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HDAS Export

Strategy ECMO support in pregnancy/post-partum patients with infectious diseases (Covid-19, SARS, MERS, etc.).

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**1. Severe H1N1 virus in pregnancy requiring extracorporeal membrane oxygenation and lobectomy.**

**Author(s):** McNamee, K; Dawood, F

**Source:** Obstetric medicine; Dec 2010; vol. 3 (no. 4); p. 156-157

**Publication Date:** Dec 2010

**Publication Type(s):** Case Reports

**PubMedID:** 27579082

Available at [Obstetric medicine](http://europepmc.org/search?query=(DOI:10.1258/om.2010.100021)) - from Europe PubMed Central - Open Access

Available at [Obstetric medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [Obstetric medicine](http://europepmc.org/articles/pmc4989626?pdf=render) - from Unpaywall

**Abstract:**Prompt diagnosis and treatment of H1N1 is crucial during pregnancy to prevent major morbidity and mortality as the virus poses an increased risk of severe illness in pregnant women. Currently, there is limited obstetric literature concerning pregnancy and the pandemic swine flu outbreak in the UK. Although there was a concerted effort to stockpile the HIN1 virus vaccinations, critical care adult extracorporeal membrane oxygenation is only available in one centre in the UK.

**Database:** Medline

**2. Treatment With Convalescent Plasma for Critically Ill Patients With Severe Acute Respiratory Syndrome Coronavirus 2 Infection.**

**Author(s):** Zhang, Bin; Liu, Shuyi; Tan, Tan; Huang, Wenhui; Dong, Yuhao; Chen, Luyan; Chen, Qiuying; Zhang, Lu; Zhong, Qingyang; Zhang, Xiaoping; Zou, Yujian; Zhang, Shuixing

**Source:** Chest; Jul 2020; vol. 158 (no. 1); p. e9

**Publication Date:** Jul 2020

**Publication Type(s):** Case Reports

**PubMedID:** 32243945

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Available at [Chest](https://doi.org/10.1016/j.chest.2020.03.039) - from Unpaywall

**Abstract:**As of March 24, 2020, novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been responsible for 379,661 infection cases with 16,428 deaths globally, and the number is still increasing rapidly. Herein, we present four critically ill patients with SARS-CoV-2 infection who received supportive care and convalescent plasma. Although all four patients (including a pregnant woman) recovered from SARS-CoV-2 infection eventually, randomized trials are needed to eliminate the effect of other treatments and investigate the safety and efficacy of convalescent plasma therapy.

**Database:** Medline

**3. Extracorporeal Membrane Oxygenation in Pregnant and Postpartum Women With H1N1-Related Acute Respiratory Distress Syndrome: A Systematic Review and Meta-analysis.**

**Author(s):** Saad, Antonio F; Rahman, Mahbubur; Maybauer, Dirk M; Fraser, John F; Costantine, Maged M; Pacheco, Luis D; Maybauer, Marc O

**Source:** Obstetrics and gynecology; Feb 2016; vol. 127 (no. 2); p. 241-247

**Publication Date:** Feb 2016

**Publication Type(s):** Meta-analysis Journal Article Review Systematic Review

**PubMedID:** 26942349

Available at [Obstetrics and gynecology](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0029-7844.is%2Band%2B%22127%22.vo%2Band%2B%222%22.ip%2Band%2B%22241%22.pg%2Bor%2B%2210.1097%2FAOG.0000000000001236%22.di) - from Ovid (LWW High Impact Collection) - 2020

Available at [Obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**OBJECTIVETo assess available evidence regarding the use of extracorporeal membrane oxygenation (ECMO) in pregnant and postpartum women with acute respiratory distress syndrome (ARDS) secondary to H1N1 infection.DATA SOURCESDatabases from MEDLINE (U.S. National Library of Medicine, 1946 to April 1, 2015), the Cochrane Library Controlled Trials Register, ClinicalTrials.gov, and Web of Science were queried for studies on ECMO in pregnant or postpartum patients with ARDS. Search terms included: "ARDS," "ECMO," "pregnant," and "postpartum."TABULATION, INTEGRATION, AND RESULTSAll relevant references in any language were reviewed. Literature for inclusion and methodologic quality were reviewed based on the meta-analyses and systematic reviews of observational studies (Meta-analysis Of Observational Studies in Epidemiology) guidelines. Of 266 citations, five retrospective studies (39 patients) fulfilled our inclusion criteria. No randomized controlled trials were found. The pooled estimate of the survival rate among pregnant and postpartum patients who received ECMO for ARDS secondary to H1N1 was 74.6% (95% confidence interval [CI] 60.7-88.6%). Neonatal outcomes were reported in two studies and the rate of live birth was 70% (95% CI 43.7-95.2). Heterogeneity was not significant among studies (I ranged from 0% to 21%; P>.25).CONCLUSIONThe role of ECMO in pregnant and postpartum women with ARDS from H1N1 remains unclear and the benefits suggested from our review should be interpreted with caution.

**Database:** Medline

**4. Extracorporeal membrane oxygenation for severe ARDS in pregnant and postpartum women during the 2009 H1N1 pandemic.**

**Author(s):** Nair, Priya; Davies, Andrew R; Beca, John; Bellomo, Rinaldo; Ellwood, David; Forrest, Paul; Jackson, Andrew; Pye, Roger; Seppelt, Ian; Sullivan, Elizabeth; Webb, Steve

**Source:** Intensive care medicine; Apr 2011; vol. 37 (no. 4); p. 648-654

**Publication Date:** Apr 2011

**Publication Type(s):** Journal Article

**PubMedID:** 21318437

Available at [Intensive care medicine](http://link.springer.com/10.1007/s00134-011-2138-z) - from SpringerLink

Available at [Intensive care medicine](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=21318437) - from EBSCO (MEDLINE Complete)

Available at [Intensive care medicine](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0342-4642&volume=37&issue=4&spage=648) - from ProQuest (Health Research Premium) - NHS Version

Available at [Intensive care medicine](http://www.uhl-library.nhs.uk/directpages/gh.html) - from Glenfield Hospital Library Local Print Collection [location] : Glenfield Library.

Available at [Intensive care medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Intensive care medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [Intensive care medicine](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7095332) - from Unpaywall

**Abstract:**PURPOSETo describe the technical challenges, efficacy, complications and maternal and infant outcomes associated with extracorporeal membrane oxygenation (ECMO) for severe adult respiratory distress syndrome (ARDS) in pregnant or postpartum patients during the 2009 H1N1 pandemic.METHODSTwelve critically ill pregnant and postpartum women were included in this retrospective observational study on the application of ECMO for the treatment of severe ARDS refractory to standard treatment. The study was conducted at seven tertiary hospitals in Australia and New Zealand.RESULTSOf the 12 patients treated with ECMO, 7 (58%) were pregnant and 5 (42%) were postpartum. Their median (interquartile range [IQR]) age was 29 (26-33) years, 6 (50%) were obese. Two patients were initially treated with veno-arterial (VA) ECMO. All others received veno-venous (VV) ECMO with one or two drainage cannulae. ECMO circuit-related complications were rare, circuit change was needed in only two cases and there was no sudden circuit failure. On the other hand, bleeding was common, leading to relatively large volumes of packed red blood cell transfusion (median [IQR] volume transfused was 3,499 [1,451-4,874] ml) and was the main cause of death (three cases). Eight (66%) patients survived to discharge and seven were ambulant, with normal oxygen saturations. The survival rate of infants whose mothers received ECMO was 71% and surviving infants were discharged home with no sequelae.CONCLUSIONSThe use of ECMO for severe ARDS in pregnant and postpartum women was associated with a 66% survival rate. The most common cause of death was bleeding. Infants delivered of mothers who had received ECMO had a 71% survival rate and, like their mothers, had no permanent sequelae at hospital discharge.

**Database:** Medline

**5. Extracorporeal life support during pregnancy.**

**Author(s):** Moore, Sarah A; Dietl, Charles A; Coleman, Denise M

**Source:** The Journal of thoracic and cardiovascular surgery; Apr 2016; vol. 151 (no. 4); p. 1154-1160

**Publication Date:** Apr 2016

**Publication Type(s):** Case Reports Journal Article Review

**PubMedID:** 26825433

Available at [The Journal of thoracic and cardiovascular surgery](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [The Journal of thoracic and cardiovascular surgery](http://www.jtcvs.org/article/S0022522315025210/pdf) - from Unpaywall

**Abstract:**OBJECTIVESTo review the literature on extracorporeal life support (ECLS) during pregnancy to determine its efficacy and safety for the mother and fetus.METHODSA comprehensive literature search was obtained from MEDLINE via PubMed.gov and from ScienceDirect.com using the following search queries: ECLS and pregnancy, extracorporeal membrane oxygenation (ECMO) and pregnancy, ECMO and H1N1 influenza, acute respiratory distress syndrome (ARDS) and pregnancy, pregnancy and H1N1 influenza, and Extracorporeal Life Support Organization registry.RESULTSOur literature search produced 332 articles for review. A total of 45 patients treated with ECLS or ECMO during pregnancy were reported in 26 publications. Postpartum patients were not included. Indications for ECLS were severe H1N1 influenza with ARDS (n = 33), other ARDS (n = 8), cardiogenic shock (n = 3), and cardiac arrest (n = 1). The mean gestational age was 26.5 weeks (range, 12-38 weeks), and the median duration of ECLS was 12.2 days (range, 1-57 days). The survival rate was 77.8% (35 of 45) for mothers and 65.1% (28 of 43) for fetuses. In addition, we report a 25-year-old pregnant patient with hantavirus cardiopulmonary syndrome unresponsive to pressors and inotropes. The patient was placed on venoarterial ECMO for 72 hours, recovered without complications, and delivered a healthy infant. The mother and son remain asymptomatic 6 years later.CONCLUSIONSECLS during pregnancy is effective and relatively safe for the mother and fetus. The first successful use of ECLS in a pregnant patient with life-threatening hantavirus cardiopulmonary syndrome is being reported together with this review.

**Database:** Medline

**6. Extracorporeal membrane oxygenation for critically ill patients with influenza A (H1N1) 2009: a case series.**

**Author(s):** Power, Clodagh A M; Van Heerden, P Vernon; Moxon, David; Martindale, Graham; Roberts, Brigit

**Source:** Critical care and resuscitation : journal of the Australasian Academy of Critical Care Medicine; Mar 2011; vol. 13 (no. 1); p. 38-43

**Publication Date:** Mar 2011

**Publication Type(s):** Comparative Study Journal Article

**PubMedID:** 21355828

Available at [Critical care and resuscitation : journal of the Australasian Academy of Critical Care Medicine](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=21355828) - from EBSCO (MEDLINE Complete)

Available at [Critical care and resuscitation : journal of the Australasian Academy of Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**In this case series, we report on five patients with influenza A (H1N1) who received extracorporeal membrane oxygenation (ECMO) treatment between July and December 2009 in the intensive care unit of Sir Charles Gairdner Hospital in Perth, Western Australia. In considering these cases, we highlight the indications, risks and potential benefits associated with ECMO, whose role remains, as yet, largely undefined in the setting of H1N1 critical illness.

**Database:** Medline

**7. Extracorporeal Membrane Oxygenation for 2009 Influenza A(H1N1) Acute Respiratory Distress Syndrome.**

**Author(s):** Australia and New Zealand Extracorporeal Membrane Oxygenation (ANZ ECMO) Influenza Investigators; Davies, Andrew; Jones, Daryl; Bailey, Michael; Beca, John; Bellomo, Rinaldo; Blackwell, Nikki; Forrest, Paul; Gattas, David; Granger, Emily; Herkes, Robert; Jackson, Andrew; McGuinness, Shay; Nair, Priya; Pellegrino, Vincent; Pettilä, Ville; Plunkett, Brian; Pye, Roger; Torzillo, Paul; Webb, Steve; Wilson, Michael; Ziegenfuss, Marc

**Source:** JAMA; Nov 2009; vol. 302 (no. 17); p. 1888-1895

**Publication Date:** Nov 2009

**Publication Type(s):** Journal Article

**PubMedID:** 19822628

Available at [JAMA](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Fjama.jamanetwork.com%2Farticle.aspx%3Fvolume%3D302%26issue%3D17%26page%3D1888) - from American Medical Association Athens - NHS

Available at [JAMA](https://jamanetwork.com/journals/jama/fullarticle/10.1001/jama.2009.1535) - from JAMA and Archives Journals

Available at [JAMA](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=19822628) - from EBSCO (MEDLINE Complete)

Available at [JAMA](http://www.uhl-library.nhs.uk/directpages/gh.html) - from Glenfield Hospital Library Local Print Collection [location] : Glenfield Library.

Available at [JAMA](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [JAMA](https://jamanetwork.com/journals/jama/articlepdf/184800/jce90005_1888_1895.pdf) - from Unpaywall

**Abstract:**CONTEXTThe novel influenza A(H1N1) pandemic affected Australia and New Zealand during the 2009 southern hemisphere winter. It caused an epidemic of critical illness and some patients developed severe acute respiratory distress syndrome (ARDS) and were treated with extracorporeal membrane oxygenation (ECMO).OBJECTIVESTo describe the characteristics of all patients with 2009 influenza A(H1N1)-associated ARDS treated with ECMO and to report incidence, resource utilization, and patient outcomes.DESIGN, SETTING, AND PATIENTSAn observational study of all patients (n = 68) with 2009 influenza A(H1N1)-associated ARDS treated with ECMO in 15 intensive care units (ICUs) in Australia and New Zealand between June 1 and August 31, 2009.MAIN OUTCOME MEASURESIncidence, clinical features, degree of pulmonary dysfunction, technical characteristics, duration of ECMO, complications, and survival.RESULTSSixty-eight patients with severe influenza-associated ARDS were treated with ECMO, of whom 61 had either confirmed 2009 influenza A(H1N1) (n = 53) or influenza A not subtyped (n = 8), representing an incidence rate of 2.6 ECMO cases per million population. An additional 133 patients with influenza A received mechanical ventilation but no ECMO in the same ICUs. The 68 patients who received ECMO had a median (interquartile range [IQR]) age of 34.4 (26.6-43.1) years and 34 patients (50%) were men. Before ECMO, patients had severe respiratory failure despite advanced mechanical ventilatory support with a median (IQR) Pao(2)/fraction of inspired oxygen (Fio(2)) ratio of 56 (48-63), positive end-expiratory pressure of 18 (15-20) cm H(2)O, and an acute lung injury score of 3.8 (3.5-4.0). The median (IQR) duration of ECMO support was 10 (7-15) days. At the time of reporting, 48 of the 68 patients (71%; 95% confidence interval [CI], 60%-82%) had survived to ICU discharge, of whom 32 had survived to hospital discharge and 16 remained as hospital inpatients. Fourteen patients (21%; 95% CI, 11%-30%) had died and 6 remained in the ICU, 2 of whom were still receiving ECMO.CONCLUSIONSDuring June to August 2009 in Australia and New Zealand, the ICUs at regional referral centers provided mechanical ventilation for many patients with 2009 influenza A(H1N1)-associated respiratory failure, one-third of whom received ECMO. These ECMO-treated patients were often young adults with severe hypoxemia and had a 21% mortality rate at the end of the study period.

**Database:** Medline

**8. [Extracorporeal membrane oxygenation for severe acute respiratory distress syndrome caused by novel 2009 influenza A (H1N1) virus].**

**Author(s):** Zhan, Qing-yuan; Sun, Bing; Tong, Zhao-hui; Guo, Li-min; Xu, Lei; Zhu, Xi; Jia, Xiao-jun; Wang, Chen

**Source:** Zhonghua yi xue za zhi; Dec 2011; vol. 91 (no. 46); p. 3262-3266

**Publication Date:** Dec 2011

**Publication Type(s):** Research Support, U.s. Gov't, Non-p.h.s. English Abstract Journal Article

**PubMedID:** 22333146

Available at [Zhonghua yi xue za zhi](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**OBJECTIVETo summarize the clinical experiences and indications of extracorporeal membrane oxygenation (ECMO) for severe ARDS caused by novel 2009 influenza A (H1N1) virus.METHODSAll ECMO cases with severe ARDS associated with novel 2009 influenza A (H1N1) virus were analyzed in 5 intensive care units (ICUs) from 5 different hospitals in Beijing and Tianjin. A physician experienced in ECMO handling collected the relevant data, including general conditions pre and post-EMCO, efficacy and complication parameters, ventilator settings of mechanical ventilation and clinical outcomes. The statistical software of SPSS (version 11.5) was used for data analysis.RESULTS18 cases of novel H1N1 influenza with severe ARDS received ECMO. There were 9 males and 9 females (all pregnant). The mean age was (33 ± 11) years old. Eight were complicated with pulmonary barotraumas (6 of pneumothorax). Prior to ECMO, the patients underwent noninvasive and invasive positive pressure ventilation for 1 day and 60 hours respectively. Physiological parameters 2-6 hours prior to ECMO use were: (53 ± 14) mm Hg of PaO2/FiO2, (17 ± 5) cm H2O of positive end expiratory pressure (PEEP), 3.80 ± 0.29 of Murray lung injury score, (7.38 ± 0.10) of arterial pH, (3.3 ± 2.3) mmol/L of serum lactate, 16 ± 8 of APACHE II score. All patients treated venous-venous ECMO (VV-ECMO) for a mean duration of 8 days (range: 2 - 168). Settings of mechanical ventilation (prior to ECMO vs 2 hours post-ECMO) were: peak airway pressure (31 ± 7) vs (25 ± 6) cm H2O, respiratory rate (15 ± 4) vs (22 ± 6) breaths/min, FiO2 0.8 - 1.0 vs 0.35 - 0.50, PEEP (16 ± 5) vs (12 ± 4) cm H2O. Arterial blood gas (pH, PaO2 and PaCO2) post-ECMO of 2 hours and 24-hour significantly improved (P < 0.05). Seven patients died during ECMO, 11 patients were successfully weaned from ECMO. And 8 of them survived and were discharged. One patient stayed in ICU and 2 died in ICU.CONCLUSIONSAs an effective measure of respiratory supports, ECMO may provide pulmonary rest and improve gas exchanges in severe ARDS induced by novel H1N1 Influenza.

