**Impact of the SARS-COV-2 outbreak on epidemiology and management of major trauma in France: registry-based study. The COVITRAUMA study**

## **Additional files**

## Supplementary material 1: 15 Participating centers

1.Department of Anesthesiology and Critical Care, AP-HP Beaujon,

2. Department of Anesthesiology and Critical Care, AP-HP Bicétre

3.Department of Anesthesiology and Critical Care, AP-HP HEGP

4.Department of Anesthesiology and Critical Care, AP-HP Mondor

5.Department of Anesthesiology and Critical Care, AP-HP Pitié-Salpêtrière

6. Department of Anesthesiology and Critical Care Metz Thionville

7.Department of Anesthesiology and Critical Care, CHU Nancy

8.Department of Anesthesiology and Critical Care, CHU Toulouse Purpan

9.Department of Anesthesiology and Critical Care, CHU Toulouse Rangeuil

10.Department of Anesthesiology and Critical Care, CHU Caen

11.Department of Anesthesiology and Critical Care, CHU Reims

12.Department of Anesthesiology and Critical Care, CHU Rouen

13.Department of Anesthesiology and Critical Care, HIA, Percy

14.Department of Anesthesiology and Critical Care, HIA Saint-Anne

15.Department of Anesthesiology and Critical Care, Hopital Civil de Colmar

## Supplementary material 2: STROBE checklist

|  |  |  |  |
| --- | --- | --- | --- |
|  | Item No | Recommendation | Page |
| Title and abstract | 1 | (*a*) Indicate the study’s design with a commonly used term in the title or the abstract | 1 |
| (*b*) Provide in the abstract an informative and balanced summary of what was done and what was found | 3 |
| Introduction | | |  |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported | 5 |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses | 5 |
| Methods | | |  |
| Study design | 4 | Present key elements of study design early in the paper |  |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection | 7 |
| Participants | 6 | (*a*) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up | 7 |
| (*b*)For matched studies, give matching criteria and number of exposed and unexposed | NA |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable | 8 |
| Data sources/ measurement | 8\* | For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group | 7 |
| Bias | 9 | Describe any efforts to address potential sources of bias | 8 |
| Study size | 10 | Explain how the study size was arrived at | 7 |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why | 8 |
| Statistical methods | 12 | (*a*) Describe all statistical methods, including those used to control for confounding | 8-9 |
| (*b*) Describe any methods used to examine subgroups and interactions | 8-9 |
| (*c*) Explain how missing data were addressed | 8-9 |
| (*d*) If applicable, explain how loss to follow-up was addressed | NA |
| (*e*) Describe any sensitivity analyses | 8 |
| Results | | |  |
| Participants | 13\* | (a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed | 10 |
| (b) Give reasons for non-participation at each stage | NA |
| (c) Consider use of a flow diagram | - |
| Descriptive data | 14\* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders | 10 |
| (b) Indicate number of participants with missing data for each variable of interest | Supplementary |
| (c) Summarise follow-up time (eg, average and total amount) | 10 |
| Outcome data | 15\* | Report numbers of outcome events or summary measures over time | 10-11-12 |
| Main results | 16 | (*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included | 10-11 |
| (*b*) Report category boundaries when continuous variables were categorized | 10-11 |
| (*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period | NA |
| Other analyses | 17 | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses | 10-11 |
| Discussion | | |  |
| Key results | 18 | Summarise key results with reference to study objectives | 12 |
| Limitations | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias | 14-15 |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | 13 |
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results | 13-14 |
| Other information | | |  |
| Funding | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based | 17 |

*Additional file 3: Vittel Criteria*

**Step 1 (Physiological signs)**

GCS < 13

SAP < 90 mmHg

SpO2 < 90%

**Step 2 (Global assessment of speed and mechanism)**

Ejection from vehicle

Death in same passenger compartment

Fail > 6 m

Victim thrown or projected

Global assessment of speed and potential injuries:

