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Impact of different visiting policies on family satisfaction in two Spanish ICUs before and during COVID-19

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Different visiting policies impact on family satisfaction in #ICUs before and during #COVID19
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Rodriguez-Ruiz E. et al: “…LINK…”

Key-points of the Letter:
- Different visiting policies impact on family satisfaction in ICUs before and during COVID19.
- Family satisfaction outcomes can support strategies to reopen ICUs to families and improve family-centred care practices.

Keywords: Family-centred care. Family. Patient. COVID-19. Intensive care unit.
Dear Editor,

Engaging relatives in the care of critically ill patients is associated with better outcomes. This reflects the importance of family-centred care (FCC) to deliver high-quality care in intensive care units (ICUs) [1]. Restricted visiting in ICU during COVID-19 pandemic has left family members unable to visit their loved ones [2, 3]. In our cross-sectional study, designed to validate the EMpowerment of PAtients in THe Intensive Care-Family (EMPATHIC-F) questionnaire, we collected data in two Spanish ICUs between November 2019 and May 2020 [4]. Here we report a secondary analysis demonstrating the impact of restricted visiting policies during COVID-19 on family satisfaction and providing evidence to support the ICU team to return, or change, to open visiting policies.

Before the COVID-19 pandemic, visiting policies varied between the two ICUs. ICU-1 had restricted visiting of 1-hour twice a day at mealtimes. ICU-2 had an open visiting policy where relatives could stay with their next-of-kin most of the time except at night and during morning rounds. When Spain was hit by COVID-19 pandemic in March 2020, visiting policies changed in both ICUs towards a restricted policy of 1-hour a day and only one relative. Simultaneously, daily telephone updates and video calls made by intensivists and nurses were implemented. Despite these changes and in line with our study protocol, we continued data collection until May 2020. The primary outcome was family satisfaction measured by the validated EMPATHIC-F questionnaire and presented as median scores [4]. The detailed study methods are provided in electronic supplementary material (ESM-1).

During the 6-month study period, 270 family members were recruited and 262 (97%) completed the EMPATHIC-F questionnaire. Family members reported higher satisfaction with care in ICU-2 \( (p=0.010) \), particularly in the domains organization \( (p=0.031) \) and care and treatment \( (p=0.019) \) (Table 1). During COVID-19 pandemic visiting restrictions, median scores in the domain family participation were lower in both ICUs, and significantly lower in ICU-2 \( (5.83 vs 5.67, p=0.016) \) (ESM-2).
Family-centred care has been defined as an approach to healthcare that is respectful of and responsive to individual families’ needs and values [1]. Using the EMPATHIC-F questionnaire covering five FCC domains (information, organization, care and treatment, professional attitude, and parent participation) [4], we observed that open visiting policies enhance family satisfaction. According to previous reports, COVID-19 pandemic has challenged FCC practices in ICUs [5]. We have demonstrated that this has impacted on family satisfaction in an ICU with open visiting and where family members actively participate in patients’ care.

Although strategies have been implemented to improve communication with relatives of ICU patients [5], we believe that, under current circumstances (better knowledge of the disease, availability of resources, and increasing vaccination rates), ICUs should be reopened to families. Family satisfaction outcomes can support strategies to promptly return to FCC and open visiting. The sample size of our study was small, limiting the generalisability. Therefore, ICU staff need to assess their own FCC practices to ensure that temporary changes implemented during the pandemic do not undermine the role that families play in patient recovery.

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DECLARATIONS

Funding
None.

Conflicts of interest
There are no conflicts of interest to declare.

Ethics approval
The study was conducted in accordance with the amended Declaration of Helsinki. The Research Ethics Committee of Santiago-Lugo approved the study (ref. no. CAEG 2019/461).

Consent to participate
A written informed consent was obtained from all participants.

Availability of data and material
Data are available upon reasonable request.

Authors’ contributions:
Conceptualization: ERR, JML, ARN; Methodology: ERR, MCI, AEG; Formal analysis and investigation: MCI, AEG; Writing original draft preparation: ERR, JML; Review and editing: ERR, JML, ARN; Supervision: JML, ARN.

