# Serum sodium trajectory during AKI and mortality risk

No abstract available

**Keywords:**Acute kidney injury; Kidney replacement therapy; Mortality; Serum sodium.

# Analysis of influenza and dengue cases in Mexico before and during the COVID-19 pandemic

No abstract available

# A prevalence study in Guadalajara, Mexico, comparing tuberculin skin test and QuantiFERON-TB Gold In-Tube

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## Abstract

**Background:**Tuberculosis (TB) is a prevalent disease throughout the world. The extent of TB illness in childhood is not clear; recent data shows that 10-20% of the cases are found in children under 15 years old. In 2017, 1 million children developed the disease, of which 9% were co-infected with HIV.

**Methods:**A cross-sectional study that analyzed 48 children diagnosed with HIV-infection in Guadalajara, Mexico. The tuberculin skin test (TST) and QuantiFERON-TB Gold In-Tube test (QFT) were performed and compared to diagnose latent TB infection (LTBI).

**Results:**The average age was 9 years old (± 4), with an age range of 1-16 years; the 6-12-year-old group predominated with 50% of cases. 27 patients (56%) were male; 83% had received the BCG vaccination and 23% had a history of being contacts of TB cases. In the study, 40 patients (83%) were without immunosuppression; seven (15%) with moderate immunosuppression, and only one patient had severe immunodeficiency. Overall, 3 of the 48 children (6.2%) had a positive TST, while 8 out of 48 (16.6%) had a positive QFT. The concordance between the two tests was 89.6% (43/48) with Kappa = 0.5 (95% CI, 0.14-0.85).

**Conclusions:**The QFT test represents an opportunity in the diagnosis of LTBI, particularly in pediatric HIV- patients. This is the first study that compares the two tests (TST and QFT) in children with HIV-infection in Guadalajara, Mexico.

# Viral Kinetics of an Acute Hepatitis B Virus Subgenotype F1b Infection in a Mexican Subject

**Free PMC article**

## Abstract

Content available: Author Interview and Audio Recording.

# U.S. bound journey of migrant peoples InTransit across Dante's Inferno and Purgatory in the Americas

## Abstract

Rapid rise of population migration is a defining feature of the 21st century due to the impact of climate change, political instability, and socioeconomic downturn. Over the last decade, an increasing number of migrant peoples travel across the Americas to reach the United States seeking asylum or cross the border undocumented in search of economic opportunities. In this journey, migrant people experience violations of their human rights, hunger, illness, violence and have limited access to medical care. In the 'Divine Comedy', the Italian poet Dante Alighieri depicts his allegorical pilgrimage across Hell and Purgatory to reach Paradise. More than 700 years after its publication, Dante's poem speaks to the present time and the perilious journey of migrant peoples to reach safehavens. By exploring the depths and heights of the human condition, Dante's struggles resonate with the multiple barriers and the unfathomable experiences faced by migrant peoples in transit across South, Central, and North America to reach the United States. Ensuring the safety of migrant peoples across the Americas and elsewhere, and attending to their health needs during their migratory paths represent modern priorities to reduce social injustices and achieving health equity.

**Keywords:**Central America; Darien; Mexico; Migrant people; Migrant people in transit; North America; Panama; South America.

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# Increment Antimicrobial Resistance During the COVID-19 Pandemic: Results from the Invifar Network