**Database:** Medline

**9. Extracorporeal membrane oxygenation for critically ill patients with 2009 influenza A (H1N1)-related acute respiratory distress syndrome: preliminary experience from a single center.**

**Author(s):** Hou, Xiaotong; Guo, Limin; Zhan, Qingyuan; Jia, Xiaojun; Mi, Yuhong; Li, Baoshun; Sun, Bin; Hao, Xing; Li, Hui

**Source:** Artificial organs; Sep 2012; vol. 36 (no. 9); p. 780-786

**Publication Date:** Sep 2012

**Publication Type(s):** Research Support, Non-u.s. Gov't Clinical Trial Journal Article

**PubMedID:** 22747918

Available at [Artificial organs](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fdoi.wiley.com%2F10.1111%2Fj.1525-1594.2012.01468.x) - from Wiley Online Library Medicine and Nursing Collection 2019 - NHS

Available at [Artificial organs](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=22747918) - from EBSCO (MEDLINE Complete)

Available at [Artificial organs](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**From early May 2009, the novel influenza A (H1N1) pandemic affected mainland China. Of those infected, a small proportion of patients developed acute respiratory distress syndrome (ARDS) so rapidly and severely that conventional ventilation treatment was ineffective. As an alternative treatment, the effect of extracorporeal membrane oxygenation (ECMO) was evaluated. From November 2009 to January 2010, all patients suffering from influenza A (H1N1)-associated ARDS referred to Beijing Anzhen Hospital for treatment with ECMO were enrolled. We describe the characteristics, treatment, and outcomes of these patients at 1- and 3-month follow-up. Nine patients (four females; mean age, 31.2 [21-59] years) from four centers were enrolled. All females had a history of recent pregnancy or had recently given birth. Before ECMO, patients had severe respiratory failure despite advanced mechanical ventilatory support with a mean partial pressure of arterial oxygen/fraction of inspired oxygen of 52.9 ± 5.1 (45.0-63.8) mm Hg, positive end-expiratory pressure of 17.2 ± 4.2 cmH(2) O, and a Murray Lung Score of 3.6 (3.25-3.75). All nine patients were treated with veno-venous ECMO via percutaneous access. The mean duration of ECMO support was 436.6 ± 652.1 h (67.0-2160.0). At the end of 1-year follow-up, five patients (55.7%) were weaned from ECMO. Five patients (55.7%) survived to hospital discharge. Four patients (44.4%) died while undergoing ECMO. The mean length of intensive care unit and hospital stay was 4-204 days (median, 32) and 4-234 days (median, 38), respectively. There was no significant difference between survivors and nonsurvivors in the screened parameters. Use of ECMO for critically ill patients with 2009 influenza A (H1N1)-related ARDS is feasible and effective. However, this treatment is technically demanding. For success, careful selection of patients is crucial.

**Database:** Medline

**10. A snapshot of the Covid-19 pandemic among pregnant women in France.**

**Author(s):** Kayem, Gilles; Lecarpentier, Edouard; Deruelle, Philippe; Bretelle, Florence; Azria, Elie; Blanc, Julie; Bohec, Caroline; Bornes, Marie; Ceccaldi, Pierre-François; Chalet, Yasmine; Chauleur, Céline; Cordier, Anne-Gael; Desbrière, Raoul; Doret, Muriel; Dreyfus, Michel; Driessen, Marine; Fermaut, Marion; Gallot, Denis; Garabédian, Charles; Huissoud, Cyril; Luton, Dominique; Morel, Olivier; Perrotin, Franck; Picone, Olivier; Rozenberg, Patrick; Sentilhes, Loïc; Sroussi, Jeremy; Vayssière, Christophe; Verspyck, Eric; Vivanti, Alexandre J; Winer, Norbert; Alessandrini, Vivien; Schmitz, Thomas

**Source:** Journal of gynecology obstetrics and human reproduction; Jun 2020 ; p. 101826

**Publication Date:** Jun 2020

**Publication Type(s):** Journal Article

**PubMedID:** 32505805

Available at [Journal of gynecology obstetrics and human reproduction](https://doi.org/10.1016/j.jogoh.2020.101826) - from Unpaywall

**Abstract:**OBJECTIVETo describe the course over time of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in French women from the beginning of the pandemic until mid-April, the risk profile of women with respiratory complications, and short-term pregnancy outcomes.METHODSWe collected a case series of pregnant women with COVID-19 in a research network of 33 French maternity units between March 1 and April 14, 2020. All cases of SARS-CoV-2 infection confirmed by a positive result on real-time reverse transcriptase polymerase chain reaction tests of a nasal sample and/or diagnosed by a computed tomography chest scan were included and analyzed. The primary outcome measures were COVID-19 requiring oxygen (oxygen therapy or noninvasive ventilation) and critical COVID-19 (requiring invasive mechanical ventilation or extracorporeal membrane oxygenation, ECMO). Demographic data, baseline comorbidities, and pregnancy outcomes were also collected.RESULTSActive cases of COVID-19 increased exponentially during March 1-31, 2020; the numbers fell during April 1-14, after lockdown was imposed on March 17. The shape of the curve of active critical COVID-19 mirrored that of all active cases. By April 14, among the 617 pregnant women with COVID-19, 93 women (15.1 %; 95 %CI 12.3-18.1) had required oxygen therapy and 35 others (5.7 %; 95 %CI 4.0-7.8) had had a critical form of COVID-19. The severity of the disease was associated with age older than 35 years and obesity, as well as preexisting diabetes, previous preeclampsia, and gestational hypertension or preeclampsia. One woman with critical COVID-19 died (0.2 %; 95 %CI 0-0.9). Among the women who gave birth, rates of preterm birth in women with non-severe, oxygen-requiring, and critical COVID-19 were 13/123 (10.6 %), 14/29 (48.3 %), and 23/29 (79.3 %) before 37 weeks and 3/123 (2.4 %), 4/29 (13.8 %), and 14/29 (48.3 %) before 32 weeks, respectively. One neonate (0.5 %; 95 %CI 0.01-2.9) in the critical group died from prematurity.CONCLUSIONCOVID-19 can be responsible for significant rates of severe acute, potentially deadly, respiratory distress syndromes. The most vulnerable pregnant women, those with comorbidities, may benefit particularly from prevention measures such as a lockdown.

**Database:** Medline

**11. Extracorporeal Membrane Oxygenation in Pregnancy.**

**Author(s):** Anselmi, Amedeo; Ruggieri, Vito G; Letheulle, Julien; Robert, Anne L; Tomasi, Jacques; Le Tulzo, Yves; Verhoye, Jean-Philippe; Flécher, Erwan

**Source:** Journal of cardiac surgery; Oct 2015; vol. 30 (no. 10); p. 781-786

**Publication Date:** Oct 2015

**Publication Type(s):** Meta-analysis Case Reports Journal Article Systematic Review

**PubMedID:** 26307595

Available at [Journal of cardiac surgery](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fdoi.wiley.com%2F10.1111%2Fjocs.12605) - from Wiley Online Library Medicine and Nursing Collection 2019 - NHS

Available at [Journal of cardiac surgery](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=26307595) - from EBSCO (MEDLINE Complete)

Available at [Journal of cardiac surgery](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Journal of cardiac surgery](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**AIMAdult respiratory distress syndrome (ARDS) may pose specific challenges in pregnant women, including the need for prone decubitus ventilation and extracorporeal membrane oxygenation (ECMO). We present our experience with ECMO during pregnancy and review the literature on this topic.METHODSWe performed a systematic literature review using the MEDLINE-NIH database. Papers describing single cases or clinical series of pregnant women treated with veno-venous ECMO for ARDS were retrieved; the clinical features and maternal and infant outcomes were presented in aggregate form.RESULTSWe describe the case of a 32-year-old primigravida who received ECMO starting at the 28th gestation week due to A/H1N1 influenza-related ARDS. This strategy allowed saving both mother and child; normal recovery without sequelae was evident at one year. The systematic review included 29 reported cases of ECMO employment during pregnancy; A/H1N1 influenza was the etiology of ARDS in 79% of cases. Maternal and infant mortality may reach 28%, while the rate of complications during ECMO support reaches 57%.CONCLUSIONSECMO is a viable treatment for severe ARDS during pregnancy, after failure of other therapeutic strategies; the risk of spontaneous gynecological bleeding is limited. Issues remain about the timing of ECMO implantation and the management of gestation. Close fetal assessment and multidisciplinary discussion are pivotal for decision-making.

**Database:** Medline

**12. [Spontaneous preterm birth in mother in an artificial sleep on ECMO with severe form of H1N1 infection].**

**Author(s):** Skrenková, J; Horáková, V; Horák, P; Koucký, M; Dokoupilová, M; Kubátová, J

**Source:** Ceska gynekologie; Jun 2011; vol. 76 (no. 3); p. 204-208

**Publication Date:** Jun 2011

**Publication Type(s):** Case Reports English Abstract Journal Article

**PubMedID:** 21838151

Available at [Ceska gynekologie](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=21838151) - from EBSCO (MEDLINE Complete)

Available at [Ceska gynekologie](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**OBJECTIVEThe authors demonstrate a premature birth of a pregnant woman, who was for heavy Respiratory Distress Syndrome (ARDS), on the basis of pulmonary infection H1N1, connected to venovenous extracorporeal membrane oxygenation (ECMO). Patient spontaneously delivered after being connected to the ECMO for 30 hours.SETTINGDepartment of Obstetrics and Gynaecology, First Faculty of Medicine, Charles University in Prague and General University Hospital in Prague, Department of Anesthesiology and Intensive Care, First Faculty of Medicine, Charles University in Prague and General University Hospital in Prague.DESIGNCase report.CONCLUSIONPreterm birth at 24 week of pregnancy. During pregnancy, the labor and postpartum was the pregnant woman connected to extracorporeal membrane oxygen therapy.

**Database:** Medline

**13. Clinical Findings and Disease Severity in Hospitalized Pregnant Women With Coronavirus Disease 2019 (COVID-19).**

**Author(s):** Savasi, Valeria M; Parisi, Francesca; Patanè, Luisa; Ferrazzi, Enrico; Frigerio, Luigi; Pellegrino, Antonio; Spinillo, Arsenio; Tateo, Saverio; Ottoboni, Mariacristina; Veronese, Paola; Petraglia, Felice; Vergani, Patrizia; Facchinetti, Fabio; Spazzini, Donata; Cetin, Irene

**Source:** Obstetrics and gynecology; Aug 2020; vol. 136 (no. 2); p. 252-258

**Publication Date:** Aug 2020

**Publication Type(s):** Journal Article

**PubMedID:** 32433453

Available at [Obstetrics and gynecology](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0029-7844.is%2Band%2B%22136%22.vo%2Band%2B%222%22.ip%2Band%2B%22252%22.pg%2Bor%2B%2210.1097%2FAOG.0000000000003979%22.di) - from Ovid (LWW High Impact Collection) - 2020

Available at [Obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [Obstetrics and gynecology](https://journals.lww.com/greenjournal/Abstract/9000/Clinical_Findings_and_Disease_Severity_in.97347.aspx) - from Unpaywall

**Abstract:**OBJECTIVETo investigate the clinical evolution of coronavirus disease 2019 (COVID-19) in hospitalized pregnant women and potential factors associated with severe maternal outcomes.METHODSWe designed a prospective multicenter cohort study of pregnant women with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection who were admitted to 12 Italian maternity hospitals between February 23 and March 28, 2020. Clinical records, laboratory and radiologic examinations, and pregnancy outcomes were collected. A subgroup of patients with severe disease was identified based on intensive care unit (ICU) admission, delivery for respiratory compromise, or both.RESULTSSeventy-seven patients were included, 14 of whom had severe disease (18%). Two thirds of the patients in the cohort were admitted during the third trimester, and 84% were symptomatic on admission. Eleven patients underwent urgent delivery for respiratory compromise (16%), and six were admitted to the ICU (8%). One woman received extracorporeal membrane oxygenation; no deaths occurred. Preterm delivery occurred in 12% of patients, and nine newborns were admitted to the neonatal intensive care unit. Patients in the severe subgroup had significantly higher pregestational body mass indexes (BMIs) and heart and respiratory rates and a greater frequency of fever or dyspnea on admission compared with women with a nonsevere disease evolution.CONCLUSIONIn our cohort, one in five women hospitalized with COVID-19 infection delivered urgently for respiratory compromise or were admitted to the ICU. None, however, died. Increased pregestational BMI and abnormal heart and respiratory rates on admission were associated with severe disease.

**Database:** Medline

**14. The successful use of extra-corporeal membrane oxygenation in the management of a pregnant woman with severe H1N1 2009 influenza complicated by pneumonitis and adult respiratory distress syndrome.**

**Author(s):** Robertson, L C; Allen, S H; Konamme, S P; Chestnut, J; Wilson, P

**Source:** International journal of obstetric anesthesia; Oct 2010; vol. 19 (no. 4); p. 443-447

**Publication Date:** Oct 2010

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 20705450

Available at [International journal of obstetric anesthesia](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [International journal of obstetric anesthesia](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [International journal of obstetric anesthesia](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7127547) - from Unpaywall

**Abstract:**We report a case of H1N1 2009 influenza A, in a previously fit woman at 24 weeks of gestation, who presented atypically with abdominal pain. The infection was complicated by severe respiratory failure and acute respiratory distress syndrome, requiring ventilatory support, including extra-corporeal membrane oxygenation (ECMO). This was one of the first cases of severe H1N1 disease presenting in the UK. Use of extra-corporeal membrane oxygenation for the complications of H1N1 resulted in full maternal recovery and subsequent delivery of a healthy infant.

**Database:** Medline

**15. Critical illness due to 2009 A/H1N1 influenza in pregnant and postpartum women: population based cohort study.**

**Author(s):** ANZIC Influenza Investigators and Australasian Maternity Outcomes Surveillance System

**Source:** BMJ (Clinical research ed.); Mar 2010; vol. 340 ; p. c1279

**Publication Date:** Mar 2010

**Publication Type(s):** Research Support, Non-u.s. Gov't Multicenter Study Journal Article

**PubMedID:** 20299694

Available at [BMJ (Clinical research ed.)](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Fwww.bmj.com%2Flookup%2Fdoi%2F10.1136%2Fbmj.c1279) - from BMJ Journals - NHS

Available at [BMJ (Clinical research ed.)](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0959-8138&volume=340&issue=mar18%203&spage=c1279) - from ProQuest (Health Research Premium) - NHS Version

Available at [BMJ (Clinical research ed.)](https://www.bmj.com/content/340/bmj.c1279.full.pdf) - from Unpaywall

**Abstract:**OBJECTIVETo describe the epidemiology of 2009 A/H1N1 influenza in critically ill pregnant women.DESIGNPopulation based cohort study.SETTINGAll intensive care units in Australia and New Zealand.PARTICIPANTSAll women with 2009 H1N1 influenza who were pregnant or recently post partum and admitted to an intensive care unit in Australia or New Zealand between 1 June and 31 August 2009.MAIN OUTCOME MEASURESMaternal and neonatal mortality and morbidity.RESULTS64 pregnant or postpartum women admitted to an intensive care unit had confirmed 2009 H1N1 influenza. Compared with non-pregnant women of childbearing age, pregnant or postpartum women with 2009 H1N1 influenza were at increased risk of admission to an intensive care unit (relative risk 7.4, 95% confidence interval 5.5 to 10.0). This risk was 13-fold greater (13.2, 9.6 to 18.3) for women at 20 or more weeks' gestation. At the time of admission to an intensive care unit, 22 women (34%) were post partum and two had miscarried. 14 women (22%) gave birth during their stay in intensive care and 26 (41%) were discharged from an intensive care unit with ongoing pregnancy. All subsequently delivered. 44 women (69%) were mechanically ventilated. Of these, nine (14%) were treated with extracorporeal membrane oxygenation. Seven women (11%) died. Of 60 births after 20 weeks' gestation, four were stillbirths and three were infant deaths. 22 (39%) of the liveborn babies were preterm and 32 (57%) were admitted to a neonatal intensive care unit. Of 20 babies tested, two were positive for the 2009 H1N1 virus.CONCLUSIONSPregnancy is a risk factor for critical illness related to 2009 H1N1 influenza, which causes maternal and neonatal morbidity and mortality.

**Database:** Medline

**16. Adult respiratory distress syndrome caused by 2009 H1N1 influenza during pregnancy: success of ECMO for both the mother and the child.**

**Author(s):** Courouble, Patricia; Geukens, Paul; Laarbaui, Fatima; Beauloye, Christophe; Van Caenegem, Olivier; Jacquet, Luc-Marie

**Source:** The journal of extra-corporeal technology; Jun 2011; vol. 43 (no. 2); p. 75-78

**Publication Date:** Jun 2011

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 21848176

Available at [The journal of extra-corporeal technology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [The journal of extra-corporeal technology](https://www.ncbi.nlm.nih.gov/pubmed/21848176) - from PubMed

Available at [The journal of extra-corporeal technology](http://www.amsect.org/members/ecu/library/ject/2011_volume43/issue2/Courouble.pdf) - from amsect.org

Available at [The journal of extra-corporeal technology](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4680027/) - from PubMed Central

**Abstract:**Extracorporeal membrane oxygenation (ECMO) is a technique that provides support to selected patients with severe respiratory failure. During the 2009 H1N1 influenza infection outbreak, ECMO was used with a good impact on survival for pregnant women, who are at higher risk of H1N1 influenza infection. However, there is little information about the survival of fetus post-ECMO therapy in the literature. We present a case report of a pregnant patient with severe adult respiratory distress syndrome secondary to 2009 H1N1 influenza treated with ECMO. The outcome was good both for the mother and her fetus. At 1-year follow-up, her child had no neurological or clinical abnormalities. We conclude that ECMO can be used safely during pregnancy with a good neurological and clinical outcome for the fetus.

**Database:** Medline

**17. [Eighteen cases of 2009 influenza A H1N1 associated with respiratory failure in adults].**

**Author(s):** Sun, Jia-jun; Li, Chen; Wu, Da-wei; Li, Chen-hua; Qin, Wei-hua; Li, Ya-lin; Liu, Qing-yue; Li, Jin-xiu; Zou, Yu-gang; Huang, Dong-qinga; Xie, Jian-jun; Li, En-jie

**Source:** Zhongguo wei zhong bing ji jiu yi xue = Chinese critical care medicine = Zhongguo weizhongbing jijiuyixue; Mar 2010; vol. 22 (no. 3); p. 156-160

**Publication Date:** Mar 2010

**Publication Type(s):** English Abstract Journal Article

**PubMedID:** 20367906

Available at [Zhongguo wei zhong bing ji jiu yi xue = Chinese critical care medicine = Zhongguo weizhongbing jijiuyixue](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**OBJECTIVETo investigate the clinical feature, treatment and outcome of respiratory failure in patients with 2009 influenza A H1N1 infection in critically ill adults.METHODSA prospective observational study of 18 patients with respiratory failure suffering from 2009 influenza A H1N1 infection admitted between November 22, 2009 and January 16, 2010. Their clinical data were analyzed.RESULTSRespiratory failure occurred in 18 patients with confirmed (n=9) or probable (n=9) 2009 influenza A H1N1. Among the 18 patients 8 patients were male, 10 patients were female (7 were pregnant or postpartum). Eight patients had pre-existing medical conditions. Twelve patients were between 20 and 40 years of age, the mean age was 37.1 years. Three were obese with body mass index over 30 kg/m (2). The 28-day mortality was 33.3% (6/18) with 1 additional late death. The median duration from the onset of the illness to hospital admission was 4.1 days (1-5 days) and from the onset to first dose of oseltamivir was 5.5 days (2-12 days), from onset to mechanical ventilation initiation was 6.8 days (4-12 days). Seventeen patients had primary viral pneumonia and 1 patient had an asthma exacerbation and 3 patients experienced multiple organ dysfunction syndrome (MODS). Twelve patients received corticosteroids, 10 patients required vasopressors. All patients were mechanically ventilated, 1 patient underwent extracorporeal membrane oxygenation (ECMO). Patients who died had higher acute physiology and chronic health evaluation II score compared to survivors (29.2 + or - 7.3 vs. 18.6 + or - 6.4, P=0.02). All deceased patients received high-level ventilation settings [peak inspiratory pressure > or = 35 cm H(2)O (1 cm H(2)O=0.098 kPa) and positive end-expiratory pressure > or = 18 cm H(2)O] within the first 7 days of ventilation, and the hypoxemia [oxygenation index < or = 60 mm Hg (1 mm Hg=0.133 kPa)] lasted 24 hours. In contrast only 1 among survivors did (9.1% vs. 100.0%, P<0.01). Compared with survivors, acute kidney injury and barotrauma occurred more frequently in non-survivors (42.9% vs. 27.3%, 28.6% vs. 9.1%, both P<0.05). Whereas all deceased patients received vasopressors, only 4 survivors required vasopressor support (100.0% vs. 36.4%, P<0.05).CONCLUSIONSevere acute respiratory distress syndrome is the most common manifestation in critically ill patients with 2009 influenza A H1N1 infection in adult. Failure to obtain satisfactory oxygenation with high-level ventilation settings within the first 7-days, onset of acute kidney injury and barotrauma, and continuous need for vasopressors portend a poor prognosis.