Vehicle deformation, estimated vehicle speed no helmet, no seat belt

Blast

**Step 3 (Anatomical injuries)**

Penetrating trauma of head, neck, thorax, abdomen, arms or legs

Flail chest

Severe burn

Pelvic fracture

Suspicion of spinal cord injury

Amputation at or above wrist or ankle level

Acute limb ischemia

**Step 4 (resuscitation)**

Mechanical ventilation

Intravascular filling > 1000 ml

Vasopressor

## Additional file 4: Missing data proportion by variables (%)

For table 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Year | Period  Pre-Lockdown | Lockdown | Post-Lockdown | Whole year |
| Injury mechanism | 2020 | 6.38 | 0.83 | 0.92 | 3.04 |
| Previous years | 0.58 | 1.38 | 1.92 | 1.32 |
| Age | 2020 | 0 | 0 | 0 | 0 |
| Previous years | 0 | 0 | 0 | 0 |
| Sex | 2020 | 6.58 | 1.11 | 1.15 | 3.27 |
| Previous years | 0.66 | 1.43 | 1.99 | 1.38 |
| ISS | 2020 | 9.09 | 5.54 | 2.98 | 6.09 |
| Previous years | 5.20 | 4.14 | 3.61 | 4.27 |
| TRISS | 2020 | 32.49 | 25.21 | 20.64 | 26.56 |
| Previous years | 18.65 | 18.57 | 19.11 | 18.75 |
| IGS | 2020 | 6.58 | 6.37 | 3.21 | 5.40 |
| Previous years | 1.07 | 2.12 | 2.07 | 1.82 |
| Hemorrhagic shock | 2020 | 7.35 | 6.37 | 2.52 | 5.48 |
| Previous years | 1.32 | 2.07 | 2.61 | 2.02 |
| Traumatic Brain Injury | 2020 | 7.54 | 6.93 | 2.75 | 5.78 |
| Previous years | 1.76 | 2.02 | 2.76 | 2.16 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Year | Period  Pre-Lockdown | Lockdown | Post-Lockdown | Whole year |
| Mortality | 2020 | 12.19 | 17.73 | 12.16 | 13.70 |
| Previous years | 6.11 | 8.44 | 9.82 | 8.2 |
| Transportation to hospital | 2020 | 9.28 | 3.60 | 3.21 | 5.71 |
| Previous years | 1.4 | 2.33 | 2.69 | 2.18 |
| Pre-hospital orotracheal intubation | 2020 | 10.83 | 3.60 | 2.98 | 6.24 |
| Previous years | 2.06 | 2.71 | 3.38 | 2.73 |
| Pre-hospital time | 2020 | 11.41 | 5.26 | 4.59 | 7.46 |
| Previous years | 4.21 | 3.5 | 4.37 | 3.95 |
| Intra-hospital time | 2020 | 31.91 | 21.88 | 21.79 | 25.80 |
| Previous years | 21.95 | 20.05 | 21.26 | 20.93 |
| Surgical interventions in the first 24h | 2020 | 8.12 | 4.43 | 3.21 | 5.48 |
| Previous years | 2.48 | 3.08 | 3.68 | 3.09 |
| Surgical or arteriography intervention | 2020 | 28.05 | 18.56 | 19.27 | 22.53 |
| Previous years | 20.13 | 17.51 | 17.88 | 18.34 |
| Mechanical ventilation duration | 2020 | 16.97 | 8.03 | 8.72 | 9.39 |
| Previous years | 7.92 | 9.18 | 11.05 | 12.33 |
| Hospitalization duration | 2020 | 8.70 | 14.68 | 14.68 | 12.33 |
| Previous years | 9.74 | 11.72 | 12.12 | 11.29 |
| Secondary admission | 2020 | 6.77 | 1.11 | 1.61 | 3.50 |
| Previous years | 1.65 | 2.12 | 2.99 | 2.25 |
| Decisions to withdraw of care | 2020 | 12.77 | 16.62 | 12.16 | 13.62 |
| Previous years | 7.10 | 8.86 | 10.13 | 8.75 |

For Table 2