Affiliations expand

## Abstract

***Aim:*** This study aims to assess the changes in antimicrobial resistance among some critical and high-priority microorganisms collected previously and during the coronavirus disease 2019 (COVID-19) pandemic in Mexico. ***Methods:*** We collected antimicrobial susceptibility data for critical and high-priority microorganisms from blood, urine, respiratory samples, and from all specimens, in which the pathogen may be considered a causative agent. Data were stratified and compared for two periods: 2019 versus 2020 and second semester 2019 (prepandemic) versus the second semester 2020 (pandemic). ***Results:*** In the analysis of second semester 2019 versus the second semester 2020, in blood samples, increased resistance to oxacillin (15.2% vs. 36.9%), erythromycin (25.7% vs. 42.8%), and clindamycin (24.8% vs. 43.3%) (*p* ≤ 0.01) was detected for *Staphylococcus aureus*, to imipenem (13% vs. 23.4%) and meropenem (11.2% vs. 21.4) (*p* ≤ 0.01), for *Klebsiella pneumoniae*. In all specimens, increased ampicillin and tetracycline resistance was detected for *Enterococcus faecium* (*p* ≤ 0.01). In cefepime, meropenem, levofloxacin, and gentamicin (*p* ≤ 0.01), resistance was detected for *Escherichia coli*; and in piperacillin-tazobactam, cefepime, imipenem, meropenem, ciprofloxacin, levofloxacin, and gentamicin (*p* ≤ 0.01), resistance was detected for *Pseudomonas aeruginosa*. ***Conclusion:*** Antimicrobial resistance increased in Mexico during the COVID-19 pandemic. The increase in oxacillin resistance for *S. aureus* and carbapenem resistance for *K. pneumoniae* recovered from blood specimens deserves special attention. In addition, an increase in erythromycin resistance in *S. aureus* was detected, which may be associated with high azithromycin use. In general, for *Acinetobacter baumannii* and *P. aeruginosa*, increasing resistance rates were detected.

**Keywords:**Acinetobacter baumannii complex; COVID-19 pandemic; Enterobacter cloacae; Enterococcus faecium; Escherichia coli; INVIFAR; Klebsiella pneumoniae; Pseudomonas aeruginosa; Staphylococcus aureus; antimicrobial resistance.

# Awake prone positioning for non-intubated patients with COVID-19-related acute hypoxaemic respiratory failure: a systematic review and meta-analysis

## Abstract

**Background:**Awake prone positioning has been broadly utilised for non-intubated patients with COVID-19-related acute hypoxaemic respiratory failure, but the results from published randomised controlled trials (RCTs) in the past year are contradictory. We aimed to systematically synthesise the outcomes associated with awake prone positioning, and evaluate these outcomes in relevant subpopulations.

**Methods:**In this systematic review and meta-analysis, two independent groups of researchers searched MEDLINE, Embase, PubMed, Web of Science, Scopus, MedRxiv, BioRxiv, and ClinicalTrials.gov for RCTs and observational studies (with a control group) of awake prone positioning in patients with COVID-19-related acute hypoxaemic respiratory failure published in English from Jan 1, 2020, to Nov 8, 2021. We excluded trials that included patients intubated before or at enrolment, paediatric patients (ie, younger than 18 years), or trials that did not include the supine position in the control group. The same two independent groups screened studies, extracted the summary data from published reports, and assessed the risk of bias. We used a random-effects meta-analysis to pool individual studies. We used the Grading of Recommendations Assessment, Development, and Evaluation approach to assess the certainty and quality of the evidence. The primary outcome was the reported cumulative intubation risk across RCTs, and effect estimates were calculated as risk ratios (RR;95% CI). The analysis was primarily conducted on RCTs, and observational studies were used for sensitivity analyses. No serious adverse events associated with awake prone positioning were reported. The study protocol was prospectively registered with PROSPERO, CRD42021271285.

**Findings:**A total of 1243 studies were identified, we assessed 138 full-text articles and received the aggregated results of three unpublished RCTs; therefore, after exclusions, 29 studies were included in the study. Ten were RCTs (1985 patients) and 19 were observational studies (2669 patients). In ten RCTs, awake prone positioning compared with the supine position significantly reduced the need for intubation in the overall population (RR 0·84 [95% CI 0·72-0·97]). A reduced need for intubation was shown among patients who received advanced respiratory support (ie, high-flow nasal cannula or non-invasive ventilation) at enrolment (RR 0·83 [0·71-0·97]) and in intensive care unit (ICU) settings (RR 0·83 [0·71-0·97]) but not in patients receiving conventional oxygen therapy (RR 0·87 [0·45-1·69]) or in non-ICU settings (RR 0·88 [0·44-1·76]). No obvious risk of bias and publication bias was found among the included RCTs for the primary outcome.

**Interpretation:**In patients with COVID-19-related acute hypoxaemic respiratory failure, awake prone positioning reduced the need for intubation, particularly among those requiring advanced respiratory support and those in ICU settings. Awake prone positioning should be used in patients who have acute hypoxaemic respiratory failure due to COVID-19 and require advanced respiratory support or are treated in the ICU.