**Database:** Medline

**18. Severe H1N1-infection during pregnancy.**

**Author(s):** Bowkalow, Sandy; Brauer, Martin; Gross, Walter; Schleussner, Ekkehard

**Source:** Archives of gynecology and obstetrics; Nov 2011; vol. 284 (no. 5); p. 1133-1135

**Publication Date:** Nov 2011

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 21748316

Available at [Archives of gynecology and obstetrics](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=21748316) - from EBSCO (MEDLINE Complete)

Available at [Archives of gynecology and obstetrics](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0932-0067&volume=284&issue=5&spage=1133) - from ProQuest (Health Research Premium) - NHS Version

Available at [Archives of gynecology and obstetrics](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Archives of gynecology and obstetrics](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7101762) - from Unpaywall

**Abstract:**H1N1 is known to induce fulminant courses in youths and young adults. We report the case of a 24-year gravida 4 para 2 with singleton pregnancy admitted to obstetrical unit for fever up to 38°C during the 20th week of a so far uncomplicated pregnancy. Ultrasound examination and urine test was inconspicuous. Throat complaints were initially relieved during antibiotic therapy, but the patient developed dyspnea with progressing signs of cyanosis. Intubation was necessary on the fifth day because of decreasing oxygen saturation. Coincidentally, progressive pancytopenia and increased inflammatory activity was recorded. Echocardiography, blood cultures, and bronchial lavage brought no pathological findings, but CT revealed acute respiratory distress syndrome and hepatomegaly. Recent human immunodeficiency virus, cytomegalic virus, herpes simplex virus, classical influenza and parainfluenza infections were excluded. An H1N1-infection was confirmed by PCR on the sixth day. The antiviral therapy was changed from zanamivir to oseltamivir. Extracorporeal membrane oxygenation was necessary due to insufficient oxygen saturation by mechanical ventilation. Until this time, pregnancy seemed to be unimpaired, but a sudden spontaneous expulsion of the fetus occurred on the seventh day (weight 460 g, no anomalies detectable). Curettage post abortem was not necessary. As a result of the antiviral therapy, H1N1-DNA was not detectable at day 16. Despite all endeavors, the respiratory situation could not be improved significantly; the patient additionally developed multiorgan failure during the time course and died on the 28th day of treatment. The recent case illustrates a very dangerous and imposing course of an H1N1-infection during pregnancy.

**Database:** Medline

**19. Ventilatory and ECMO treatment of H1N1-induced severe respiratory failure: results of an Italian referral ECMO center.**

**Author(s):** Cianchi, Giovanni; Bonizzoli, Manuela; Pasquini, Andrea; Bonacchi, Massimo; Zagli, Giovanni; Ciapetti, Marco; Sani, Guido; Batacchi, Stefano; Biondi, Simona; Bernardo, Pasquale; Lazzeri, Chiara; Giovannini, Valtere; Azzi, Alberta; Abbate, Rosanna; Gensini, Gianfranco; Peris, Adriano

**Source:** BMC pulmonary medicine; Jan 2011; vol. 11 ; p. 2

**Publication Date:** Jan 2011

**Publication Type(s):** Journal Article

**PubMedID:** 21223541

Available at [BMC pulmonary medicine](http://bmcpulmmed.biomedcentral.com/articles/10.1186/1471-2466-11-2) - from BioMed Central

Available at [BMC pulmonary medicine](http://europepmc.org/search?query=(DOI:10.1186/1471-2466-11-2)) - from Europe PubMed Central - Open Access

Available at [BMC pulmonary medicine](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=21223541) - from EBSCO (MEDLINE Complete)

Available at [BMC pulmonary medicine](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1471-2466&volume=11&issue=1&spage=2) - from ProQuest (Health Research Premium) - NHS Version

Available at [BMC pulmonary medicine](https://bmcpulmmed.biomedcentral.com/track/pdf/10.1186/1471-2466-11-2) - from Unpaywall

**Abstract:**BACKGROUNDSince the first outbreak of a respiratory illness caused by H1N1 virus in Mexico, several reports have described the need of intensive care or extracorporeal membrane oxygenation (ECMO) assistance in young and often healthy patients. Here we describe our experience in H1N1-induced ARDS using both ventilation strategy and ECMO assistance.METHODSFollowing Italian Ministry of Health instructions, an Emergency Service was established at the Careggi Teaching Hospital (Florence, Italy) for the novel pandemic influenza. From Sept 09 to Jan 10, all patients admitted to our Intensive Care Unit (ICU) of the Emergency Department with ARDS due to H1N1 infection were studied. All ECMO treatments were veno-venous. H1N1 infection was confirmed by PCR assayed on pharyngeal swab, subglottic aspiration and bronchoalveolar lavage. Lung pathology was evaluated daily by lung ultrasound (LUS) examination.RESULTSA total of 12 patients were studied: 7 underwent ECMO treatment, and 5 responded to protective mechanical ventilation. Two patients had co-infection by Legionella Pneumophila. One woman was pregnant. In our series, PCR from bronchoalveolar lavage had a 100% sensitivity compared to 75% from pharyngeal swab samples. The routine use of LUS limited the number of chest X-ray examinations and decreased transportation to radiology for CT-scan, increasing patient safety and avoiding the transitory disconnection from ventilator. No major complications occurred during ECMO treatments. In three cases, bleeding from vascular access sites due to heparin infusion required blood transfusions. Overall mortality rate was 8.3%.CONCLUSIONSIn our experience, early ECMO assistance resulted safe and feasible, considering the life threatening condition, in H1N1-induced ARDS. Lung ultrasound is an effective mean for daily assessment of ARDS patients.

**Database:** Medline

**20. A PREGNANT WOMAN WITH AVIAN INFLUENZA A (H7N9) VIRUS PNEUMONIA AND ARDS MANAGED WITH EXTRACORPOREAL MEMBRANE OXYGENATION.**

**Author(s):** Wang, Guyi; Zhou, Yanyan; Gong, Subo; Dong, Haiyun; Wu, Guobao; Xiang, Xudong; Tang, Jianjun

**Source:** The Southeast Asian journal of tropical medicine and public health; May 2015; vol. 46 (no. 3); p. 444-448

**Publication Date:** May 2015

**Publication Type(s):** Research Support, Non-u.s. Gov't Case Reports Journal Article

**PubMedID:** 26521517

Available at [The Southeast Asian journal of tropical medicine and public health](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=26521517) - from EBSCO (MEDLINE Complete)

Available at [The Southeast Asian journal of tropical medicine and public health](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0038-3619&volume=46&issue=3&spage=444) - from ProQuest (Health Research Premium) - NHS Version

Available at [The Southeast Asian journal of tropical medicine and public health](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**We report a case of H7N9 avian influenza pneumonia in a pregnant woman who developed acute respiratory distress syndrome (ARDS) managed with extracorporeal membrane oxygenation (ECMO). A 29-year-old, 27 week pregnant woman developed rapidly progressive pneumonia with bilateral infiltrates on chest x-ray and was confirmed to have influenza A (H7N9) infection. Her condition deteriorated and she developed ARDS which was managed with veno-venous extracorporeal membrane oxygenation (V-V ECMO) and treated with antimicrobials. Her clinical symptoms and oxygenation gradually improved and the ECMO was discontinued on the 19t day. Unfortunately, she suddenly died a few days later, due to a presumed pulmonary embolism. Based on our experience, ECMO may be useful to manage pneumonia due to H7N9 avian influenza and ARDS in pregnant women.

**Database:** Medline

**21. Perinatal and maternal outcomes in critically ill obstetrics patients with pandemic H1N1 Influenza A.**

**Author(s):** Oluyomi-Obi, Titilayo; Avery, Lisa; Schneider, Carol; Kumar, Anand; Lapinsky, Stephen; Menticoglou, Savas; Zarychanski, Ryan

**Source:** Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC; May 2010; vol. 32 (no. 5); p. 443-447

**Publication Date:** May 2010

**Publication Type(s):** Journal Article

**PubMedID:** 20500952

Available at [Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**BACKGROUNDDuring the influenza pandemic of spring 2009, Manitoba had a disproportionate number of pregnant women who became critically ill. Information about these cases will be useful to help us understand the potential impact of future outbreaks and review critical illness in pregnancy.METHODSWe describe the clinical details of six critically ill pregnant women with pandemic H1N1 2009 influenza virus admitted to two ICUs in Manitoba between March 1 and August 31, 2009.RESULTSThirty adult pregnant women tested positive for pandemic H1N1 2009 virus in Manitoba. Six women were admitted to the ICU. The time from onset of symptoms to life-threatening deterioration was on average five days. Most patients presented with worsening fever and cough and had H1N1-positive contacts. Five of six patients (83%) were Aboriginal. Four of six cases occurred in the third trimester. These patients frequently required non-conventional ventilatory support such as high frequency ventilation or extracorporeal membrane oxygenation (ECMO). All patients received oseltamivir. Two patients died while in the ICU. Three of six patients had adverse perinatal outcomes, and there was one spontaneous abortion and one early preterm delivery.CONCLUSIONPandemic H1N1 2009 influenza virus has the potential to cause severe illness in pregnant patients. Those patients requiring ICU admission for respiratory support have a high risk for poor fetal and neonatal outcome. The experience of this cohort underscores the appropriateness of public health measures directed at prevention and early treatment of H1N1 infection in pregnancy.

**Database:** Medline

**22. Severe influenza A(H1N1)2009 infection: a single centre experience and review of the literature.**

**Author(s):** van Ierssel, S H; Leven, M; Jorens, P G

**Source:** Acta clinica Belgica; 2012; vol. 67 (no. 1); p. 1-6

**Publication Date:** 2012

**Publication Type(s):** Journal Article Review

**PubMedID:** 22480031

Available at [Acta clinica Belgica](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=2295-3337&volume=67&issue=1&spage=1) - from ProQuest (Health Research Premium) - NHS Version

**Abstract:**The first influenza pandemic of the 21st century started in April 2009 with an outbreak of swine origin influenza A(H1NI)2009 in Mexico and the United States. While generally a mild disease affecting mostly school-aged children and young adults, most attention went to severe cases of pneumonia in young previously healthy individuals or individuals belonging to a risk group. In this article we review the literature on the presentation and management of severe cases of influenza A(H1N1)2009 in the intensive care unit (ICU), and describe our own experience in a tertiary referral centre with ECMO facilities. Pregnant women and (bone marrow) transplant patients are two known risk groups for severe influenza described more thoroughly in this paper.These severely ill patients are characterized by respiratory failure, resulting often in the need of mechanical ventilation. As Oseltamivir resistance remains low up till now, early antiviral therapy with Oseltamivir is warranted in these cases. Despite pharmacological and ventilator management, refractory hypoxaemia is described frequently in these patients, with need for rescue therapies like nitric oxide inhalation, high frequency ventilation, and extracorporeal membrane oxygenation. The value of the use of corticosteroids is under discussion. Despite advances in management strategies, mortality and morbidity in these severe cases remains high. In the first influenza season after the pandemic, winter 2010/2011, influenza A(H1N1)2009 is the major influenza A strain in Europe, resulting in reports with increased mortality and morbidity compared to pre-pandemic seasonal influenza. "Continuing vigilance for severe influenza in patients not belonging to the classical influenza risk group might still be warranted for the upcoming influenza season".

**Database:** Medline

**23. Pandemic (H1N1) 2009 influenza, pregnancy and extracorporeal membrane oxygenation.**

**Author(s):** Welch, Susan A; Snowden, Leone N; Buscher, Hergen

**Source:** The Medical journal of Australia; Jun 2010; vol. 192 (no. 11); p. 668

**Publication Date:** Jun 2010

**Publication Type(s):** Letter Case Reports

**PubMedID:** 20528724

Available at [The Medical journal of Australia](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [The Medical journal of Australia](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Database:** Medline

**24. Clinical pathological characteristics and management of acute respiratory distress syndrome resulting from influenza A (H1N1) virus.**

**Author(s):** Homsi, Samer; Milojkovic, Natasa; Homsi, Yamen

**Source:** Southern medical journal; Aug 2010; vol. 103 (no. 8); p. 786

**Publication Date:** Aug 2010

**Publication Type(s):** Case Reports Journal Article Review

**PubMedID:** 20622733

Available at [Southern medical journal](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Young adults, especially pregnant woman and patients with pre-existing medical conditions, appear to be at risk for the development of severe acute respiratory distress syndrome (ARDS) from influenza A (H1N1) infection, leading to critical hypoxemia. This may require high ventilator settings, the use of nonconventional modes, and extracorporeal membrane oxygenation in some cases. This severe ARDS may be related to prolonged and virulent viral infection, inducing ongoing aberrant immune responses and leading to extensive lung damage. Duration of antiviral therapy, the timing of steroid introduction, and moving away from standard ventilation techniques in ARDS may be key points in disease management.

**Database:** Medline

**25. Delivery during extracorporeal membrane oxygenation (ECMO) support of pregnant woman with severe respiratory distress syndrome caused by influenza: a case report and review of the literature.**

**Author(s):** Liu, Chunli; Sun, Wenqing; Wang, Chunting; Liu, Fenglin; Zhou, Mingxiang

**Source:** The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians; Aug 2019; vol. 32 (no. 15); p. 2570-2574

**Publication Date:** Aug 2019

**Publication Type(s):** Case Reports Journal Article Review

**PubMedID:** 29471707

Available at [The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**OBJECTIVETo report a case of labour induction during extracorporeal membrane oxygenation (ECMO) support in a patient with acute respiratory distress syndrome (ARDS) caused by influenza and review of the literature.METHODSCase report and the literature search of all English articles on delivery while on ECMO in patients with ARDS caused by influenza.RESULTSA 25-year-old pregnant woman was initiated with ECMO due to severe ARDS caused by influenza A (H1N1) virus. When the patient had symptoms of colporrhagia and uterine contractions, the medical team decided to start labour induction while on ECMO. There were in total five case reports identified. Maternal oxygenation was improved after delivery and ECMO was successfully discontinued.CONCLUSIONSMaternal oxygenation was improved after delivery, which may be beneficial to reduce the duration of ECMO. Caesarean section (CS) may be the most used mode and labour induction could be another option. The procedure should be performed by an experienced ECMO team, cooperating with the obstetrician, anaesthesiologist, and ICU doctors.

**Database:** Medline

**26. [Extracorporeal membrane oxygenation for refractory hypoxia secondary to a severe viral pneumonia due to influenza A (H1N1) in a pregnant woman: continuation or termination of pregnancy?].**

**Author(s):** Abbal, B; Perbet, S; Jabaudon, M; Legault, B; Gallot, D; Constantin, J-M

**Source:** Annales francaises d'anesthesie et de reanimation; Jan 2014; vol. 33 (no. 1); p. 55-57

**Publication Date:** Jan 2014

**Publication Type(s):** Letter Case Reports

**PubMedID:** 24440734

Available at [Annales francaises d'anesthesie et de reanimation](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Database:** Medline

**27. Pregnancy-related H1N1 influenza and severe acute respiratory distress syndrome successfully treated with extracorporeal membrane oxygenation despite difficult vascular access.**

**Author(s):** Seczyńska, Bożena; Jankowski, Miłosz; Nowak, Ilona; Szczeklik, Wojciech; Szułdrzyński, Konstanty; Królikowski, Wiesław

**Source:** Polskie Archiwum Medycyny Wewnetrznej; 2014; vol. 124 (no. 3); p. 136-137

**Publication Date:** 2014

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 24643021

Available at [Polskie Archiwum Medycyny Wewnetrznej](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=24643021) - from EBSCO (MEDLINE Complete)

Available at [Polskie Archiwum Medycyny Wewnetrznej](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Polskie Archiwum Medycyny Wewnetrznej](http://pamw.pl/sites/default/files/6_Krolikowski_clinical%20image.pdf) - from Unpaywall

**Database:** Medline

**28. Coronavirus in pregnancy and delivery: rapid review.**

**Author(s):** Mullins, E; Evans, D; Viner, R M; O'Brien, P; Morris, E

**Source:** Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology; May 2020; vol. 55 (no. 5); p. 586-592

**Publication Date:** May 2020

**Publication Type(s):** Journal Article Review

**PubMedID:** 32180292

Available at [Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology](https://onlinelibrary.wiley.com/doi/abs/10.1002/uog.22014) - from Wiley Online Library

Available at [Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology](https://obgyn.onlinelibrary.wiley.com/doi/pdfdirect/10.1002/uog.22014) - from Unpaywall

**Abstract:**OBJECTIVESThere are limited case series reporting the impact on women affected by coronavirus during pregnancy. In women affected by severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), the case fatality rate appears higher in those affected in pregnancy compared with non-pregnant women. We conducted a rapid review to guide health policy and management of women affected by COVID-19 during pregnancy, which was used to develop the Royal College of Obstetricians and Gynaecologists' (RCOG) guidelines on COVID-19 infection in pregnancy.METHODSSearches were conducted in PubMed and MedRxiv to identify primary case reports, case series, observational studies and randomized controlled trials describing women affected by coronavirus in pregnancy. Data were extracted from relevant papers. This review has been used to develop guidelines with representatives of the Royal College of Paediatrics and Child Health (RCPCH) and RCOG who provided expert consensus on areas in which data were lacking.RESULTSFrom 9965 search results in PubMed and 600 in MedRxiv, 21 relevant studies, all of which were case reports or case series, were identified. From reports of 32 women to date affected by COVID-19 in pregnancy, delivering 30 babies (one set of twins, three ongoing pregnancies), seven (22%) were asymptomatic and two (6%) were admitted to the intensive care unit (ICU), one of whom remained on extracorporeal membrane oxygenation. No maternal deaths have been reported to date. Delivery was by Cesarean section in 27 cases and by vaginal delivery in two, and 15 (47%) delivered preterm. There was one stillbirth and one neonatal death. In 25 babies, no cases of vertical transmission were reported; 15 were reported as being tested with reverse transcription polymerase chain reaction after delivery. Case fatality rates for SARS and MERS were 15% and 27%, respectively. SARS was associated with miscarriage or intrauterine death in five cases, and fetal growth restriction was noted in two ongoing pregnancies affected by SARS in the third trimester.CONCLUSIONSSerious morbidity occurred in 2/32 women with COVID-19, both of whom required ICU care. Compared with SARS and MERS, COVID-19 appears less lethal, acknowledging the limited number of cases reported to date and that one woman remains in a critical condition. Preterm delivery affected 47% of women hospitalized with COVID-19, which may put considerable pressure on neonatal services if the UK's reasonable worst-case scenario of 80% of the population being affected is realized. Based on this review, RCOG, in consultation with RCPCH, developed guidance for delivery and neonatal care in pregnancies affected by COVID-19, which recommends that delivery mode be determined primarily by obstetric indication and recommends against routine separation of affected mothers and their babies. We hope that this review will be helpful for maternity and neonatal services planning their response to COVID-19. © 2020 The Authors. Ultrasound in Obstetrics & Gynecology published by John Wiley & Sons Ltd on behalf of the International Society of Ultrasound in Obstetrics and Gynecology.

