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http://pec.cochrane.org

# **HAPPY NEW YEAR 2024**



The Cochrane PEC team wishes you all the best for 2024.

The Cochrane PEC is involved in knowledge translation particularly by disseminating Cochrane reviews to enhance emergency care professionals' knowledge and decision making.

All year round, meet us in conferences, training sessions and on our website!

# **COCHRANE PEC MAJOR CONTRIBUTOR**



#### Pr Sandrine Charpentier

We are pleased to welcome the New President of the French Society of Emergency Medicine (SFMU). She is full professor since 2013, head of the emergency department at the Purpan University Hospital in Toulouse since 2017 and chair of the Collège National des Universitaires de Médecine d'Urgence (CNUMU) since 2021. Her main topics are acute myocardial infarctus, emergency childbirth and structuring emergency care.

She was particularly involved in the Emergency Medicine specialty recognition.

The SFMU strongly supports the Cochrane PEC and is proud to collaborate with Cochrane to help people make well informed decisions about emergency care.

# **RECENT REVIEWS**

Cochrane Library

#### Continuous positive airway pressure (CPAP) for acute bronchiolitis in children

Kana R Jat, Jeanne M Dsouza, Joseph L Mathew

The use of Continuous Positive Airway Pressure did not reduce the need for mechanical ventilation in children with bronchiolitis, although the evidence was of low certainty. Limited, low certainty evidence suggests that breathing improved (a decreased respiratory rate) in children with bronchiolitis who received CPAP. Larger, adequately powered trials are needed to evaluate the effect of CPAP for children with acute bronchiolitis.

#### Inhaled corticosteroids for the treatment of COVID-19

Mirko Griesela, Carina Wagnera, Agata Mikolajewska, Miriam Stegemann, Falk Fichtner, Maria-Inti Metzendorf, Avinash Anil Nair, Jefferson Daniel, Anna-Lena Fischera, Nicole Skoetz

In people with confirmed COVID-19 and mild symptoms who are able to use inhaler devices, we found moderate-certainty evidence that inhaled corticosteroids probably reduce the combined endpoint of admission to hospital or death and increase the resolution of all initial symptoms at day 14. Low-certainty evidence suggests that corticosteroids make little to no difference in all-cause mortality up to day 30 and may decrease the duration to symptom resolution. There is low-certainty evidence that inhaled corticosteroids may decrease infections.

The evidence we identified came from studies in high-income settings using budesonide and ciclesonide prior to vaccination roll-outs.

#### Magnesium sulfate for acute exacerbations of chronic obstructive pulmonary disease

Han Ni, Swe Zin Aye, Cho Naing

Intravenous magnesium sulfate may be associated with fewer hospital admissions, reduced length of hospital stay and improved dyspnoea scores compared to placebo.

For nebulised magnesium sulfate, we are unable to draw conclusions about its effects in Chronic Obstructive Pulmonary Disease exacerbations for most of the outcomes.

### Magnetic Resonance Imaging (MRI) for diagnosis of acute appendicitis

Nigel D'Souza, Georgina Hicks, Richard Beable, Antony Higginson, Bo Rud

Magnetic Resonnace Imaging appears to be highly accurate in confirming and excluding acute appendicitis in adults, children, and pregnant women regardless of protocol. The methodological quality of the included studies was generally low.

Oxygenation during the apnoeic phase preceding intubation in adults in prehospital, emergency department, intensive care and operating theatre environments

Leigh D White, Ruan A Vlok, Christopher YC Thang, David H Tian, Thomas M Melhuish

There was some evidence that oxygenation during the apnoeic phase of intubation may improve the lowest recorded oxygen saturation. However, the differences in oxygen saturation were unlikely to be clinically significant.