**Funding:**OpenAI, Rice Foundation, National Institute for Health Research, and Oxford Biomedical Research Centre.

# The utility of the Edmonton Obesity Staging System for the prediction of COVID-19 outcomes: a multi-centre study

**Free PMC article**

## Abstract

**Background:**Patients with obesity have an increased risk for adverse COVID-19 outcomes. Body mass index (BMI) does not acknowledge the health burden associated this disease. The performance of the Edmonton Obesity Staging System (EOSS), a clinical classification tool that assesses obesity-related comorbidity, is compared with BMI, with respect to adverse COVID-19 outcomes.

**Methods:**1071 patients were evaluated in 11 COVID-19 hospitals in Mexico. Patients were classified into EOSS stages. Adjusted risk factors for COVID-19 outcomes were calculated and survival analysis for mechanical ventilation and death was carried out according to EOSS stage and BMI category.

**Results:**The risk for intubation was higher in patients with EOSS stages 2 and 4 (HR 1.42, 95% CI 1.02-1.97 and 2.78, 95% CI 1.83-4.24), and in patients with BMI classes II and III (HR 1.71, 95% CI 1.06-2.74, and 2.62, 95% CI 1.65-4.17). Mortality rates were significantly lower in patients with EOSS stages 0 and 1 (HR 0.62, 95% CI 0.42-0.92) and higher in patients with BMI class III (HR 1.58, 95% CI 1.03-2.42). In patients with a BMI ≥ 25 kg/m2, the risk for intubation increased with progressive EOSS stages. Only individuals in BMI class III showed an increased risk for intubation (HR 2.24, 95% CI 1.50-3.34). Mortality risk was increased in EOSS stages 2 and 4 compared to EOSS 0 and 1, and in patients with BMI class II and III, compared to patients with overweight.

**Conclusions:**EOSS was associated with adverse COVID-19 outcomes, and it distinguished risks beyond BMI. Patients with overweight and obesity in EOSS stages 0 and 1 had a lower risk than patients with normal weight. BMI does not adequately reflect adipose tissue-associated disease, it is not ideal for guiding chronic-disease management.

# Factors for success of awake prone positioning in patients with COVID-19-induced acute hypoxemic respiratory failure: analysis of a randomized controlled trial

## Abstract

**Background:**Awake prone positioning (APP) improves oxygenation in coronavirus disease (COVID-19) patients and, when successful, may decrease the risk of intubation. However, factors associated with APP success remain unknown. In this secondary analysis, we aimed to assess whether APP can reduce intubation rate in patients with COVID-19 and to focus on the factors associated with success.

**Methods:**In this multicenter randomized controlled trial, conducted in three high-acuity units, we randomly assigned patients with COVID-19-induced acute hypoxemic respiratory failure (AHRF) requiring high-flow nasal cannula (HFNC) oxygen to APP or standard care. Primary outcome was intubation rate at 28 days. Multivariate analyses were performed to identify the predictors associated to treatment success (survival without intubation).

**Results:**Among 430 patients randomized, 216 were assigned to APP and 214 to standard care. The APP group had a lower intubation rate (30% vs 43%, relative risk [RR] 0.70; CI95 0.54-0.90, P = 0.006) and shorter hospital length of stay (11 interquartile range [IQR, 9-14] vs 13 [IQR, 10-17] days, P = 0.001). A respiratory rate ≤ 25 bpm at enrollment, an increase in ROX index > 1.25 after first APP session, APP duration > 8 h/day, and a decrease in lung ultrasound score ≥ 2 within the first 3 days were significantly associated with treatment success for APP.

**Conclusion:**In patients with COVID-19-induced AHRF treated by HFNC, APP reduced intubation rate and improved treatment success. A longer APP duration is associated with APP success, while the increase in ROX index and decrease in lung ultrasound score after APP can also help identify patients most likely to benefit.

**Trial registration:**This study was retrospectively registered in ClinicalTrials.gov at July 20, 2021. Identification number [NCT04477655](http://clinicaltrials.gov/show/NCT04477655). https://clinicaltrials.gov/ct2/show/NCT04477655?term=PRO-CARF&draw=2&rank=1.

**Keywords:**Acute hypoxemic respiratory failure; Awake prone positioning; COVID-19; Intubation.

**Perforación de la valva no coronariana en un paciente con síndrome de Laubry-Pezzi**

No abstract available