



# Awake prone positioning and oxygen therapy in patients with COVID-19: the APRONOX study

Orlando R. Perez-Nieto <sup>1</sup>, Diego Escarraman-Martinez <sup>2</sup>, Manuel A. Guerrero-Gutierrez <sup>3</sup>, Eder I. Zamarron-Lopez <sup>4</sup>, Javier Mancilla-Galindo <sup>5,6</sup>, Ashuin Kammar-García <sup>7</sup>, Miguel A. Martinez-Camacho <sup>8</sup>, Ernesto Deloya-Tomás <sup>1</sup>, Jesús S. Sanchez-Díaz <sup>9</sup>, Luis A. Macías-García <sup>10</sup>, Raúl Soriano-Orozco <sup>11</sup>, Gabriel Cruz-Sánchez <sup>12</sup>, José D. Salmeron-Gonzalez <sup>13</sup>, Marco A. Toledo-Rivera <sup>14</sup>, Ivette Mata-Maqueda <sup>15</sup>, Luis A. Morgado-Villaseñor <sup>16</sup>, Jenner J. Martinez-Mazariegos <sup>17</sup>, Raymundo Flores Ramirez <sup>18</sup>, Josue L. Medina-Estrada <sup>19</sup> and Silvio A. Ñamendys-Silva <sup>3,20</sup> on behalf of the APRONOX Group <sup>21</sup>

<sup>1</sup>Intensive Care Unit, Hospital General San Juan del Rio, Querétaro, Mexico. <sup>2</sup>Dept of Anaesthesia, Hospital de Especialidades Centro Médico Nacional “LaRaza”, Mexico City, Mexico. <sup>3</sup>Dept of Critical Care Medicine, Instituto Nacional de Cancerología, Mexico City, Mexico. <sup>4</sup>Intensive Care Unit, Hospital CEMAIN Tampico, Tamaulipas, Mexico. <sup>5</sup>Unidad de Investigación UNAM-INC, Instituto Nacional de Cardiología Ignacio Chávez, Mexico City, Mexico. <sup>6</sup>Respiratory Medicine, Instituto Nacional de Enfermedades Respiratorias, Mexico City, Mexico. <sup>7</sup>Emergency Dept, Instituto Nacional de Ciencias Médicas y Nutrición “Salvador Zubirán”, Mexico City, Mexico. <sup>8</sup>Intensive Care Unit, Hospital General de México, Mexico City, Mexico. <sup>9</sup>Intensive Care Unit, Hospital de Alta Especialidad IMSS “Adolfo Ruiz Cortines” Veracruz, Veracruz, Mexico. <sup>10</sup>Intensive Care Unit, Hospital Regional ISSSTE “Fernando Quiroz Gutiérrez”, Mexico City, Mexico. <sup>11</sup>Intensive Care Unit, Hospital de Alta Especialidad T1 IMSS, León, Mexico. <sup>12</sup>Intensive Care Unit, Clínica Hospital Mérida ISSSTE, Yucatán, Mexico. <sup>13</sup>Intensive Care Unit, Hospital General “Miguel Silva”, Morelia, Mexico. <sup>14</sup>Intensive Care Unit, Hospital SEDNA, Mexico City, Mexico. <sup>15</sup>Secretaría de Salud del Estado de Querétaro, Ethics and Research Committee, Mexico. <sup>16</sup>Intensive Care Unit, Hospital General de Zona IMSS No. 15 Reynosa, Tamaulipas, Mexico. <sup>17</sup>Intensive Care Unit, Hospital Vida Mejor ISSSTECH Tuxtla Gutiérrez, Chiapas, Mexico. <sup>18</sup>Intensive Care Unit, Hospital de Especialidades “5 de Mayo” ISSSTEP, Puebla, Mexico. <sup>19</sup>Intensive Care Unit, Hospital Regional No. 1 IMSS “Vicente Guerrero”, Acapulco, Mexico. <sup>20</sup>Division of Pulmonary, Anaesthesia and Critical Care Medicine, Instituto Nacional de Ciencias Médicas y Nutrición “Salvador Zubirán”, Mexico City, Mexico. <sup>21</sup>A complete list of members of the APRONOX Group is provided in appendix 1 in the supplementary material.

Corresponding author: Orlando Perez-Nieto ([orlando\\_rpn@hotmail.com](mailto:orlando_rpn@hotmail.com))



Shareable abstract (@ERSpublications)

Awake prone positioning in nonintubated hospitalised patients with COVID-19 was associated with a lower risk of intubation and mortality in the APRONOX multicentre observational study <https://bit.ly/3Atb92Z>

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## Abstract

**Background** The awake prone positioning strategy for patients with acute respiratory distress syndrome is a safe, simple and cost-effective technique used to improve hypoxaemia. We aimed to evaluate intubation and mortality risk in patients with coronavirus disease 2019 (COVID-19) who underwent awake prone positioning during hospitalisation.

**Methods** In this retrospective, multicentre observational study conducted between 1 May 2020 and 12 June 2020 in 27 hospitals in Mexico and Ecuador, nonintubated patients with COVID-19 managed with awake prone or awake supine positioning were included to evaluate intubation and mortality risk through logistic regression models; multivariable and centre adjustment, propensity score analyses, and E-values were calculated to limit confounding.

**Results** 827 nonintubated patients with COVID-19 in the awake prone (n=505) and awake supine (n=322) groups were included for analysis. Fewer patients in the awake prone group required endotracheal intubation (23.6% *versus* 40.4%) or died (19.8% *versus* 37.3%). Awake prone positioning was a protective factor for intubation even after multivariable adjustment (OR 0.35, 95% CI 0.24–0.52; p<0.0001, E=2.12), which prevailed after propensity score analysis (OR 0.41, 95% CI 0.27–0.62; p<0.0001, E=1.86) and mortality (adjusted OR 0.38, 95% CI 0.26–0.55; p<0.0001, E=2.03). The main variables associated with

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intubation among awake prone patients were increasing age, lower baseline peripheral arterial oxygen saturation/inspiratory oxygen fraction ratio ( $P_{aO_2}/F_{IO_2}$ ) and management with a nonrebreather mask.

**Conclusions** Awake prone positioning in hospitalised nonintubated patients with COVID-19 is associated with a lower risk of intubation and mortality.