#### SARS-CoV-2-neutralising monoclonal antibodies to prevent COVID-19

Caroline Hirsch, Yun Soo Park, Vanessa Piechotta, Khai Li Chai, Lise J Estcourt, Ina Monsef, Susanne Salomon, Erica M Wood, Cynthia So-Osman, Zoe McQuilten, Christoph D Spinner, Jakob J Malin, Miriam Stegemann, Nicole Skoetz, Nina Kreuzberger

For Pre Exposure Prophilaxis, there is a decrease in development of clinical COVID-19 symptoms (high certainty), infection with SARS-CoV-2 (moderate certainty), and admission to hospital (low certainty) with tixagevimab/cilgavimab. There is low certainty of a decrease in infection with SARS-CoV-2, and development of clinical COVID-19 symptoms; and a higher rate for all-grade AEs with casirivimab/imdevimab.

For Post Exposure Prophylaxis, there is moderate certainty of a decrease in infection with SARS-CoV-2 and low certainty for a higher rate for all-grade AEs with bamlanivimab. There is high certainty of a decrease in infection with SARS-CoV-2, development of clinical COVID-19 symptoms, and a higher rate for all-grade AEs with casirivimab/imdevimab.

These findings only apply to people unvaccinated against COVID-19 and to the variants prevailing during the study and not other variants (e.g. Omicron).

Training healthcare providers (HCP) to respond to intimate partner violence against women (IPV)

Naira Kalra, Leesa Hooker, Sonia Reisenhofer, Gian Luca Di Tanna, Claudia García-Moreno

Overall, IPV training for HCPs may be effective for outcomes that are precursors to behaviour change. There is some, albeit weak evidence that IPV training may improve HCPs' attitudes towards IPV. Training may also improve IPV knowledge and HCPs' self-perceived readiness to respond to those affected by IPV, although we are not certain about this evidence. Although supportive evidence is weak and inconsistent, training may improve HCPs' actual responses, including the use of safety planning, identification and documentation of IPV in women's case histories.

#### Transfusion thresholds for guiding red blood cell transfusion (RBC)

Jeffrey L Carsona, Simon J Stanwortha, Jane A Dennisa, Marialena Trivella, Nareg Roubinian, Dean A Fergusson, Darrell Triulzi, Carolyn Dorée, Paul C Hébert

Transfusion at a restrictive haemoglobin concentration decreased the proportion of people exposed to RBC transfusion by 41% across a broad range of clinical contexts. Across all trials, no evidence suggests that a restrictive transfusion strategy impacted 30-day mortality, mortality at other time points, or morbidity (i.e. cardiac events, myocardial infarction, stroke, pneumonia, thromboembolism, infection) compared with a liberal transfusion strategy.

Some patient subgroups might benefit from RBCs to maintain higher haemoglobin concentrations; research efforts should focus on these clinical contexts.

# <u>Ultrasound guidance for arterial (other than femoral) catheterisation in adults</u>

Ronald LG Flumignan, Virginia FM Trevisani, Renato D Lopes, Jose CC Baptista-Silva, Carolina DQ Flumignan, Luis CU Nakano

Real-time B-mode ultrasound guidance may improve first attempt success rate, overall success rate, and time needed for a successful procedure for radial artery catheterisation compared to palpation, or Doppler Auditory Ultrasound AssistanceA. In addition, real-time B-mode ultrasound guidance probably decreases major haematomas compared to palpation. However, we are uncertain about the evidence on major haematomas and pain for other comparisons due to very low-certainty evidence and unreported outcomes. We are also uncertain about the effects on pseudoaneurysm and QoL for axillary and dorsalis pedis arteries catheterisation.