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| Domain                | ICU-1 |       |       | ICU-2 |       |       | p     |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|
|                       | n     | Median| IQR   | 95% CI| n     | Median| IQR   | 95% CI|       |
| Professional attitude | 146   | 6.00  | 5.50 – 6.00 | 5.83 – 6.00 | 116   | 6.00  | 5.66 – 6.00 | 5.83 – 6.00 | 0.306 |
| Organization          | 146   | 5.80  | 5.20 – 6.00 | 5.80 – 6.00 | 116   | 6.00  | 5.60 – 6.00 | 5.80 – 6.00 | 0.031 |
| Care and Treatment    | 146   | 5.62  | 5.25 – 6.00 | 5.43 – 5.72 | 116   | 5.85  | 5.37 – 6.00 | 5.75 – 6.00 | 0.019 |
| Information           | 146   | 5.80  | 5.23 – 6.00 | 5.60 – 6.00 | 116   | 6.00  | 5.40 – 6.00 | 5.80 – 6.00 | 0.101 |
| Family participation  | 146   | 5.67  | 5.00 – 6.00 | 5.50 – 5.83 | 116   | 5.80  | 5.33 – 6.00 | 5.67 – 5.83 | 0.126 |
| Satisfaction total items | 146     | 5.66  | 5.30 – 5.90 | 5.56 – 5.75 | 116   | 5.82  | 5.53 – 5.96 | 5.73 – 5.87 | 0.010 |

Abbreviations: IQR, interquartile range; CI, confidence interval; EMPATHIC-F, EMpowerment of PAtients in THe Intensive Care – Family. Data are expressed as the median (interquartile range). p-values calculated by Mann-Whitney U test. Statistically significant difference between groups: p < 0.05.
Electronic Supplementary Material

Supplement to:

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Electronic Supplementary Material 1:

METHODS

Design
We conducted a cross-sectional study using the EMpowerment of PAtients in THe Intensive Care – Family (EMPATHIC-F) questionnaire [1] to measure family satisfaction of relatives of patients admitted and discharged between November 2019 and May 2020. A relative was considered the person in the patient's environment (family member or not) who voluntarily undertakes the responsibility of the patient's care and is willing to make surrogate decisions for the patient's best interest.

Setting
The study took place in two Intensive Care Units (ICUs) located in a tertiary University affiliated general hospital situated in northwest Spain. Both ICUs are multi-disciplinary units which provide both medical and surgical adult intensive care. Both ICUs are designed with multi-bedded rooms. ICU-1 has 15 beds and over 700 admissions per year. ICU-2 has 8 beds and over 300 admissions per year.

Data Collection
Questionnaires were handed over to the relatives by the researchers at ICU discharge. The relatives were able to return the questionnaire and written consent form in a separate box on the ICU or post it later from home. Inclusion criteria were ICU length of stay greater than 24 hours and good comprehension of the Spanish language by PSPs. The level of Spanish language was
assessed during admission when communicating with the relatives. Three exclusion criteria were defined: (1) discharge from ICU within 24 hours; (2) ICU readmission, a questionnaire was only given after first admission; and (3) patient’s death during ICU admission.

**EMPATHIC-F questionnaire**

The self-reported EMPATHIC-F questionnaire evaluates the family experiences and satisfaction with care provided by the intensive care team. It was originally developed for parents of critically ill children in Pediatric ICU [2] and subsequently validated for relatives in adult ICU [1]. The 30-item EMPATHIC-F questionnaire is divided into five domains that are related to the family-centred care (FCC) principles: information (5 items), care and treatment (8 items), family participation (6 items), organization (5 items), and professional attitude (6 items). Responses are provided on a 6-point ordinal Likert scale (1 = totally disagree; 6 = totally agree), with an additional ‘not applicable’ option for each statement. The EMPATHIC-F has been translated and culturally adapted from the EMPATHIC-30 instrument [1, 2]. The reliability measures were adequate with an overall Cronbach’s alpha of 0.90 [1].

**Statistical analysis**

EMPATHIC-F scores were expressed with median and interquartile range. Comparisons between groups were analysed using the Mann-Whitney test. Analysis was performed using R statistic software (version 3.5.2) [2], and for all analyses a p-value <0.05 was considered to be statistically significant.