**Database:** Medline

**29. Use of extracorporeal respiratory support during pregnancy: a case report and literature review.**

**Author(s):** Grasselli, Giacomo; Bombino, Michela; Patroniti, Nicolò; Giuffrida, Angela; Marcolin, Roberto; Vergani, Patrizia; Pesenti, Antonio

**Source:** ASAIO journal (American Society for Artificial Internal Organs : 1992); 2012; vol. 58 (no. 3); p. 281-284

**Publication Date:** 2012

**Publication Type(s):** Case Reports Journal Article Review

**PubMedID:** 22395116

Available at [ASAIO journal (American Society for Artificial Internal Organs : 1992)](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**We describe the case of a 25 year-old woman at 27 weeks of gestation who was admitted to our intensive care unit (ICU) for acute respiratory distress syndrome (ARDS) caused by pandemic 2009 H1N1 influenza A. She presented with septic shock and refractory hypoxemia unresponsive to rescue therapies such as recruitment maneuvers, prone positioning, and nitric oxide inhalation. Extracorporeal membrane oxygenation (ECMO) for respiratory support was instituted, and the patient's clinical conditions progressively improved: she was extubated after 16 days and discharged from the ICU 3 days later. No fetal complications were observed. At 38 weeks of gestation she gave birth to a healthy baby.

**Database:** Medline

**30. Impact of pandemic (H1N1) 2009 influenza on critical care capacity in Victoria.**

**Author(s):** Lum, Martin E; McMillan, Alison J; Brook, Chris W; Lester, Rosemary; Piers, Leonard S

**Source:** The Medical journal of Australia; Nov 2009; vol. 191 (no. 9); p. 502-506

**Publication Date:** Nov 2009

**Publication Type(s):** Research Support, Non-u.s. Gov't Journal Article

**PubMedID:** 19883346

Available at [The Medical journal of Australia](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [The Medical journal of Australia](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**OBJECTIVETo describe the demand for critical care hospital admissions in Victoria resulting from the rapid rise in the number of pandemic (H1N1) 2009 influenza cases, and to describe the role of modelling tools to assist with the response to the pandemic.DESIGN AND SETTINGProspective modelling with the tools FluSurge 2.0 and FluAid 2.0 (developed by the United States Centers for Disease Control and Prevention) over 12 weeks from when the pandemic "Contain" Phase was declared on 22 May 2009, compared with data obtained from daily hospital reports of pandemic (H1N1) 2009 influenza-related admissions and transfers to intensive care units (ICUs).MAIN OUTCOME MEASURESThe effect on hospitals as projected by the FluAid 2.0 model compared with observed hospital admissions and ICU admissions.RESULTSProspective use of the FluAid 2.0 model provided valuable health intelligence for assessment and projection of hospitalisation and critical care demand through the first 10 weeks of the pandemic in Victoria. The observed rate of hospital admissions for pandemic (H1N1) 2009 was broadly consistent with a 5% gross clinical attack rate, with 0.3% of infected patients being hospitalised. Transfers to ICUs occurred at a rate of 20% of hospital admissions, and were associated with vulnerable patient groups, and severe respiratory failure in 82% of patients admitted to ICUs. Most patients treated in ICUs (85%) survived after an average ICU length of stay of 9 days (SD, 6.5 days). Mechanical ventilation was required by 72% of patients admitted to ICUs, and extracorporeal membrane oxygenation (ECMO) was used for 7%. Pre-existing haematological malignancy accounted for half of all the deaths in patients admitted to ICUs with pandemic (H1N1) 2009 influenza.CONCLUSIONSProspective use of modelling tools informed critical decisions in the planning and management of the pandemic. Early estimation of the clinical attack rate, hospitalisation rates, and demand for ICU beds guided implementation of surge capacity. ECMO emerged as an important treatment modality for pandemic (H1N1) 2009 influenza, and will be an important consideration for future pandemic planning.

**Database:** Medline

**31. Spontaneous delivery during veno-venous extracorporeal membrane oxygenation in swine influenza-related acute respiratory failure.**

**Author(s):** Kunstyr, J; Lips, M; Belohlavek, J; Prskavec, T; Mlejnsky, F; Koucky, M; Sebron, V; Balik, M

**Source:** Acta anaesthesiologica Scandinavica; Oct 2010; vol. 54 (no. 9); p. 1154-1155

**Publication Date:** Oct 2010

**Publication Type(s):** Letter Case Reports

**PubMedID:** 20887420

Available at [Acta anaesthesiologica Scandinavica](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fdoi.wiley.com%2F10.1111%2Fj.1399-6576.2010.02300.x) - from Wiley Online Library Medicine and Nursing Collection 2019 - NHS

Available at [Acta anaesthesiologica Scandinavica](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=20887420) - from EBSCO (MEDLINE Complete)

Available at [Acta anaesthesiologica Scandinavica](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Acta anaesthesiologica Scandinavica](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Database:** Medline

**32. [ARDS and influenza A (H1N1): patients' characteristics and management in intensive care unit. A literature review].**

**Author(s):** Jaber, S; Conseil, M; Coisel, Y; Jung, B; Chanques, G

**Source:** Annales francaises d'anesthesie et de reanimation; Feb 2010; vol. 29 (no. 2); p. 117-125

**Publication Date:** Feb 2010

**Publication Type(s):** English Abstract Journal Article Review

**PubMedID:** 20116970

Available at [Annales francaises d'anesthesie et de reanimation](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Novel influenza A (H1N1) at the origin of the 2009 pandemic flu developed mainly in subjects of less than 65 years contrary to the seasonal influenza, which usually developed in elderly patients of more than 65 years. Elderly subjects are partly protected by old meetings with close stocks. Influenza A(H1N1) can arise in serious forms within 60 to 80% of cases a fulminant acute respiratory distress syndrome (ARDS) "malignant and fulminant influenza" in subjects without any comorbidity, which makes the gravity and the fear of this influenza. The fact that this influenza A (H1N1) can develop in healthy young patients and evolve in few hours to a severe ARDS with a refractory hypoxemia gave to the foreground the possible interest of the recourse to extracorporeal oxygenation (ECMO) in some selected severe ARDS (5-10%). The first publications of patients admitted in intensive care unit (ICU) for severe influenza A (H1N1) often associated to an ARDS reported a mortality rate from 15 to 40%. This mortality variability may be explained in part by different studied populations, ARDS characteristics and human and material resources in the ICUs between the countries. Indeed, the highest mortality rates (30-40%) have been reported by in Mexico which were affected the first by pandemic flu and which were not prepared. A bacterial pneumonia was associated to H1N1 influenza in approximately 30% of the cases as at admission in ICU or following the days of the admission justifying an early antibiotherapy associated to the antiviral treatment by oseltamivir (Tamiflu). Obesity, pregnancy and respiratory diseases (asthma, COPD) seem to be associated to the development of a severe viral pneumonia due to influenza A (H1N1) often with ARDS. Older age, high APACHE II and SOFA scores and a delay of initiation of the antiviral treatment by oseltamivir are associated to higher morbidity and mortality. Other analyses of the results obtained from the first published papers included more patients and future studies would permitted to better define the role of therapeutics such as steroids and ECMO.

**Database:** Medline

**33. [Pulmonary complications from pandemic AH1N1 influenza: clinical-radiological features].**

**Author(s):** Bellissima, Pietro; Bellissima, Giuseppe

**Source:** Le infezioni in medicina; Mar 2011; vol. 19 (no. 1); p. 20-27

**Publication Date:** Mar 2011

**Publication Type(s):** Journal Article

**PubMedID:** 21471743

Available at [Le infezioni in medicina](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=21471743) - from EBSCO (MEDLINE Complete)

Available at [Le infezioni in medicina](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**We describe the epidemiology, clinical features, radiological findings, therapy and course for 15 patients hospitalized at the Infectious Diseases UOC of Gravina Hospital Caltagirone for a serious respiratory condition with verified infection A (H1N1) from 9 November to 22 December 2009. We retrospectively reviewed medical records, laboratory and instrumental tests performed on hospitalized patients. All patients had significant respiratory impairment: nine had co-morbidities and risk factors such as obesity, pregnancy, immunosuppressant conditions and muscular dystrophy. Symptoms were similar to those of seasonal influenza; radiological investigation of the chest (RX and CT) presents lung involvement in 80% of patients and changes in the bio-humoral indices. Development into acute respiratory distress syndrome (ARDS) was observed in six patients: three were ventilated with a Venturi mask, three were treated in intensive care and two patients used extracorporeal membrane oxygenation (ECMO). Two died. All patients received antiviral and symptomatic therapy for 5-21 days. A(H1N1) virus infection led to a mild to moderate flu syndrome, which was often cured by symptomatic treatment; some patients required hospitalization for viral pneumonia, mixed pneumonia or ARDS. In previous flu epidemics there was no development into ARDS (40% in our series).

**Database:** Medline

**34. Epidemiology, clinical characteristics and resource implications of pandemic (H1N1) 2009 in intensive care units in Ireland.**

**Author(s):** Nicolay, Nathalie; Callaghan, Michael A; Domegan, Lisa M; Oza, Ajay N; Marsh, Brian J; Flanagan, Paula C; Igoe, Derval M; O'Donnell, Joan M; O'Flanagan, Darina M; O'Hora, Aidan P

**Source:** Critical care and resuscitation : journal of the Australasian Academy of Critical Care Medicine; Dec 2010; vol. 12 (no. 4); p. 255-261

**Publication Date:** Dec 2010

**Publication Type(s):** Journal Article

**PubMedID:** 21143086

Available at [Critical care and resuscitation : journal of the Australasian Academy of Critical Care Medicine](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=21143086) - from EBSCO (MEDLINE Complete)

Available at [Critical care and resuscitation : journal of the Australasian Academy of Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**OBJECTIVETo describe the incidence, clinical characteristics and outcomes of critically ill patients in Ireland with pandemic (H1N1) 2009 infection, and to provide a dynamic assessment of the burden of such cases on Irish intensive care units.DESIGN, SETTING AND PARTICIPANTSMulticentre prospective observational study of all adult patients admitted to any of the 30 ICUs in the Republic of Ireland between 15 July 2009 and 30 May 2010.MAIN OUTCOME MEASURESPatient demographics, clinical characteristics and ICU mortality; ICU admissions, bed-days, bed occupancy rates and distribution.RESULTSSeventy-seven adult patients with pandemic (H1N1) 2009 infection were admitted to 27 of 30 Irish ICUs. The median age was 43 years (IQR, 30-56 years); 67 patients (88%) were aged under 65; 39 (51%) were male. Sixty-two patients (82%) had comorbid conditions, including obesity (36%), respiratory disease (34%) and malignancy or immunosuppression (20%). Eight (11%) were pregnant, and 27 (36%) were smokers. Sixty-seven patients were mechanically ventilated, 24 (32%) required renal replacement therapy, 39 (51%) received vasopressors and four (5%) received extracorporeal membrane oxygenation. Of 14 patients (18%) who died in the ICU, two had no pre-existing comorbidities. The ICU admission rate of patients with pandemic (H1N1) 2009 infection was 22.5/million population. A total of 1882 ICU bed-days (557.5 bed-days/million adult population) were consumed, equating to a 3.9% bed occupancy rate, with a peak of 14.0% in October 2009. Median length of stay was 12 days (IQR, 7-34 days).CONCLUSIONThe 2009 influenza A (H1N1) pandemic was a significant burden on Irish ICUs, predominantly affecting the tertiary centres. The demographics and clinical characteristics were similar to those described in the southern hemisphere, suggesting such data may inform future resource planning for similar threats.

**Database:** Medline

**35. [Pneumonia and acute respiratory distress syndrome due to pandemic influenza H1N1 2009].**

**Author(s):** Kato, Yasuyuki

**Source:** Nihon rinsho. Japanese journal of clinical medicine; Sep 2010; vol. 68 (no. 9); p. 1666-1670

**Publication Date:** Sep 2010

**Publication Type(s):** English Abstract Journal Article Review

**PubMedID:** 20845745

Available at [Nihon rinsho. Japanese journal of clinical medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Pandemic influenza H1N1 2009 caused more severe diseases in children and young adults than seasonal influenza. The typical manifestation of severe diseases was diffuse viral pneumonia complicated with acute respiratory distress syndrome. Over half of the severe cases had underlying conditions, in which pregnancy and morbid obesity were regarded as major risk factors. Pathological findings revealed that the virus efficiently replicated in alveolar cells and caused diffuse alveolar damage as well as bronchiolitis. The level of plasma cytokines was also elevated in the severe cases. Antiviral use was generally recommended for the severe cases and might improve the outcomes. Further studies are needed for better clinical management of the severe cases of the latest pandemic influenza.

**Database:** Medline

**36. Clinical experience with intravenous zanamivir under an Emergency IND program in the United States (2011-2014).**

**Author(s):** Chan-Tack, Kirk M; Kim, Christine; Moruf, Alicia; Birnkrant, Debra B

**Source:** Antiviral therapy; 2015; vol. 20 (no. 5); p. 561-564

**Publication Date:** 2015

**Publication Type(s):** Journal Article Review

**PubMedID:** 25667992

Available at [Antiviral therapy](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Antiviral therapy](http://pdfs.semanticscholar.org/065a/15def7726f0508b0dbe970532957954383dc.pdf) - from Unpaywall

**Abstract:**BACKGROUNDSince the emergence of 2009 H1N1 virus, intravenous (IV) zanamivir has been authorized as an investigational treatment for patients with serious and life-threatening influenza through an Emergency Investigational New Drug application (EIND). This review encompasses the FDA's EIND database from May 2011 to June 2014.METHODSThis is a retrospective descriptive review of patient clinical data in the FDA's IV zanamivir EIND database from May 2011 to June 2014.RESULTSOf 364 IV zanamivir EIND requests, most (83%) patients were aged 18-64 years, 8 (2%) were pregnant, and 29 (8%) were children. 234 (64%) patients had ≥1 comorbidity reported. The majority (87%) were receiving oseltamivir when IV zanamivir was requested, and 33% had suspected (n=120; no improvement or worsening on oseltamivir) H275Y oseltamivir resistance. Influenza A was reported for 300 patients: confirmed 2009 H1N1 (n=163), suspected 2009 H1N1 (n=8), confirmed H3N2 (n=4) and not subtyped (n=125). Influenza B was reported for 25 patients. Many patients (87%) required invasive mechanical ventilation, 23 (6%) received high frequency oscillatory ventilation, and 74 (20%) received extracorporeal membrane oxygenation (ECMO). 289 (79%) patients had ≥1 complication such as renal failure (n=124; 77/124 required dialysis), bacteraemia (n=18), shock (n=95) or pneumonia (n=159). Of 134 (37%) patients with available outcome data, 83 died and 51 survived.CONCLUSIONSIV zanamivir EIND authorizations were for treatment of critically ill adult patients with 2009 H1N1, including a substantial number with suspected oseltamivir resistance. Data from prospective, randomized controlled trials are needed and are ongoing to assess the safety and efficacy of IV zanamivir for treatment of hospitalized patients with severe influenza.

**Database:** Medline

**37. Analysis of Maternal Coronavirus Infections and Neonates Born to Mothers with 2019-nCoV; a Systematic Review.**

**Author(s):** Muhidin, Salut; Behboodi Moghadam, Zahra; Vizheh, Maryam

**Source:** Archives of academic emergency medicine; 2020; vol. 8 (no. 1); p. e49

**Publication Date:** 2020

**Publication Type(s):** Journal Article Review

**PubMedID:** 32440660

Available at [Archives of academic emergency medicine](https://www.ncbi.nlm.nih.gov/pubmed/32440660) - from PubMed

Available at [Archives of academic emergency medicine](http://journals.sbmu.ac.ir/aaem/index.php/AAEM/article/view/656) - from sbmu.ac.ir

Available at [Archives of academic emergency medicine](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7211430/) - from PubMed Central

**Abstract:**IntroductionThe emergence and fast spread of 2019 novel coronavirus (2019-nCoV) threatens the world as a new public health crisis. This study aimed to clarify the impact of novel coronavirus disease (COVID-19) on pregnant patients and maternal and neonatal outcomes.MethodsA comprehensive literature search was conducted in databases including PubMed, Scopus, Embase, ProQuest, and Science Direct. All studies including original data; case reports, case series, descriptive and observational studies, and randomized controlled trials were searched from December 2019 until 19 March 2020.ResultsThe search identified 1472 results and 939 abstracts were screened. 928 articles were excluded because studies did not include pregnant women. Full texts of eleven relevant studies were reviewed and finally nine studies were included in this study. The characteristics of 89 pregnant women and their neonates were studied. Results revealed that low-grade fever and cough were the principal symptoms in all patients. The main reported laboratory findings were lymphopenia, elevated C-Reactive Protein (CRP), Amino alanine transferase (ALT), and Aspartate amino transferase (AST). In all symptomatic cases, chest Computerized Tomography (CT) scans were abnormal. Fetal distress, premature rupture of membranes and preterm labor were the main prenatal complications. Two women needed intensive care unit admission and mechanical ventilation, one of whom developed multi-organ dysfunction and was on Extracorporeal Membrane Oxygenation (ECMO). No case of maternal death was reported up to the time the studies were published. 79 mothers delivered their babies by cesarean section and five women had a vaginal delivery. No fetal infection through intrauterine vertical transmission was reported.ConclusionsAvailable data showed that pregnant patients in late pregnancy had clinical manifestations similar to non-pregnant adults. It appears that the risk of fetal distress, preterm delivery and prelabor rupture of membranes (PROM) rises with the onset of COVID-19 in the third trimester of pregnancy. There is also no evidence of intrauterine and transplacental transmission of COVID-19 to the fetus in the third trimester of pregnancies.

