèu, Xarxa hospitalaria i universitària de Manresa, Fundació Althaia: Botifoll E, Lobato Z; H.U. Sant Joan de Déu: Martínez Sánchez L, Luaces C, Algarada L.; H San Pedro: Martínez L.; H.U. Salamanca: López J; H. Virgen de la Salud: Aquino E.; H. Zumarraga: Pérez A; H.U. Lozano Blesa: Lanuza R; H.U. Politècnico La Fe: Señor R; H. Mataró: Baena J; H.U. Marqués de Valdecilla, H. Sierrallana: Peñalba A; H. Gernika-Lumo: Alday A.; H. Miguel Servet: Campos C.; H.U. Son Espases: López V.; H. Son Llatzer: Vidal C.; C. Asistencia Soria: Muñoz N.; H. Infantil La Paz: De Miguel B.; Hospital C. U. Valencia: Khodayar P, H.U. Central de Asturias: Alonso MA, H. Severo Ochoa: Angulo AM.

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¹ The members of the Working Group on Poisonings of the Sociedad Española de Urgencias de Pediatría are presented in Appendix A.

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