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Electronic Supplementary Material 2:

Supplementary results

Table S1 Differences in EMPATHIC-F domains between two time periods. Abbreviations: EMPATHIC-F EMpowerment of PAtients in THe Intensive Care – Family.

| Domain                  | November 2019 – February 2020 | March – May 2020 | p     |
|-------------------------|-------------------------------|------------------|-------|
|                         | n    | Median | IQR           | 95% CI | n    | Median | IQR           | 95% CI |       |
| Professional attitude   | 194  | 6.00   | 5.50 – 6.00   | 5.83 – 6.00 | 68  | 6.00   | 5.70 – 6.00   | 5.83 – 6.00 | 0.190 |
| Organization            | 194  | 5.80   | 5.24 – 6.00   | 5.75 – 6.00 | 68  | 6.00   | 5.80 – 6.00   | 6.00 – 6.00 | 0.008 |
| Care and Treatment      | 194  | 5.75   | 5.25 – 6.00   | 5.50 – 5.87 | 68  | 5.81   | 5.39 – 6.00   | 5.62 – 5.87 | 0.490 |
| Information             | 194  | 5.80   | 5.25 – 6.00   | 5.60 – 6.00 | 68  | 6.00   | 5.60 – 6.00   | 5.80 – 6.00 | 0.124 |
| Family participation    | 194  | 5.80   | 5.17 – 6.00   | 5.67 – 6.00 | 68  | 5.67   | 5.00 – 5.96   | 5.33 – 5.80 | 0.021 |
| Satisfaction total items| 194  | 5.71   | 5.33 – 5.96   | 5.63 – 5.81 | 68  | 5.77   | 5.51 – 5.90   | 5.69 – 5.83 | 0.797 |

Abbreviations: IQR, interquartile range; CI, confidence interval; EMPATHIC-F, EMpowerment of PAtients in THe Intensive Care – Family.

Data are expressed as the median (interquartile range). p-values calculated by Mann-Whitney U test. Statistically significant difference between groups: p < 0.05.

Table S1 shows differences in EMPATHIC-F domains between the two study periods (November 2019 – February 2020 and March – May 2020). During the COVID-19 pandemic visitation restrictions, median scores in the domain family participation were significantly lower (5.80 vs 5.67, p=0.021). In addition, median scores in the domain organization were significantly higher during the second period (5.80 vs 6.00, p=0.008).
Table S2 Differences in EMPATHIC-F domains between the two time periods in each ICU. Abbreviations: EMPATHIC-F EMpowerment of PAtients in THe Intensive Care – Family.

| Domain                  | ICU-1                          | ICU-2                          | p value |
|-------------------------|--------------------------------|--------------------------------|---------|
|                         | November 2019 – February 2020 | March – May 2020               |         |
|                         | n    | Median (IQR)   | 95% CI | n    | Median (IQR)   | 95% CI |         |
| Professional attitude   | 121  | 6.00 (5.50 – 6.00) | 5.80 – 6.00 | 25  | 6.00 (5.73 – 6.00) | 5.83 – 6.00 | 0.365  |
| Organization            | 121  | 5.80 (5.10 – 6.00) | 5.50 – 6.00 | 25  | 6.00 (5.55 – 6.00) | 5.80 – 6.00 | 0.081  |
| Care and Treatment      | 121  | 5.65 (5.25 – 6.00) | 5.43 – 5.75 | 25  | 5.75 (5.19 – 6.00) | 5.37 – 6.00 | 0.837  |
| Information             | 121  | 5.80 (5.20 – 6.00) | 5.60 – 6.00 | 25  | 5.80 (5.45 – 6.00) | 5.60 – 6.00 | 0.648  |
| Family participation    | 121  | 5.67 (5.00 – 6.00) | 5.50 – 6.00 | 25  | 5.50 (4.83 – 5.83) | 5.00 – 5.83 | 0.145  |
| Satisfaction total items| 121  | 5.65 (5.30 – 5.93) | 5.52 – 5.77 | 25  | 5.69 (5.48 – 5.86) | 5.57 – 5.82 | 0.915  |

Abbreviations: IQR, interquartile range; CI, confidence interval; EMPATHIC-F, EMpowerment of PAtients in THe Intensive Care – Family.
Data are expressed as the median (interquartile range). p-values calculated by Mann-Whitney U test. Statistically significant difference between groups: p < 0.05.

Table S2 shows differences in EMPATHIC-F domains between the two time periods (November 2019 – February 2020 and March – May 2020) in each ICU. While in ICU-1 there were no significant differences in median scores between both periods, in ICU-2 median scores in the domain family participation were significantly lower during COVID-19 pandemic visitation restrictions (5.83 vs 5.67, p=0.016).