**Database:** Medline

**38. Case report of massive hemoptysis in pregnancy requiring veno-venous extracorporeal membrane oxygenation.**

**Author(s):** Stiff, Alyssa; Harrison, Rachel; Palatnik, Anna

**Source:** The journal of obstetrics and gynaecology research; Dec 2019; vol. 45 (no. 12); p. 2452-2455

**Publication Date:** Dec 2019

**Publication Type(s):** Case Reports

**PubMedID:** 31486147

Available at [The journal of obstetrics and gynaecology research](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Fonlinelibrary.wiley.com%2Fdoi%2Fabs%2F10.1111%2Fjog.14110) - from Wiley Online Library Medicine and Nursing Collection 2019 - NHS

Available at [The journal of obstetrics and gynaecology research](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [The journal of obstetrics and gynaecology research](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Hemoptysis in pregnancy is rare and can be life-threatening. This case describes management of hemoptysis in pregnancy requiring veno-venous extracorporeal membrane oxygenation (VV-ECMO). The patient presented with massive hemoptysis in respiratory failure at 26 weeks gestation. VV-ECMO was utilized for maternal stability due to severe hypoxia from lung parenchymal damage. An extensive work-up for hemoptysis returned negative except for an elevated Bordetella pertussis IgG antibody. The patient was delivered via cesarean section with a complicated post-partum course. She and the infant were discharged in stable condition after long hospital stays. Prior publications describing VV-ECMO use in pregnancy are limited to treatment of respiratory infections such as influenza or pneumonia. This case is the first in the literature to describe VV-ECMO utilization for hemoptysis in pregnancy, specifically, and demonstrates its significant benefit in cases of respiratory failure due to hemoptysis.

**Database:** Medline

**39. [Severe cases of A(H1N1)v2009 infection in Réunion Island in 2009 and 2010].**

**Author(s):** Gaüzère, B-A; Bussienne, F; Bouchet, B; Jabot, J; Roussiaux, A; Drouet, D; Djourhi, S; Leauté, B; Belcour, D; Bossard, G; Champion, S; Jaffar-Bandjee, M-C; Belmonte, O; Vilain, P; Brottet, E; Hoang, L; Vandroux, D

**Source:** Bulletin de la Societe de pathologie exotique (1990); May 2011; vol. 104 (no. 2); p. 97-104

**Publication Date:** May 2011

**Publication Type(s):** English Abstract Journal Article

**PubMedID:** 21509522

Available at [Bulletin de la Societe de pathologie exotique (1990)](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=21509522) - from EBSCO (MEDLINE Complete)

Available at [Bulletin de la Societe de pathologie exotique (1990)](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Bulletin de la Societe de pathologie exotique (1990)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7097782) - from Unpaywall

**Abstract:**In the Southern hemisphere, Réunion Island acts as a sentinel for infections preferentially occurring during the austral winter that are likely to reach the Northern hemisphere a few months later. We relate the main features concerning patients that were admitted during years 2009 and 2010 in our intensive care unit with an A(H1N1)v2009 infection, mainly for acute respiratory distress. Demographic, clinical, and biological data as well as given medications and outcome were prospectively collected among all PCR-confirmed influenza-infected patients. In 2009 and 2010, 25 patients met the criteria. Patients' median age was 40.4 (±17.4) years. Most of them (22/25) had comorbidities such as: chronic diseases, overweight, obesity, pregnancy, and Down syndrome. Maximum bed-occupation rate was 10 days per million inhabitants. Main diagnosis for ICU admission was virus-related pneumonia. Twenty-two out of 25 patients needed mechanical ventilation, some required rescue therapies such as extracorporeal membranous oxygenation (ECMO) or hi-frequency oscillation ventilation (HFOV), both only available in few French hospitals. Within the study period, 12 patients died (48%) mainly of multi-organ failure. Through 2009 and 2010 autumn and winter periods, for several weeks, the A(H1N1)v2009 virus infection resulted in a significant increase of workload in Réunion Island ICUs. In 2010, the failure of the mass immunization campaign, particularly among the at-risk groups, led to severe cases of A(H1N1)v2009 infections, particularly among patients with comorbidities. Our data may contribute toward better management of influenza virus pandemics in the future.

**Database:** Medline

**40. Coronavirus disease 2019 in pregnancy was associated with maternal morbidity and preterm birth.**

**Author(s):** Sentilhes, Loïc; De Marcillac, Fanny; Jouffrieau, Charlotte; Kuhn, Pierre; Thuet, Vincent; Hansmann, Yves; Ruch, Yvon; Fafi-Kremer, Samira; Deruelle, Philippe

**Source:** American journal of obstetrics and gynecology; Jun 2020

**Publication Date:** Jun 2020

**Publication Type(s):** Journal Article

**PubMedID:** 32553908

Available at [American journal of obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/lgh.html) - from Leicester General Hospital Library Local Print Collection [location] : Leicester General Library. [title\_notes] : Issues before 2000 held in Archive.

Available at [American journal of obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [American journal of obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [American journal of obstetrics and gynecology](https://doi.org/10.1016/j.ajog.2020.06.022) - from Unpaywall

**Abstract:**BACKGROUNDDespite the mainly reassuring outcomes for pregnant women with coronavirus disease 2019 reported by previous case series with small sample sizes, some recent reports of severe maternal morbidity requiring intubation and of maternal deaths show the need for additional data about the impact of coronavirus disease 2019 on pregnancy outcomes.OBJECTIVEThis study aimed to report the maternal characteristics and clinical outcomes of pregnant women with coronavirus disease 2019.STUDY DESIGNThis retrospective, single-center study includes all consecutive pregnant women with confirmed (laboratory-confirmed) or suspected (according to the Chinese management guideline [version 7.0]) coronavirus disease 2019, regardless of gestational age at diagnosis, admitted to the Strasbourg University Hospital (France) from March 1, 2020, to April 3, 2020. Maternal characteristics, laboratory and imaging findings, and maternal and neonatal outcomes were extracted from medical records.RESULTSThe study includes 54 pregnant women with confirmed (n=38) and suspected (n=16) coronavirus disease 2019. Of these, 32 had an ongoing pregnancy, 1 had a miscarriage, and 21 had live births: 12 vaginal and 9 cesarean deliveries. Among the women who gave birth, preterm deliveries were medically indicated for their coronavirus disease 2019-related condition for 5 of 21 women (23.8%): 3 (14.3%) before 32 weeks' gestation and 2 (9.5%) before 28 weeks' gestation. Oxygen support was required for 13 of 54 women (24.1%), including high-flow oxygen (n=2), noninvasive (n=1) and invasive (n=3) mechanical ventilation, and extracorporeal membrane oxygenation (n=1). Of these, 3, aged 35 years or older with positive test result for severe acute respiratory syndrome coronavirus 2 using reverse transcription polymerase chain reaction, had respiratory failure requiring indicated delivery before 29 weeks' gestation. All 3 women were overweight or obese, and 2 had an additional comorbidity.CONCLUSIONCoronavirus disease 2019 in pregnancy was associated with maternal morbidity and preterm birth. Its association with other well-known risk factors for severe maternal morbidity in pregnant women with no infection, including maternal age above 35 years, overweight, and obesity, suggests further studies are required to determine whether these risk factors are also associated with poorer maternal outcome in these women.

**Database:** Medline

**41. H1N1 influenza in pregnancy: cause for concern.**

**Author(s):** Spradlin, Timothy L; Clardy, Bryan H; Payne, Elisa M; Vinson, John

**Source:** Obstetrics and gynecology; Jan 2010; vol. 115 (no. 1); p. 185

**Publication Date:** Jan 2010

**Publication Type(s):** Letter Comment

**PubMedID:** 20027058

Available at [Obstetrics and gynecology](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0029-7844.is%2Band%2B%22115%22.vo%2Band%2B%221%22.ip%2Band%2B%22185%3B%22.pg%2Bor%2B%2210.1097%2FAOG.0b013e3181c8ad6b%22.di) - from Ovid (LWW High Impact Collection) - 2020

Available at [Obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Database:** Medline

**42. H1N1 in pregnancy: the wound care team called to action.**

**Author(s):** Gustafson, Kristin

**Source:** Advances in skin & wound care; Dec 2009; vol. 22 (no. 12); p. 542

**Publication Date:** Dec 2009

**Publication Type(s):** Editorial Case Reports

**PubMedID:** 19935123

Available at [Advances in skin & wound care](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Advances in skin & wound care](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Database:** Medline

**43. Intensive care unit surveillance of influenza infection in France: the 2009/10 pandemic and the three subsequent seasons.**

**Author(s):** Bonmarin, Isabelle; Belchior, Emmanuel; Bergounioux, Jean; Brun-Buisson, Christian; Mégarbane, Bruno; Chappert, Jean Loup; Hubert, Bruno; Le Strat, Yann; Lévy-Bruhl, Daniel

**Source:** Euro surveillance : bulletin Europeen sur les maladies transmissibles = European communicable disease bulletin; 2015; vol. 20 (no. 46)

**Publication Date:** 2015

**Publication Type(s):** Journal Article

**PubMedID:** 26607262

Available at [Euro surveillance : bulletin Europeen sur les maladies transmissibles = European communicable disease bulletin](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=26607262) - from EBSCO (MEDLINE Complete)

Available at [Euro surveillance : bulletin Europeen sur les maladies transmissibles = European communicable disease bulletin](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Euro surveillance : bulletin Europeen sur les maladies transmissibles = European communicable disease bulletin](https://www.eurosurveillance.org/deliver/fulltext/eurosurveillance/20/46/eurosurv-20-30066-1.pdf?itemId=/content/10.2807/1560-7917.ES.2015.20.46.30066&mimeType=pdf&containerItemId=content/eurosurveillance) - from Unpaywall

**Abstract:**During the 2009/10 pandemic, a national surveillance system for severe influenza cases was set up in France. We present results from the system's first four years. All severe influenza cases admitted to intensive care units (ICU) were reported to the Institut de Veille Sanitaire using a standardised form: data on demographics, immunisation and virological status, risk factors, severity (e.g. acute respiratory distress syndrome (ARDS) onset, mechanical ventilation, extracorporeal life support) and outcome. Multivariate analysis was performed to identify factors associated with ARDS and death. The number of confirmed influenza cases varied from 1,210 in 2009/10 to 321 in 2011/12. Most ICU patients were infected with A(H1N1)pdm09, except during the 2011/12 winter season when A(H3N2)-related infections predominated. Patients' characteristics varied according to the predominant strain. Based on multivariate analysis, risk factors associated with death were age ≥ 65 years, patients with any of the usual recommended indications for vaccination and clinical severity. ARDS occurred more frequently in patients who were middle-aged (36-55 years), pregnant, obese, or infected with A(H1N1)pdm09. Female sex and influenza vaccination were protective. These data confirm the persistent virulence of A(H1N1)pdm09 after the pandemic and the heterogeneity of influenza seasons, and reinforce the need for surveillance of severe influenza cases.

**Database:** Medline

**44. Influenza A pandemics: clinical and organizational aspects: the experience in Chile.**

**Author(s):** Ugarte, Sebastián; Arancibia, Francisco; Soto, Rodrigo

**Source:** Critical care medicine; Apr 2010; vol. 38 (no. 4)

**Publication Date:** Apr 2010

**Publication Type(s):** Journal Article

**PubMedID:** 19935412

Available at [Critical care medicine](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0090-3493.is%2Band%2B%2238%22.vo%2Band%2B%224%22.ip%2Band%2B%22e133%22.pg%2Bor%2B%2210.1097%2FCCM.0b013e3181c87716%22.di) - from Ovid (Journals @ Ovid)

Available at [Critical care medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Critical care medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Recently, the World Health Organization declared a pandemic mediated by the novel A H1N1 influenza virus. Soon after the first report from Mexico, the disease arrived in Chile, where it spread quickly from south to north, mimicking cold weather progression through the country. Between May and September 2009, 366,624 cases of H1N1 were reported; 12,248 were confirmed by real-time reverse-transcription polymerase chain reaction and 1562 were hospitalized. One hundred thirty-two deaths were attributable to the infection, creating a death rate of 0.78 per 100,000 inhabitants. Common comorbidities were present in 59%, including obesity, chronic obstructive pulmonary disease, hypertension, type II diabetes, and congestive heart failure. Nine percent were pregnant. Severe disease developed early; the median time to admittance was 5 days, and the most common clinical manifestations were cough, fever, dyspnea, and myalgia. Mean acute physiology and chronic health evaluation II and sequential organ failure assessment scores were 14 and 5, respectively. Highlighted laboratory data were lactate dehydrogenase and creatine kinase elevation, leukocytosis in 50%, elevated creatinine in a 25%, and thrombocytopenia in 20%. Severe respiratory failure requiring high-frequency oscillatory ventilation and extracorporeal membrane oxygenation as sophisticated modes of respiratory support was seen in 17%. Acute renal failure occurred in 25% of the intensive care unit patients, with death rates near 50%. Health systems reinforced outpatient guards with extra staff and extension of the duty schedules. Antivirals were supplied free for medically diagnosed cases. Admissions for severe cases were prioritized, reconverting hospital beds into advanced care ones; a central coordination station rationed their assignment. Recommendations for small hospitals include adding ventilators, using videoconferences, providing tutorial activity from experts, developing guidelines for disease management, and outlining criteria for transport.

**Database:** Medline

**45. [Severe acute respiratory distress syndrome complicating type A (H1N1) influenza treated with extracorporeal CO2 removal].**

**Author(s):** Smiechowicz, Jakub; Barteczko, Barbara; Grotowska, Małgorzata; Kaiser, Teresa; Zieliński, Stanisław; Kübler, Andrzej

**Source:** Anestezjologia intensywna terapia; 2011; vol. 43 (no. 2); p. 98-103

**Publication Date:** 2011

**Publication Type(s):** Case Reports English Abstract Journal Article

**PubMedID:** 22011871

Available at [Anestezjologia intensywna terapia](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**BACKGROUNDThe influenza pandemic of 2009 was reported to be frequently associated with pulmonary complications, including ARDS. We report the case of a morbidly obese, 37-year-old, AH1N1-infected woman, who was admitted to a regional hospital because of rapidly progressing respiratory failure. She was treated successfully with high frequency oscillatory ventilation (HFOV) and low-flow extracorporeal CO2 removal.CASE REPORTThe patient was admitted to a regional hospital because of severe viral infection, diabetes and hypertension that developed during pregnancy. On admission, she was deeply unconscious (GCS 5), hypotonic and anuric. Conventional ventilation, veno-venous haemofiltration, antibiotics and antiviral therapy (oseltamivir) did not improve the patient's condition, and she was transferred to a tertiary referral centre. Immediately before the transfer, she suffered two cardiac arrest episodes. They were successfully reversed. On admission, the patient was hypercapnic (PaCO2 150 mm Hg/20 kPa), acidotic (pH 6.92) and hyperkinetic (HR 120 min-1, CO 12.7 L min-1). Total lung compliance was 21 mL cm H2O-1, and SAP/DAP was 63/39 mm Hg). The PaO2/FIO2 index was 85. HFOV was instituted for 48 h, resulting in a marked improvement in gas exchange, however any manipulations caused immediate deterioration in the patient's condition. Extracorporeal CO2 removal was commenced and continued for 120 h, resulting in gradual improvement and eventual weaning from artificial ventilation after 17 days. Further treatment was complicated by septic shock due to Pseudomonas aeruginosa infection of the vagina, treated with piperacillin/tazobactam. The patient eventually recovered and returned to her regional hospital after 24 days.DISCUSSIONDuring the 2009 pandemic, a high number of pulmonary complications were observed all over the world. Viral infections are especially difficult to treat and the CESAR study indicated that the use of ECMO or extracorporeal CO2 removal devices may result in a lower mortality when compared with standard therapy. We conclude that the use of a simple CO2 removal device can be beneficial in complicated cases of AH1N1 influenza.

**Database:** Medline

**46. French experience of 2009 A/H1N1v influenza in pregnant women.**

**Author(s):** Dubar, Grégory; Azria, Elie; Tesnière, Antoine; Dupont, Hervé; Le Ray, Camille; Baugnon, Thomas; Matheron, Sophie; Luton, Dominique; Richard, Jean-Christophe; Launay, Odile; Tsatsaris, Vassilis; Goffinet, François; Mignon, Alexandre; French Registry on 2009 A/H1N1v during pregnancy

**Source:** PloS one; Oct 2010; vol. 5 (no. 10)

**Publication Date:** Oct 2010

**Publication Type(s):** Journal Article

**PubMedID:** 20957195

Available at [PloS one](http://europepmc.org/search?query=(DOI:10.1371/journal.pone.0013112)) - from Europe PubMed Central - Open Access

Available at [PloS one](https://dx.plos.org/10.1371/journal.pone.0013112) - from Public Library of Science (PLoS)

Available at [PloS one](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=20957195) - from EBSCO (MEDLINE Complete)

Available at [PloS one](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1932-6203&volume=5&issue=10&spage=e13112) - from ProQuest (Health Research Premium) - NHS Version

Available at [PloS one](https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0013112&type=printable) - from Unpaywall

**Abstract:**BACKGROUNDThe first reports on the pandemic influenza 2009 A/H1N1v from the USA, Mexico, and Australia indicated that this disease was associated with a high mortality in pregnant women. The aim of this study was to describe and compare the characteristics of severe critically ill and non-severe pregnant women with 2009 A/H1N1v-related illness in France.METHODOLOGY/PRINCIPAL FINDINGSA national registry was created to screen pregnant women with laboratory-confirmed 2009 A/H1N1v influenza. Three hundred and fifteen patients from 46 French hospitals were included: 40 patients were admitted to intensive care units (severe outcomes), 111 were hospitalized in obstetric or medical wards (moderate outcomes), and 164 were outpatients (mild outcomes). The 2009 A/H1N1v influenza illness occurred during all pregnancy trimesters, but most women (54%), notably the severe patients (70%), were in the third trimester. Among the severe patients, twenty (50%) underwent mechanical ventilation, and eleven (28%) were treated with extracorporeal membrane oxygenation. Three women died from A/H1N1v influenza. We found a strong association between the development of a severe outcome and both co-existing illnesses (adjusted odds ratio [OR], 5.1; 95% confidence interval [CI], 2.2-11.8) and a delay in oseltamivir treatment after the onset of symptoms (>3 or 5 days) (adjusted OR, 4.8; 95% CI, 1.9-12.1 and 61.2, 95% CI; 14.4-261.3, respectively). Among the 140 deliveries after 22 weeks of gestation known to date, 19 neonates (14%) were admitted to a neonatal intensive care unit, mainly for preterm delivery, and two neonates died. None of these neonates developed 2009 A/H1N1v infection.CONCLUSIONSThis series confirms the high incidence of complications in pregnant women infected with pandemic A/H1N1v observed in other countries but depicts a lower overall maternal and neonatal mortality and morbidity than indicated in the USA or Australia. Moreover, our data demonstrate the benefit of early oseltamivir treatment in this specific population.