#### Ultrasound guidance versus landmark method for peripheral venous cannulation in adults

Masafumi Tada, Naoki Yamada, Takashi Matsumoto, Chikashi Takeda, Toshi A Furukawa, Norio Watanabe

There is very low- and low-certainty evidence that, compared to the landmark method, ultrasound guidance may benefit difficult participants for increased first-pass and overall success of cannulation, with no difference detected in pain. There is moderate- and low-certainty evidence that, compared to the landmark method, ultrasound guidance may benefit moderately difficult participants due to a small increased first-pass success of cannulation with no difference detected in pain. There is moderate- and high-certainty evidence that, compared to the landmark method, ultrasound guidance does not benefit easy participants: ultrasound guidance decreased the first-pass success of cannulation with no difference detected in overall success of cannulation and increased pain.

#### Videolaryngoscopy versus direct laryngoscopy for adults undergoing tracheal intubation

Jan Hansel, Andrew M Rogers, Sharon R Lewis, Tim M Cook, Andrew F Smith

Video Laryngoscopies (VL) of all designs likely reduce rates of failed intubation and result in higher rates of successful intubation on the first attempt with improved glottic views. Macintosh-style and channelled VLs likely reduce rates of hypoxaemic events, while hyperangulated VLs probably reduce rates of oesophageal intubation. VL likely provides a safer risk profile compared to direct laryngoscopy for all adults undergoing tracheal intubation.

#### Ultrasound-guided arterial cannulation in the paediatric population

Christian K Raphael, Nour A El Hage Chehade, Joanne Khabsa, Elie A Akl, Marie Aouad-Maroun, Roland Kaddoum

We identified moderate-certainty evidence that ultrasound guidance for arterial cannulation compared with palpation or Doppler auditory assistance improves first-attempt success rate, second-attempt success rate and overall success rate. We also found moderate-certainty evidence that ultrasound guidance reduces the incidence of complications, the number of attempts to successful cannulation and the duration of the cannulation procedure.

#### Family presence during resuscitation

Monika Afzali Rubin, Tintin LG Svensson, Suzanne Forsyth Herling, Patricia Jabre, Ann Merete Møller

There was insufficient evidence to draw any firm conclusions on the effects of family présence during resuscitation on relatives' psychological outcomes.

Sufficiently powered and well-designed randomized controlled trials may change the conclusions of the review in future.

#### Hypothermia for neuroprotection in adults after cardiac arrest

Jasmin Arrich, Nikola Schütz, Julia Oppenauer, Janne Vendt, Michael Holzer, Christof Havel, Harald Herkner

Current evidence suggests that conventional cooling methods to induce therapeutic hypothermia may improve neurological outcomes after cardiac arrest. We obtained available evidence from studies in which the target temperature was 32  $^{\circ}$ C to 34  $^{\circ}$ C.

Oxygenation during the apnoeic phase preceding intubation in adults in prehospital, emergency department, intensive care and operating theatre environments

Leigh D White, Ruan A Vlok, Christopher YC Thang, David H Tian, Thomas M Melhuish

There was some evidence that oxygenation during the apnoeic phase of intubation may improve the lowest recorded oxygen saturation. However, the differences in oxygen saturation were unlikely to be clinically significant. This did not translate into any measurable effect on the incidence of hypoxaemia or severe hypoxaemia in a group of predominately critically ill people. We were unable to assess the influence on hospital length of stay; however, there was a reduction in ICU stay in the apnoeic oxygenation group. The mechanism for this is unclear as there was little to no difference in first pass success or adverse event rates.

<u>Higher versus lower fractions of inspired oxygen or targets of arterial oxygenation for adults admitted to the intensive care unit</u>

Thomas L Klitgaard, Olav L Schjørring, Frederik M Nielsen, Christian S Meyhoff, Anders Perner, Jørn Wetterslev, Bodil S Rasmussen, Marija Barbateskovic

In adult ICU patients, it is still not possible to draw clear conclusions about the effects of higher versus lower oxygenation strategies on all-cause mortality, serious adverse events, quality of life, lung injuries, myocardial infarction, stroke, and sepsis at maximum follow-up. This is due to low or very low-certainty evidence

#### Extracorporeal membrane oxygenation for critically ill adults

Aidan Burrell, Jiwon KimPatricia Alliegro, Lorena Romero, Ary Serpa Neto, Frederick Mariajoseph, Carol Hodgson

In this updated systematic review, which included four additional randomized controlled trials, we found that extracorporeal membrane oxygenation was associated with a reduction in day-90 to one-year all-cause mortality, as well as three times increased risk of bleeding. However, the certainty of this result was only low to moderate, limited by a low number of small trials, clinical heterogeneity, and indirectness across studies.

# **COCHRANE PEC CORNER AND VIDEOS**

# The Cochrane PEC team is very pleased to announce its new partnership with the Panorama of Emergency Medicine (PoEM) journal



On 4 August 2020, Beirut (Lebanon) was rocked by a powerful explosion which left thousands of victims and caused massive destruction of property and livelihoods. Mediterranean Journal of Emergency Medicine (MJEM) offices were not spared from that tragedy and the journal's activity was suspended due to the explosion and

other crisis that assailed Lebanon.

However, the MJEM members have decided to defy all odds and pursue their journal's mission and revitalize it as: Panorama of Emergency Medicine (PoEM).

The Cochrane PEC team also selects Cochrane reviews relevant to emergency medicine and publishes them in different formats and languages.

#### **EMERGENCIAS**

#### Perlas para urgenciólogos

A Cochrane PEC Corner is regularly published in the Journal of the Spanish Society of Emergency Medicine EMERGENCIAS.



#### JORNAL BRASILEIRO DE MEDECINA DE EMERGENCIA

A Cochrane PEC Corner is now regularly published in the Journal of the Brasilian Society of Emergency Medicine 'Jornal Brasileiro de Medecina de Emergência'.



# ANNALES FRANCAISES DE MEDECINE D'URGENCE

Cochrane PEC PEARLS are also regularly published in French in the Journal of the French Society of Emergency Medicine 'Annales Françaises de Médecine d'Urgence'



The Cochrane PEC team is pleased to continue its partnership with Top MU from Quebec (Transfert Optimisé des Publications en Médecine d'Urgences).





From this partnership, new videos will soon be available. These videos aims to get Cochrane evidence to practitioners or researchers in the way they need it.



The Cochrane PEC also produces videos in French summarizing some Cochrane emergency reviews. They are available on the Cochrane PEC website and on Vimeo.





# **COCHRANE PEC PARTENARIAT**

The Cochrane PEC is pleased to collaborate with Cochrane Brasil to translate Cochrane abstracts prior to their publication in the Jornal Brasileiro de Medecina de Emergência.





The Cochrane PEC is also pleased to collaborate with the French Society of Disaster Medicine 'SFMC' in the dissemination of Cochrane reviews.



# **LATEST NEWS**

We've been there :



Friday Research Sessions

Médipôle Lyon-Villeurbanne

Lyon, France

10 March 2023



#### <u>Urgences le congrès</u>

Paris, France

7-9 June 2023



Join us in London as we go forwards together at the Cochrane Colloquium



3 September - Satellite events 4-6 September Cochrane Colloquium



Cochrane Event

London, England

3-6 September 2023



# **EUSEM 2023**

Barcelona, Spain

16-20 September 2023

# **UPCOMMINGS EVENTS**

#### Urgences le congrès

Paris, France

5-7 June 24





#### Global Evidence Summit

Praha, Czech Republic

9-14 September 2024

#### **EUSEM 2024**

Copenhagen, Denmark

13-16 October 2024



# **COCHRANE PEC LIFE**

We are pleased to welcome Dr Mathieu Oberlin and Pr Aurelien Renard in our team.





We're delighted to be working with emergency pediatricians to disseminate our pediatric PEARLS:

Dr Peter Jones,

Dr Rasha Sawaya,

Dr Chady El Tawil







# TRAINING AND WORKSHOP



#### COCHRANE WORKSHOPS, INTERACTIVE LEARNING AND WEBINARS

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