**Database:** Medline

**47. Cerebral microbleeds and intracerebral hemorrhage associated with veno-venous extracorporeal membrane oxygenation.**

**Author(s):** Gijs, Jeroen; Lambert, Julie; Meyfroidt, Geert; Demeestere, Jelle

**Source:** Acta neurologica Belgica; Sep 2018; vol. 118 (no. 3); p. 513-515

**Publication Date:** Sep 2018

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 29981007

Available at [Acta neurologica Belgica](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=29981007) - from EBSCO (MEDLINE Complete)

**Database:** Medline

**48. A successful cesarean section in a pregnant woman with A (H1N1) influenza requiring ECMO support.**

**Author(s):** Łysenko, Lidia; Zaleska-Dorobisz, Urszula; Blok, Radosław; Dumański, Andrzej; Zielińska, Marzena; Kustrzycki, Wojciech; Durek, Grażyna

**Source:** Kardiochirurgia i torakochirurgia polska = Polish journal of cardio-thoracic surgery; Jun 2014; vol. 11 (no. 2); p. 216-219

**Publication Date:** Jun 2014

**Publication Type(s):** Case Reports

**PubMedID:** 26336425

Available at [Kardiochirurgia i torakochirurgia polska = Polish journal of cardio-thoracic surgery](http://europepmc.org/search?query=(DOI:10.5114/kitp.2014.43855)) - from Europe PubMed Central - Open Access

Available at [Kardiochirurgia i torakochirurgia polska = Polish journal of cardio-thoracic surgery](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1731-5530&volume=11&issue=2&spage=216) - from ProQuest (Health Research Premium) - NHS Version

Available at [Kardiochirurgia i torakochirurgia polska = Polish journal of cardio-thoracic surgery](https://www.termedia.pl/Journal/-40/pdf-23087-10?filename=21_Lysenko.pdf) - from Unpaywall

**Abstract:**A 24-year-old pregnant woman (29.4 weeks of gestation) with A (H1N1) influenza-associated adult respiratory distress syndrome was admitted to the intensive care unit. The patient was connected to femoral-jugular veno-venous extracorporeal membrane oxygenation (ECMO) 8 hours after admission. On the 7(th) day of ECMO support, due to the increasing threat to the life of the mother and the fetus, a decision was made to carry out a cesarean section (CS) without discontinuing the ECMO support. The CS was performed uneventfully under general anesthesia, 5 hours after the discontinuation of heparin infusion. A live, premature 1200 g female neonate was delivered. No complications occurred in the perioperative period. On the 17(th) day, the patient was successfully weaned off the ECMO and discharged 10 days later. The newborn was discharged from the hospital in good health 41 days after the delivery.

**Database:** Medline

**49. Pregnancy complicated by influenza A ARDS requiring consecutive VV-ECMO treatment with successful vaginal delivery.**

**Author(s):** Radsel, Peter; Gorjup, Vojka; Jazbec, Anja; Knafelj, Rihard; Lucovnik, Miha; Kavsek, Gorazd; Kornhauser Cerar, Lilijana; Noc, Marko

**Source:** Journal of artificial organs : the official journal of the Japanese Society for Artificial Organs; Dec 2018; vol. 21 (no. 4); p. 471-474

**Publication Date:** Dec 2018

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 29774445

Available at [Journal of artificial organs : the official journal of the Japanese Society for Artificial Organs](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=29774445) - from EBSCO (MEDLINE Complete)

Available at [Journal of artificial organs : the official journal of the Japanese Society for Artificial Organs](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1434-7229&volume=21&issue=4&spage=471) - from ProQuest (Health Research Premium) - NHS Version

Available at [Journal of artificial organs : the official journal of the Japanese Society for Artificial Organs](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**A 29-year-old woman presented with influenza A ARDS at 23+0 weeks of gestation. Mechanical ventilation failed and VV-ECMO was started in a non-ECMO hospital. Transportation was performed on ECMO. Within 5 days ECMO weaning was successful. Fetal condition was stable, and decision to continue pregnancy was taken. However, second VV-ECMO was needed due to ventilator-associated pneumonia. At 25+6 weeks, the patient spontaneously delivered a neonate vaginally. Patient's condition improved, and ECMO could be removed 10 days postpartum. 2-year follow-up showed no severe consequences in the mother and the child.

**Database:** Medline

**50. ARDS in pregnancy.**

**Author(s):** Duarte, Alexander G

**Source:** Clinical obstetrics and gynecology; Dec 2014; vol. 57 (no. 4); p. 862-870

**Publication Date:** Dec 2014

**Publication Type(s):** Journal Article Review

**PubMedID:** 25314088

Available at [Clinical obstetrics and gynecology](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0009-9201.is%2Band%2B%2257%22.vo%2Band%2B%224%22.ip%2Band%2B%22862%22.pg%2Bor%2B%2210.1097%2FGRF.0000000000000067%22.di) - from Ovid (Journals @ Ovid)

Available at [Clinical obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Clinical obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Acute respiratory distress syndrome (ARDS) is an uncommon condition in pregnant patients. The causes of ARDS are associated with obstetric causes such as amniotic fluid embolism, preeclampsia, septic abortion, and retained products of conception or nonobstetric causes that include sepsis, aspiration pneumonitis, influenza pneumonia, blood transfusions, and trauma. An essential component in management of ARDS involves good communication between the obstetrics team and critical care specialist and a fundamental understanding of mechanical ventilatory support. Medical therapies such as nitric oxide and corticosteroids play a complimentary role. Extracorporeal life support is beneficial in the management of the parturient with severe ARDS.

**Database:** Medline

**51. Cesarean section during ECMO support.**

**Author(s):** Panarello, G; D'Ancona, G; Capitanio, G; Occhipinti, G; Attardo, G; Bertani, A; Arcadipane, A

**Source:** Minerva anestesiologica; Jun 2011; vol. 77 (no. 6); p. 654-657

**Publication Date:** Jun 2011

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 21525834

Available at [Minerva anestesiologica](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**This article presents the case of a pregnant woman affected by A/H1N1 flu progressed to ARDS requiring rescue therapy by VV ECMO. Due to the early gestational age, the patient was placed on ECMO before delivery. Four weeks after VV-ECMO placement, a Cesarean section was successfully performed while on ECMO support. One week after delivery, the patient was weaned from ECMO and at 8 weeks from admission she was discharged home without O2 support. The newborn is alive and was discharged at 40 days of age on neurological follow-up.

**Database:** Medline

**52. Extra-corporeal membrane oxygenation as an indispensable tool for a successful treatment of a pregnant woman with H1N1 infection in Brazil.**

**Author(s):** Amancio, Rodrigo T; Acra, Celina Machado; Souza Dantas, Vicente Cés de

**Source:** Respiratory medicine case reports; 2017; vol. 20 ; p. 133-136

**Publication Date:** 2017

**Publication Type(s):** Case Reports

**PubMedID:** 28217438

Available at [Respiratory medicine case reports](http://europepmc.org/search?query=(DOI:10.1016/j.rmcr.2017.01.015)) - from Europe PubMed Central - Open Access

Available at [Respiratory medicine case reports](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [Respiratory medicine case reports](https://doi.org/10.1016/j.rmcr.2017.01.015) - from Unpaywall

**Database:** Medline

**53. Maternal and fetal recovery after severe respiratory failure due to influenza: a case report.**

**Author(s):** Madsen, Kristine; Strange, Ditte Gry; Hedegaard, Morten; Mathiesen, Elisabeth R; Damm, Peter

**Source:** BMC research notes; Feb 2013; vol. 6 ; p. 62

**Publication Date:** Feb 2013

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 23414816

Available at [BMC research notes](https://bmcresnotes.biomedcentral.com/articles/10.1186/1756-0500-6-62) - from BioMed Central

Available at [BMC research notes](http://europepmc.org/search?query=(DOI:10.1186/1756-0500-6-62)) - from Europe PubMed Central - Open Access

Available at [BMC research notes](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=23414816) - from EBSCO (MEDLINE Complete)

Available at [BMC research notes](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1756-0500&volume=6&issue=1&spage=62) - from ProQuest (Health Research Premium) - NHS Version

Available at [BMC research notes](https://bmcresnotes.biomedcentral.com/track/pdf/10.1186/1756-0500-6-62) - from Unpaywall

**Abstract:**BACKGROUNDDuring pregnancy women are at increased risk of severe complications to influenza infection, including death of mother or fetus, especially if chronic comorbid medical conditions such as diabetes mellitus are present.CASE PRESENTATIONA 36 years old Caucasian pregnant woman with type 1 diabetes underwent mechanical ventilation in gestation week 27 for severe respiratory failure due to influenza and pneumonia. For three weeks during and following her most severe illness, fetal growth could not be detected and the umbilical flows and amniotic fluid volumes were affected too. The possibility of preterm delivery and extracorporeal membrane oxygenation (ECMO) treatment were considered, however the patient and her fetus recovered gradually on conservative treatment. Under close surveillance the pregnancy continued until term, with delivery of an infant with appropriate weight for gestational age.CONCLUSIONPreterm delivery and decreased birth weight were reported for women with antepartum pneumonia. Mechanical ventilation and ECMO treatment for severe respiratory failure in pregnancy are life threatening conditions and have been associated with preterm delivery. It remains uncertain if delivery improves the respiratory status of a critically ill woman, and the fetal condition is likely to improve, if the maternal condition is stabilized.Severe respiratory insufficiency requiring mechanical ventilation in a diabetic pregnant woman with influenza was successfully treated conservatively. Despite clear signs of impaired fetal condition in the acute phase, watchful waiting resulted in delivery of a normal weight infant at term.

**Database:** Medline

**54. A potentially preventable case of serious influenza infection in a pregnant patient.**

**Author(s):** Parkins, Michael D; Fonseca, Kevin; Peets, Adam D; Laupland, Kevin B; Shamseddin, Khaled; Gill, M John

**Source:** CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne; Oct 2007; vol. 177 (no. 8); p. 851-853

**Publication Date:** Oct 2007

**Publication Type(s):** Case Reports Journal Article

**PubMedID:** 17923651

Available at [CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne](http://europepmc.org/search?query=(DOI:10.1503/cmaj.070622)) - from Europe PubMed Central - Open Access

Available at [CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=17923651) - from EBSCO (MEDLINE Complete)

Available at [CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0820-3946&volume=177&issue=8&spage=851) - from ProQuest (Health Research Premium) - NHS Version

Available at [CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne](http://www.cmaj.ca/content/cmaj/177/8/851.full.pdf) - from Unpaywall

**Database:** Medline

**55. Interhospital Transfer in Patients on ECMO Support. An Essential Tool for a Critical Care Network.**

**Author(s):** Uribarri, Aitor; Cruz-González, Ignacio; Dalmau, María José; Rubia-Martín, María Concepción; Ochoa, Miriam; Sánchez, Pedro L

**Source:** Revista espanola de cardiologia (English ed.); Dec 2017; vol. 70 (no. 12); p. 1147-1149

**Publication Date:** Dec 2017

**Publication Type(s):** Letter

**PubMedID:** 28372914

**Database:** Medline

**56. Leg for life? The use of sartorius muscle flap for the treatment of an infected vascular reconstructions after VA-ECMO use. A case report.**

**Author(s):** Patrut, George V; Neamtu, Claudiu; Ionac, Mihai

**Source:** International journal of surgery case reports; 2015; vol. 16 ; p. 25-28

**Publication Date:** 2015

**Publication Type(s):** Journal Article

**PubMedID:** 26408936

Available at [International journal of surgery case reports](http://europepmc.org/search?query=(DOI:10.1016/j.ijscr.2015.09.017)) - from Europe PubMed Central - Open Access

Available at [International journal of surgery case reports](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [International journal of surgery case reports](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [International journal of surgery case reports](https://doi.org/10.1016/j.ijscr.2015.09.017) - from Unpaywall

**Abstract:**INTRODUCTIONVeno-arterial extracorporeal membrane oxygenation (VA-ECMO(1)) systems are a life-saving option in the treatment of acute respiratory distress syndrome (ARDS(2)), but may be encumbered by severe vascular complications in the groin.PRESENTATION OF CASEA pregnant woman was admitted with respiratory failure due to H1N1 influenza. VA-ECMO was inserted percutaneously by the intensivists and then accidentally removed by the patient after 8 days. 24h later VA-ECMO was reinstalled with surgical denudation of femoral vessels in another department. 2h later, due to active bleeding and signs of limb ischemia, the patient was referred to our department and emergency trombectomy and patch angioplasty with PTFE were performed. Evolution was further bad with wound infection (Pseudomonas, Proteus), which imposed large debridement, replacing the PTFE patch with 2 parallel venous patches and wound reconstruction through sartorius muscle rotation. The wound underwent negative pressure therapy for 10 days and was skin grafted. The patient recovered under systemic antibiotic and virostatic therapy.DISCUSSIONMajor complications of using VA-ECMO devices are related to vascular access, most common bleeding at the puncture site and acute limb ischemia. In the groin, sartorius muscle flap is the most used for vascular coverage and small tissue defect reconstruction because of the ease in harvesting and low donor-site complications.CONCLUSIONAlthough ischemic complications associated with VA-ECMO are accepted by intensivists under the slogan "leg for life", for the repair of the femoral artery in the presence of groin infection the sartorius muscle remains an efficient solution for limb salvage.

**Database:** Medline

**57. A curious case of acute respiratory distress syndrome.**

**Author(s):** Crawford, Todd C; Grimm, Joshua C; Magruder, J Trent; Stephens, R Scott; Sciortino, Christopher M; Vaught, A Jason; Althaus, Janyne; Shah, Ashish S; Kim, Bo S

**Source:** Journal of surgical case reports; Nov 2015; vol. 2015 (no. 11)

**Publication Date:** Nov 2015

**Publication Type(s):** Case Reports

**PubMedID:** 26552407

Available at [Journal of surgical case reports](http://europepmc.org/search?query=(DOI:10.1093/jscr/rjv140)) - from Europe PubMed Central - Open Access

Available at [Journal of surgical case reports](https://academic.oup.com/jscr/article-lookup/doi/10.1093/jscr/rjv140) - from HighWire - Free Full Text

Available at [Journal of surgical case reports](https://academic.oup.com/jscr/article-lookup/doi/10.1093/jscr/rjv140) - from Oxford Journals - Open Access

Available at [Journal of surgical case reports](https://academic.oup.com/jscr/article-pdf/2015/11/rjv140/7196611/rjv140.pdf) - from Unpaywall

**Abstract:**Gestational acute respiratory distress syndrome (ARDS) is a complicated problem with the potential to gravely harm both mother and fetus. This case report describes a young woman in her second trimester of pregnancy who developed progressive respiratory failure in the setting of newly diagnosed influenza, diffuse alveolar hemorrhage and lymphangioleiomyomatosis. The patient's condition was refractory to conventional interventions and required extracorporeal membrane oxygenation (ECMO) support. Her course was further complicated by preeclampsia requiring preterm delivery with cesarean section while on ECMO. Through novel therapies and a multidisciplinary approach to care, both the patient and her child would overcome these unique and challenging conditions and survive.

**Database:** Medline

**58. Successful use of VV-ECMO in a pregnant patient with severe ARDS.**

**Author(s):** Carlier, Laurence; Muller, Jan; Debaveye, Yves; Verelst, Sandra; Rex, Steffen

**Source:** Turkish journal of emergency medicine; Jul 2019; vol. 19 (no. 3); p. 111-112

**Publication Date:** Jul 2019

**Publication Type(s):** Case Reports

**PubMedID:** 31321344

Available at [Turkish journal of emergency medicine](http://europepmc.org/search?query=(DOI:10.1016/j.tjem.2019.04.003)) - from Europe PubMed Central - Open Access

Available at [Turkish journal of emergency medicine](https://doi.org/10.1016/j.tjem.2019.04.003) - from Unpaywall

**Abstract:**IntroductionAround 0.1-0.2% of all pregnancies are complicated by respiratory failure. The altered physiology of pregnancy predisposes mother and child to develop hypoxia and respiratory failure more easily than a non-pregnant patient. Respiratory failure in pregnancy may have detrimental fetal complications, therefore extensive knowledge of the range of therapeutic options is necessary. If conventional lung-protective mechanical ventilation strategies fail, alternative approaches such as veno-venous extracorporeal membrane oxygenation (VV-ECMO) should be considered.Case presentationA previously healthy 30-year-old P1G2 at 26 weeks and 6 days of gestation was admitted to the emergency department because of a severe respiratory infection. She suffered of severe hypoxic respiratory failure due to an overwhelming pneumonia (influenza type A) with acute respiratory distress syndrome (ARDS). Because long protective ventilation strategies and ventilation in prone positioning were inadequate, and further respiratory deterioration occurred, VV-ECMO was initiated.ConclusionIn a pregnant patient with severe respiratory failure, when other interventions fail, initiation of VV-ECMO should not be delayed. The use of VV-ECMO in pregnancy is a multi-disciplinary team approach.

**Database:** Medline

**59. Coronavirus Disease 2019 (COVID-19): A Systematic Review of Pregnancy and the Possibility of Vertical Transmission.**

**Author(s):** Ashraf, Mohammad Ali; Keshavarz, Pedram; Hosseinpour, Parisa; Erfani, Amirhossein; Roshanshad, Amirhossein; Pourdast, Alieh; Nowrouzi-Sohrabi, Peyman; Chaichian, Shahla; Poordast, Tahereh

**Source:** Journal of reproduction & infertility; 2020; vol. 21 (no. 3); p. 157-168

**Publication Date:** 2020

**Publication Type(s):** Journal Article Review

**PubMedID:** 32685412

Available at [Journal of reproduction & infertility](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=2228-5482&volume=21&issue=3&spage=157) - from ProQuest (Health Research Premium) - NHS Version

Available at [Journal of reproduction & infertility](https://www.ncbi.nlm.nih.gov/pubmed/32685412) - from PubMed

Available at [Journal of reproduction & infertility](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7362089/) - from PubMed Central

**Abstract:**BackgroundThere is a growing need for information regarding maternal and neonatal outcomes during coronavirus pandemic. In this study, a comprehensive investigation was done regarding the possibility of vertical transmission using the available data in the literature.MethodsA systematic search was conducted using electronic databases, including PubMed, Scopus, Web of Science, Embase, and Scholar. All studies containing infected COVID-19 pregnant women who had given birth were included, and the search was done up to April 14, 2020.ResultsOverall, 21 articles were reviewed, and clinical characteristics of 90 pregnant patients and 92 neonates born to mothers infected with COVID-19 were reviewed. The most common symptoms included fever, cough, and dyspnea. The main laboratory findings included leukocytosis, lymphopenia, thrombocytopenia, and elevated C-reactive protein. The most commonly reported complications were preterm labor and fetal distress. Three mothers were admitted to ICU and required mechanical ventilation; among them, one died, and one was on extracorporeal membrane oxygenation. Overall, 86 neonates were tested for the possibility of vertical transmission and 82 cases were negative in RT-PCR, while 4 were positive. Out of 92 neonates, one died, and one was born dead. Nineteen patients reported having no symptoms, while breathing problems and pneumonia were reported as the most common neonatal complications.ConclusionThere were no differences in the clinical characteristics of pregnant women and non-pregnant COVID-19 patients. COVID-19 infection has caused higher incidence of fetal distress and premature labor in pregnant women. Although the possibility of vertical transmission in infected pregnant women is rare, four neonates' test results for COVID-19 infection were positive in this review.

**Database:** Medline

**60. Seasonal Human Influenza: Treatment Options.**

**Author(s):** Rowe, Emily; Ng, Pei Yi; Chandra, Thiaghu; Chen, Mark; Leo, Yee-Sin

**Source:** Current treatment options in infectious diseases; 2014; vol. 6 (no. 3); p. 227-244

**Publication Date:** 2014

**Publication Type(s):** Journal Article Review

**PubMedID:** 32288650

Available at [Current treatment options in infectious diseases](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7101591) - from Unpaywall

**Abstract:**Seasonal influenza can be a self-limiting illness in healthy individuals but is associated with short-term morbidity and economic burden. Influenza can cause significant morbidity and mortality in young children, the elderly, pregnant and post-partum women, patients with co-morbidities and the immunocompromised. Neuraminidase inhibitors (NAIs) are the treatment of choice for influenza due to widespread resistance to the adamantanes. NAIs are efficacious for the treatment of influenza in ambulatory patients with mild illness, when initiated within 48 h of symptom onset. Early treatment with NAIs has been shown to reduce otitis media in children, and lower respiratory tract complications, resulting in antibiotic therapy, in adults. Evidence on the efficacy of NAIs for the prevention of influenza-related complications in at-risk populations, based on reviews of data from randomised trials is inconclusive. However, observational studies suggest that in hospitalised patients early treatment with NAIs has been associated with reduced mortality. NAIs should be initiated as soon as possible in patients at high-risk of influenza-related complications, with suspected or proven influenza, hospitalised patients and patients with severe or progressive disease. NAIs can be considered in previously healthy patients when therapy can be initiated within 48 h of symptom onset. In previously healthy patients, the therapeutic efficacy of oseltamivir is time-dependent, with maximal benefit observed when therapy is initiated within 48 h of symptom onset. However, several observational studies suggest therapeutic benefit beyond 48 h, in hospitalised patients, severe disease, and patients at high risk of complications, including pregnant women. NAIs should be considered in patients at high risk of influenza-related complications who present late. Further studies are needed to define the optimal timing of NAIs. Oseltamivir-resistant virus has been widely reported but is predominantly an issue in H1N1 seasonal influenza. Zanamivir-resistant influenza virus is rare, and inhaled or intravenous (IV) zanamivir is the treatment of choice in proven or suspected oseltamivir-resistant virus. Intubated patients with severe influenza can be treated with oseltamivir (suspension) administered via nasogastric tube. The commercial dry powder formulation of zanamivir should not be administered, via nebulisation, as it has been associated with ventilator malfunction and mortality. In intubated patients, when there are concerns about gastric absorption, IV zanamivir should be obtained under Emergency Investigational New Drug access schemes. Currently available evidence does not support the use of high-dose or extended-duration oseltamivir in patients with severe influenza, but does require further investigation. Extracorporeal membrane oxygenation has not been shown to be superior to conventional management in patients with influenza-associated acute respiratory distress syndrome and should be considered as salvage therapy. Corticosteriods should not be used in the treatment of severe influenza as this has been associated with increased risk of mortality and bacterial superinfection.

**Database:** Medline

**61. High rates of stillbirth and preterm delivery in women with covid-19 and the efficacy of ECMO in pregnancy.**

**Author(s):** Kingston, Elizabeth V

**Source:** BMJ (Clinical research ed.); Jul 2020; vol. 370 ; p. m2921

**Publication Date:** Jul 2020

**Publication Type(s):** Letter

**PubMedID:** 32718936

Available at [BMJ (Clinical research ed.)](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Fwww.bmj.com%2Flookup%2Fdoi%2F10.1136%2Fbmj.m2921) - from BMJ Journals - NHS

Available at [BMJ (Clinical research ed.)](https://www.bmj.com/content/bmj/370/bmj.m2921.full.pdf) - from Unpaywall

**Database:** Medline

**62. COVID-19 in pregnant women and neonates: A systematic review of the literature with quality assessment of the studies**

**Author(s):** Trippella G.; Ciarcia M.; Ferrari M.; Buzzatti C.; Maccora I.; Azzari C.; Dani C.; Galli L.; Chiappini E.

**Source:** Pathogens; Jun 2020; vol. 9 (no. 6); p. 1-29

**Publication Date:** Jun 2020

**Publication Type(s):** Review

Available at [Pathogens](http://europepmc.org/search?query=(DOI:10.3390/pathogens9060485)) - from Europe PubMed Central - Open Access

Available at [Pathogens](https://www.mdpi.com/2076-0817/9/6/485/pdf) - from Unpaywall

**Abstract:**The SARS-CoV-2 virus emerged in December 2019 and then spread globally. Little is still known about the impact of COVID-19 on pregnant women and neonates. A review of the literature was performed according to the PRISMA guideline recommendations, searching the MEDLINE and EMBASE databases. Studies' quality assessments were performed using the JBI Critical Appraisal Checklist. A total of 37 studies were included, involving 275 pregnant women with COVID-19 and 248 neonates. The majority of pregnant women presented with mild to moderate symptoms, only 10 were admitted in the ICU, and one died. Two stillbirths were reported and the incidence of prematurity was 28%. Sixteen neonates were tested positive for SARS-CoV-2 by RT-PCR, and nine of them were born from mothers infected during pregnancy. Neonatal outcomes were generally good: all the affected neonates recovered. RT-PCR for SARS-CoV-2 yielded negative results on amniotic fluid, vaginal/cervical fluids, placenta tissue, and breast milk samples. SARS-CoV-2 infection in pregnant women appeared associated with mild or moderate disease in most cases, with a low morbidity and mortality rate. The outcomes of neonates born from infected women were mainly favorable, although neonates at risk should be closely monitored. Further studies are needed to investigate the possibility of vertical transmission.Copyright © 2020 by the authors. Licensee MDPI, Basel, Switzerland.

**Database:** EMBASE

**63. Coronavirus Disease 2019 (COVID-19) and pregnancy: what obstetricians need to know**

**Author(s):** Rasmussen S.A.; Smulian J.C.; Wen T.S.; Lednicky J.A.; Jamieson D.J.

**Source:** American Journal of Obstetrics and Gynecology; May 2020; vol. 222 (no. 5); p. 415-426

**Publication Date:** May 2020

**Publication Type(s):** Review

**PubMedID:** 32105680

Available at [American journal of obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/lgh.html) - from Leicester General Hospital Library Local Print Collection [location] : Leicester General Library. [title\_notes] : Issues before 2000 held in Archive.

Available at [American journal of obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [American journal of obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [American journal of obstetrics and gynecology](https://doi.org/10.1016/j.ajog.2020.02.017) - from Unpaywall

**Abstract:**Coronavirus disease 2019 is an emerging disease with a rapid increase in cases and deaths since its first identification in Wuhan, China, in December 2019. Limited data are available about coronavirus disease 2019 during pregnancy; however, information on illnesses associated with other highly pathogenic coronaviruses (ie, severe acute respiratory syndrome and the Middle East respiratory syndrome) might provide insights into coronavirus disease 2019's effects during pregnancy. Coronaviruses cause illness ranging in severity from the common cold to severe respiratory illness and death. Currently the primary epidemiologic risk factors for coronavirus disease 2019 include travel from mainland China (especially Hubei Province) or close contact with infected individuals within 14 days of symptom onset. Data suggest an incubation period of ~5 days (range, 2-14 days). Average age of hospitalized patients has been 49-56 years, with a third to half with an underlying illness. Children have been rarely reported. Men were more frequent among hospitalized cases (54-73%). Frequent manifestations include fever, cough, myalgia, headache, and diarrhea. Abnormal testing includes abnormalities on chest radiographic imaging, lymphopenia, leukopenia, and thrombocytopenia. Initial reports suggest that acute respiratory distress syndrome develops in 17-29% of hospitalized patients. Overall case fatality rate appears to be ~1%; however, early data may overestimate this rate. In 2 reports describing 18 pregnancies with coronavirus disease 2019, all were infected in the third trimester, and clinical findings were similar to those in nonpregnant adults. Fetal distress and preterm delivery were seen in some cases. All but 2 pregnancies were cesarean deliveries and no evidence of in utero transmission was seen. Data on severe acute respiratory syndrome and Middle East respiratory syndrome in pregnancy are sparse. For severe acute respiratory syndrome, the largest series of 12 pregnancies had a case-fatality rate of 25%. Complications included acute respiratory distress syndrome in 4, disseminated intravascular coagulopathy in 3, renal failure in 3, secondary bacterial pneumonia in 2, and sepsis in 2 patients. Mechanical ventilation was 3 times more likely among pregnant compared with nonpregnant women. Among 7 first-trimester infections, 4 ended in spontaneous abortion. Four of 5 women with severe acute respiratory syndrome after 24 weeks' gestation delivered preterm. For Middle East respiratory syndrome, there were 13 case reports in pregnant women, of which 2 were asymptomatic, identified as part of a contact investigation; 3 patients (23%) died. Two pregnancies ended in fetal demise and 2 were born preterm. No evidence of in utero transmission was seen in severe acute respiratory syndrome or Middle East respiratory syndrome. Currently no coronavirus-specific treatments have been approved by the US Food and Drug Administration. Because coronavirus disease 2019 might increase the risk for pregnancy complications, management should optimally be in a health care facility with close maternal and fetal monitoring. Principles of management of coronavirus disease 2019 in pregnancy include early isolation, aggressive infection control procedures, oxygen therapy, avoidance of fluid overload, consideration of empiric antibiotics (secondary to bacterial infection risk), laboratory testing for the virus and coinfection, fetal and uterine contraction monitoring, early mechanical ventilation for progressive respiratory failure, individualized delivery planning, and a team-based approach with multispecialty consultations. Information on coronavirus disease 2019 is increasing rapidly. Clinicians should continue to follow the Centers for Disease Control and Prevention website to stay up to date with the latest information (https://www.cdc.gov/coronavirus/2019-nCoV/hcp/index.html).Copyright © 2020 Elsevier Inc.

**Database:** EMBASE

**64. Recent advances in the diagnosis and management of sepsis in pregnancy**

**Author(s):** Ali A.; Lamont R.F.

**Source:** F1000 Research; 2019; vol. 8

**Publication Date:** 2019

**Publication Type(s):** Review

**PubMedID:** 31508205

Available at [F1000Research](http://europepmc.org/search?query=(DOI:10.12688/f1000research.18736.1)) - from Europe PubMed Central - Open Access

Available at [F1000Research](https://f1000research.com/articles/8-1546/v1/pdf) - from Unpaywall

**Abstract:**Background: Maternal sepsis accounts for 11% of all maternal deaths worldwide. It is the third most common direct cause of maternal death and is a major contributor to other common causes of maternal death, such as haemorrhage and thromboembolism. Method(s): This review addresses important topics, including the epidemiology, risk factors, prevention, diagnosis, care bundles and management of maternal sepsis, including antibiotic treatment, and critical care interventions such as extracorporeal membrane oxygenation. Preventative measures that have had an impact on maternal sepsis as well as future research directions are also covered in this review. Case studies of maternal sepsis which highlight key learning points relevant to all clinicians involved in the management of obstetric patients will also be presented. Result(s): Although, historically, maternal death from sepsis was considered to be a problem for low-income countries, severe obstetric morbidity and maternal death from sepsis are increasing in high-income countries. The global burden of maternal sepsis and the obstetric-related and patient-related risk factors and the likely sources are presented. Recent changes in definition and nomenclature are outlined, and challenges in diagnosis and identification are discussed. Conclusion(s): Following maternal sepsis, early diagnosis and early intervention are critical to save lives and prevent long-term adverse sequelae. Dogma surrounding critical care interventions in pregnancy is being challenged, and future research is warranted to maximise therapeutic options available for maternal septic shock.Copyright © 2019 Ali A and Lamont RF.

**Database:** EMBASE

**65. Venovenous ECMO: Successful use in a postpartum patient with ARDS. First case of Mobile ECMO at our center**

**Author(s):** Castillo C.; Hernandez E.; Lima R.; De Oca M.A.M.; Roldan D.; Gonzalez F.; Galvan I.; Riera C.; Barragan A.

**Source:** ASAIO Journal; 2019; vol. 65 ; p. 26

**Publication Date:** 2019

**Publication Type(s):** Conference Abstract

Available at [ASAIO Journal](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Introduction: Veno venous ECMO (VV-ECMO) is potentially indicated in patients with severe ARDS that continue with respiratory failure despite the use of prone positioning, neuromuscular blockers and PEEP optimization. There are few cases reported using VV-ECMO during pregnancy and immediately after delivery and most had poor results. There is not enough information about the risks associated with ECMO in the postpartum period; nonetheless, ECMO can be used safely. Mobile VV-ECMO is a safe option when it is done by an experienced center. Objective(s): To describe a successful case of Mobile VV-ECMO in a patient with ARDS during postpartum period. Result(s): A 30-year-old patient at 34.5 weeks' gestation is admitted in an obstetric hospital due to ARDS secondary to influenza virus pneumonia, presenting fetal distress, thus terminating her pregnancy by cesarean. Respiratory failure continues after 72 hours despite optimal medical support. The patient is presented to our service with PaO2 / FIO2 ratio <80 for 6 hours; so VV-ECMO is placed cannulating right jugular and femoral veins for extraction and left femoral vein for return. The patient is transferred to our center via land to finish antiviral and antibiotic treatment. Respiratory status improves and pneumonia resolves, removing ECMO 9 days later. The patient is discharged after 23 days. Conclusion(s): The use of VV-ECMO in the postpartum period is safe when installed and managed by an experienced team.

**Database:** EMBASE

**66. Extra corporeal membrane oxygenation (ECMO) in pregnancy: A single center experience of 11 cases**

**Author(s):** Quirin S.; Berlingo L.; Nizard J.; Lebreton G.

**Source:** European Journal of Obstetrics Gynecology and Reproductive Biology; Mar 2019; vol. 234

**Publication Date:** Mar 2019

**Publication Type(s):** Conference Abstract

Available at [European Journal of Obstetrics & Gynecology and Reproductive Biology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [European Journal of Obstetrics & Gynecology and Reproductive Biology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Introduction: The use of ECMO during pregnancy or immediate postpartum is a rare and dramatic situation with a high maternal and perinatal mortality rate due to the severity of the indication. There is an ongoing debate of the usefulness of ECMO depending on the indications. Objective(s): Our aim was to report the outcome of our cohort. Method(s): We collected consecutive cases in a single referral ECMO center of Paris from January 2013 to December 2016. This center is the largest ECMO center in France and cares for patients in a large region around Paris. Once the ECMO is installed, the patients are transferred to the referral center in a specific intensive care unit. Discussion and conclusions: Over this period of time, there were 35 ECMO and pregnancy in 33 patients, two patients had an ECMO put in twice. Perinatal data were available for 13 ECMO in 11 patients: 10 (60%) were indicated for refractory cardiac insufficiency due to pulmonary embolism (n = 2), Amniotic embolism (n = 2), dilated cardiomyopathy (n = 3 in 2 patients), HELLP syndrome (n = 1), peripartum cardiomyopathy (n = 2 in one patient, the second ECMO was after cardiac transplantation). The other indications were RDS for either severe influenza infection (n = 1) or septic shock on pyelonephritis (n = 1). The last case was on a refractory cardiac arrest at home (n = 1). ECMO was used during pregnancy in 3 patients, with 2/3 fetal deaths. Maternal death occurred in 2 cases, the cardiac arrest at home and a pulmonary embolism two days after cesarean section. For all ECMOs used in the postpartum, neonates survived in the immediate postpartum. In this partial series, maternal survival when ECMO is required in the postpartum is relatively good considering the severity of their conditions. When used during pregnancy, there seems to be a high perinatal death rate.Copyright © 2018

**Database:** EMBASE

**67. Mechanical ventilation in critically ill pregnant women: A systematic review**

**Author(s):** Viau-Lapointe J.; Lapinsky S.; Twin S.; Kfouri J.; D'Souza R.; Rose L.

**Source:** Canadian Journal of Anesthesia; Sep 2018; vol. 65

**Publication Date:** Sep 2018

**Publication Type(s):** Conference Abstract

Available at [Canadian Journal of Anesthesia/Journal canadien d'anesthésie](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=29858988) - from EBSCO (MEDLINE Complete)

Available at [Canadian Journal of Anesthesia/Journal canadien d'anesthésie](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0832-610X&volume=65&issue=S2&spage=1) - from ProQuest (Health Research Premium) - NHS Version

Available at [Canadian Journal of Anesthesia/Journal canadien d'anesthésie](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Canadian Journal of Anesthesia/Journal canadien d'anesthésie](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [Canadian Journal of Anesthesia/Journal canadien d'anesthésie](https://link.springer.com/content/pdf/10.1007/s12630-018-1162-7.pdf) - from Unpaywall

**Abstract:**Introduction: Approximately 0.2 % of pregnant women will require mechanical ventilation (MV) due to critical illness, trauma, or complications associated with pregnancy [1]. Evidence-based management recommendations are lacking and clinicians are faced with uncertainties when defining their MV plan tailored to maternal and fetal physiology [2]-. Objective(s): This systematic review aims to describe MV strategies outlined in studies of critically ill pregnant women. Method(s): We performed an electronic search using MEDLINE, EMBASE, CINAHL, the Cochrane Library, PROSPERO and the Joanna Briggs Institute EBP databases (Jan 1980 to Sept 2016) using keywords and MeSH terms to identify Englishlanguage publications describing the use of invasive or non-invasive MV in pregnant women. We excluded case reports and case series reporting less than 5 women published earlier than 2002 due to publication of evidence of the benefit of lung protective ventilation. Reference lists of included articles were manually searched. Two authors independently performed title and full text screening, and data extraction. Result(s): We retrieved 5034 studies and included 74 articles for data extraction and analysis. We found 44 case reports, 29 case series, and one case control study describing a median of 1 (IQR 1-10.75) women per study (total 924 women). Acute respiratory distress syndrome was the most common reason for ventilation (46 studies, 62%), most commonly due to influenza (26/46 studies, 57%)). Other frequent indications were status asthmaticus, pneumonia, and pulmonary edema. Overall maternal mortality was 21%. Non-invasive ventilation (NIV) (bi-level and continuous positive pressure ventilation) was used in 19 studies (24%) for 127 women. NIV failure, defined as need to provide invasive MV was required for 58/127 women (46%). Invasive ventilation was provided to 842 women in 70 studies (95%). Ventilator parameters were specified in 62% of studies. Most frequently reported modes were volume (184 women) and pressure control ventilation (11 women). Nonconventional modes such as airway pressure release ventilation were also used (7 women). When described, tidal volumes ranged from 5 to 10 ml/kg positive endexpiratory pressure (PEEP) from 5 to 32cm H2O. Few descriptions of inspiratory peak or plateau airway pressures were provided. Adjunctive respiratory therapies were described in 43 studies (58%). Most frequently used were neuromuscular blocking agents (44 women) tracheostomy (33 women) venovenous extracorporeal membrane oxygenation (32 women) inhaled vasodilators (20 women) prone positioning (19 women) and high frequency oscillatory ventilation (11 women). Other therapies infrequently described were recruitment maneuvers and tracheal gas insufflation. A total of 323 deliveries were described including 134 (41%) during MV of which 106 (79%) were delivered by caesarean section. The impact of delivery on respiratory function was rarely reported. Conclusion(s): This systematic review describes various MV strategies used in critically ill pregnant women. There is limited evidence that MV strategies used in the general ICU population are well suited to pregnancy. Existing data are insufficient to make recommendations on how MV should be modified for the critically ill pregnant woman.

**Database:** EMBASE

**68. Status asthmaticus in pregnancy requiring sevoflurane and ECMO**

**Author(s):** Seth B.; Gonzalez M.; Schembri F.

**Source:** American Journal of Respiratory and Critical Care Medicine; 2018; vol. 197

**Publication Date:** 2018

**Publication Type(s):** Conference Abstract

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Introduction Status asthmaticus is a life-threatening condition characterized by progressive respiratory failure despite standard therapy. Observational data shows an association between poor asthma control and pregnancy, with resultant increased pregnancy-related risks. We report a case of a pregnant patient who presented with severe refractory status asthmaticus ultimately requiring inhaled sevoflurane and ECMO. Case A 32-year-old female at 23 weeks gestation (G2P1) was admitted dyspnea, wheezing, fever and myalgias and was diagnosed with an acute asthma exacerbation in the setting of Influenza B infection. She had childhood onset asthma, with multiple prior intubations, including during her prior pregnancy. On admission, she was tachypneic (RR 25-35) with accessory muscle use and diffuse biphasic wheezing. She was trialed on BPAP for 24 hours, but due to progressive hypercarbic respiratory failure was intubated. Over the next few hours, her respiratory compliance and gas-exchange deteriorated - no air movement was noted on auscultation, peak inspiratory pressure >50mmHg, tidal volume 100-110ml and gas-exchange worsened (pH 6.9, pCo2 >101mmHg). Continuous nebulized albuterol-ipratropium, IV methylprednisone, IV epinephrine, ketamine, and paralysis were attempted to improve her respiratory compliance, each to no avail. As arrangements were being made for ECMO, inhaled sevoflurane was initiated in the ICU with significant improvement in airway resistance, tidal volumes, peak inspiratory pressures, and acidosis. The patient was transferred to another facility where VV-ECMO was started with marked improvement, and 72 hours later she was extubated. No fetal distress was appreciated throughout her hospital course and she was ultimately discharged home, and had an uneventful delivery 3 months later. Discussion Asthma is one of the most common serious medical problems the occurs during pregnancy and pregnancy may alter maternal control of asthma. Status asthmaticus in pregnancy poses an especially complex situation, with considerable risk to both maternal and fetal outcomes. Anesthetic agents have bronchodilating effects, and few reports have described responses in patients with refractory status asthmaticus. Sevoflurane has been shown to reduce respiratory system resistance in non-asthmatic patients to a greater degree than halothane/isoflurane, though hypotension is a limiting factor. Reproductive studies have been performed in animal models and have revealed no evidence of harm to the fetus due to sevoflurane although there are no well controlled studies in pregnant women (Category B). More recently, ECMO has been used for adjunctive pulmonary support in life-threatening refractory status asthmaticus. We describe a case and review the literature where both these interventions resulted in improved outcomes.

**Database:** EMBASE

**69. Differences Between Venovenous and Venoarterial Extracorporeal Membrane Oxygenation in Pregnancies**

**Author(s):** Wertaschnigg D.; Lucovnik M.; Moertl M.G.

**Source:** Annals of Thoracic Surgery; Jan 2017; vol. 103 (no. 1); p. 361

**Publication Date:** Jan 2017

**Publication Type(s):** Letter

**PubMedID:** 28007242

Available at [The Annals of thoracic surgery](https://linkinghub.elsevier.com/retrieve/pii/S0003497516307123?goto=sd) - from ScienceDirect Please click on 'Sign in' and then on 'OpenAthens' for the site to recognise your Athens account and provide access to the full range of issues.

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Available at [The Annals of thoracic surgery](http://www.annalsthoracicsurgery.org/article/S0003497516307123/pdf) - from Unpaywall

**Database:** EMBASE

**70. Human Metapneumovirus Infection and Acute Respiratory Distress Syndrome during Pregnancy**

**Author(s):** Fuchs A.; McLaren R.; Saunders P.; Karakash S.; Minkoff H.

**Source:** Obstetrics and Gynecology; Sep 2017; vol. 130 (no. 3); p. 630-632

**Publication Date:** Sep 2017

**Publication Type(s):** Article

**PubMedID:** 28796690

Available at [Obstetrics and gynecology](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0029-7844.is%2Band%2B%22130%22.vo%2Band%2B%223%22.ip%2Band%2B%22630%22.pg%2Bor%2B%2210.1097%2FAOG.0000000000002165%22.di) - from Ovid (LWW High Impact Collection) - 2020

Available at [Obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

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**Abstract:**BACKGROUND: Human metapneumovirus has recently been recognized as an important cause of severe respiratory viral infections and of viral infections in patients admitted to intensive care units. Little is known about the course of this infection in pregnancy. CASE: A late-preterm primigravid woman was admitted to the intensive care unit for acute respiratory distress syndrome and subsequently diagnosed with human metapneumovirus. Because of worsening maternal respiratory status, she was intubated and a primary cesarean delivery was performed. The patient's respiratory status continued to decline postpartum, and she ultimately required extracorporeal membrane oxygenation. She was treated supportively until her respiratory status improved, at which time she was extubated and weaned off extracorporeal membrane oxygenation and subsequently discharged home. CONCLUSION(S): Human metapneumovirus can lead to severe respiratory illness during pregnancy.Copyright © by The American College of Obstetricians.

**Database:** EMBASE

**71. 5th Annual Conference of SWAC ELSO**

**Author(s):** anonymous

**Source:** Journal of Cardiac Critical Care; Dec 2017; vol. 1 (no. 2)

**Publication Date:** Dec 2017

**Publication Type(s):** Conference Review

**Abstract:**The proceedings contain 11 papers. The topics discussed include: successful use of venovenous extracorporeal membrane oxygenation in an immediate postpartum female patient with swine flu pneumonia and severe acute respiratory distress syndrome; fatal sepsis in extracorporeal membrane oxygenation: case report of the H1N1 treated elderly patient; case series of patients with aluminum phosphate poisoning treated with extracorporeal membrane oxygenation in unique hospital, Surat, Gujarat; a rare case of coronary cameral fistula with patent ductus arteriosus, national heart institute, new delhi; venoarterial extracorporeal membrane oxygenation for amlodipine and telmisartan overdose - a lifesaving intervention; extracorporeal membrane oxygenation in the tropical world: disease-specific solutions and challenges; and initiating an adult and pediatric extracorporeal membrane oxygenation program in a developing country: challenges, successes, opportunities, and road ahead.

**Database:** EMBASE

**72. Successful use of venovenous extracorporeal membrane oxygenation in an immediate postpartum female patient with swine flu pneumonia and severe acute respiratory distress syndrome**

**Author(s):** Mangal K.; Bhargava V.; Mehta N.; Sharma K.K.; Sharma A.K.; Gupta Y.; Sarwa P.; Gurjar Y.; Tiwari M.; Bana A.; Jaiswal S.

**Source:** Journal of Cardiac Critical Care; Dec 2017; vol. 1 (no. 2)

**Publication Date:** Dec 2017

**Publication Type(s):** Conference Abstract

Available at [Journal of Cardiac Critical Care TSS](http://www.thieme-connect.de/products/ejournals/pdf/10.1055/s-0038-1639413.pdf) - from Unpaywall

**Abstract:**Introduction: Extracorporeal membrane oxygenation (ECMO) is an important therapeutic option for patients with severe acute respiratory distress syndrome (ARDS). H1N1 pneumonia carries a high risk of mortality in pregnant females. We present successful use of venovenous ECMO (VV-ECMO) in an immediate postpartum female patient with swine flu pneumonia and severe ARDS. Case Report: We report a 32-year-old female patient who came with post lower segment cesarean section (LSCS) status (day 0), H1N1 pneumonia, and severe ARDS, along with severe respiratory acidosis, multiple vasopressors, and renal failure. The patient was immediately put on VV-ECMO. Her acidosis and vasopressors improved, but she required hemodialysis thrice for acute kidney injury (AKI) and fluid removal. She experienced bleeding from the left bronchi and required multiple bronchoscopes and clot evacuations. After 11 days of ECMO therapy, it was successfully weaned off. She experienced persistent bleeding after discontinuation, for which cryoprecipitate and single-donor platelet (SDP) was given. Abdominal wall hematoma was evacuated. She was weaned from ventilator after tracheostomy. Later decannulation was done, and the patient was discharged after 20 days. Conclusion(s): ECMO is lifesaving for patients with severe ARDS. In postpartum patients, risk of bleeding is higher, but it was managed. It was the first successful use of VV- ECMO in the state of Rajasthan.

**Database:** EMBASE

**73. A challenging case of V-V ECMO**

**Author(s):** Nandagiri P.K.; Pandya S.T.; Joshi H.; Kaukuntla H.; Dashetwar A.; Singi S.; Kolla R.

**Source:** ASAIO Journal; Sep 2017; vol. 63 (no. 5); p. 37

**Publication Date:** Sep 2017

**Publication Type(s):** Conference Abstract

Available at [ASAIO Journal](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**30 year 24 weeks pregnant lady,previous cesarean section, diagnosed of upper respiratory tract infection and was treated for the same at an obstetric hospital. Breathlessness continued to worsen, and chest x-ray suggested -pneumonic consolidation in the left lung. Virology turned positive for H1N1. In -view of the worsening breathlessness, he was transferred to our centre for further help.At admission, her saturations were around 90%.She was started on Tamiflu and was given supportive therapy, inspite of which she continued to drop her saturations and was intubated and mechanical ventilation started. Her serial obstetric ultrasound confirmed the IUD, secondary to placental hypoxia. In-view of the IUD, and previous c-section, it was discussed that ECMO, should follow evacuation of the dead fetus, which has to be medical termination, rather than surgical evacuation. Four days into the starting of medical termination, the dead fetus was evacuated. She continued to worsen in terms of her respiratory illness, with significant drop in her blood oxygen saturations.Her chest x-ray worsened and now was involving both the lungs.Sje rapidly became hypoxix and had cardiac arrest,.CPR was commenced and there was ROSC.The down time was for 6 min.The family was counselled and emergency V-V ECMO initiated. She gained consciousness after 24 hours without any neurological deficits. She continued to progress with the recovery of the lungs,and enroute had iatrogenic bleed into left lung following repeated airway toileting, for which she had multiple flexible bronchoscopies and clot evacuation to recruit the left lung.She also developed HIT, for which the circuit was run heparin free and received LMWH randomly. She progressed sufficiently, with single lung ventilation, at which time, it was decided to wean and come off the ECMO.Weaning was successful and decannulation was planned for the following day. In the interim night, she had accidental decannulation of the returns cannula in the neck and lost output, during which she received 30 units of blood and blood products. Decannulation was done the same night and was ventilated overnight after restoring the hemodynamics.She woke up after 24 hours with no neurological deficits. She continued to progress and a CT scan lung was done to assess for the left lung, which fortunately was good, with patent airway and reasonable parenchyma. She was discharged home after 56 days of ICU stay, 27 days on V-V ECMO, 179 units of blood and blood products.

**Database:** EMBASE

**74. Delivery during ECMO: A single-center case series**

**Author(s):** Morsolini M.; Sciacca S.; Bertani A.; Vitulo P.; Pilato M.; Panarello G.; Martucci G.; Arcadipane A.; Longo R.

**Source:** Journal of Heart and Lung Transplantation; Apr 2017; vol. 36 (no. 4)

**Publication Date:** Apr 2017

**Publication Type(s):** Conference Abstract

Available at [Journal of Heart and Lung Transplantation](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Journal of Heart and Lung Transplantation](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Purpose: Extracorporeal membrane oxygenation (ECMO) is the standard of care for temporary life support in potentially reversible cardiac or respiratory failure. Here we report our experience with ECMO as a "bridge-to-delivery" in pregnants. Method(s): 4 patients underwent caesarean section during ECMO. Mean age was 34+/-3 years and body surface area was 1.71+/-0.1 m2. Gestation week at the time of ECMO implant was 31+/-2 weeks. The indications for ECMO were: severe pulmonary hypertension in 2 patients, severe respiratory failure (influenza H1N1) in 1 patient, cardiogenic shock complicating mechanical mitral prosthesis thrombosis in 1 patient. A low anticoagulation rate was maintained during ECMO. Heparin was stopped during the caesarean section. Local anesthesia was administered for peripheral cannulation. Result(s): See tables. Conclusion(s): ECMO was a safe and effective support during pregnancy, with 100% survival of mothers and fetuses. The incidence of complications during shorter ECMO runs was low, whereas the longer run caused more severe complications and less favorable outcome for the fetus. 50% of the mothers and 25% of the fetuses experienced bleeding complications despite low anticoagulation rate. Local anesthesia was well tolerated and allowed to avoid the hemodynamic changes typical of general anesthesia.(Table presented).

**Database:** EMBASE

**75. Outcomes reported in studies on mechanical ventilation in pregnant and postpartum patients: A systematic review**

**Author(s):** Viau-Lapointe J.; Kfouri J.; Lapinsky S.; D'Souza R.; Rose L.

**Source:** American Journal of Respiratory and Critical Care Medicine; 2017; vol. 195

**Publication Date:** 2017

**Publication Type(s):** Conference Abstract

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Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**RATIONALE: Approximately 0.2 % of pregnant women require mechanical ventilation, but data on this topic are limited and core outcomes (minimal outcomes that should be measured and reported in all clinical trials) have not been elucidated. We aim to develop of a core outcome set (COS) for studies on mechanical ventilation (MV) in pregnant and postpartum patients, and this systematic review identifying reported outcomes is the initial step. METHOD(S): We performed an electronic search using MEDLINE, EMBASE, CINAHL, the Cochrane Library, PROSPERO and the Joanna Briggs Institute EBP databases (Jan 1980 to Sept 2016). We used terms to identify studies published in English on pregnant or postpartum women requiring invasive or non-invasive MV in the intensive care unit (ICU) or a high-dependency unit. We excluded case reports and case series reporting on 5 or less patients published before the last 15 years. Two authors independently performed title and full text screening and data extraction. RESULT(S): We retrieved 5034 studies and included 74 in the final analysis comprising 47 case reports (63%), 26 case-series (35%) and one case-control study describing mechanical ventilation (MV) in 842 patients. Most (94%) studies described MV during the antepartum period. Acute respiratory distress syndrome was the most common reason for ventilation (56%), frequently related to influenza (26%). Modes of MV varied and 19% reported use of non-invasive ventilation. Ventilator parameters were specified in 65% of studies. Rescue interventions including neuromuscular blockers, prone positioning, high frequency oscillation ventilation, nitric oxide and extracorporeal membrane oxygenation were used in 34% of studies. Reported outcomes were highly heterogeneous. Maternal mortality was often not detailed (44, 59%) and the time point of measurement not specified. Frequently reported maternal outcomes included duration of ventilation (54, 75%), ICU (33, 46%), and hospital length of stay (33, 46%). Reported perinatal outcomes included perinatal or neonatal mortality (23, 32%), Apgar score (20, 28%), birth weight (19, 26%), stillbirth, abortion and neonatal ICU admission or MV. Two studies reported neurological or developmental status of the infants. Obstetric details were limited to mode (45, 63%), indication and emergent/elective status of delivery. Three studies mentioned qualitative assessment of functional status and one mentioned mother-child bonding while none reported psychosocial outcomes. CONCLUSION(S): Core outcomes reported in studies of MV during pregnancy are poorly and inconsistently described. To improve the conduct of future research in this rare but important clinical situation, development of a universally accepted COS is essential.

**Database:** EMBASE

**76. Pneumonia during pregnancy and the post partum period: A reappraisal of etiologies requiring intermediate or intensive care-a retrospective study through the CUBREA network**

**Author(s):** Jacquens A.; Kerever S.; Guidet B.; Aegerter P.; Das V.; Cariou A.; Fartoukh M.; Fulgencio J.-P.; Hayon J.; Combes A.; De Montmollin E.; Richard C.; Desmard M.; Megarbane B.; Zuber B.; Sztrymf B.; Ricard J.-D.; Messika J.

**Source:** Annals of Intensive Care; Jan 2017; vol. 7 (no. 1); p. 177-178

**Publication Date:** Jan 2017

**Publication Type(s):** Conference Abstract

Available at [Annals of Intensive Care](http://europepmc.org/search?query=(DOI:10.1186/s13613-016-0224-7)) - from Europe PubMed Central - Open Access

Available at [Annals of Intensive Care](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=2110-5820&volume=7&issue=S1&spage=177) - from ProQuest (Health Research Premium) - NHS Version

Available at [Annals of Intensive Care](https://annalsofintensivecare.springeropen.com/track/pdf/10.1186/s13613-016-0224-7) - from Unpaywall

**Abstract:**Introduction Infections are among the main causes of non-obstetric morbidity and mortality during pregnancy and the postpartum period, and the second causes of intensive care unit (ICU) admissions for non-obstetric reasons. Among those, pneumonia is of particular interest, as pregnancy impairs the ventilatory function, and blunts the immune response. In addition, pneumonia might increase fetal morbimortality. We, therefore, sought to investigate the epidemiology of community-acquired pneumonia (CAP) occurring during pregnancy or postpartum (until 6 weeks postpartum) requiring ICU or intermediate care unit admission. Patients and methods We conducted a retrospective multicenter observational study in 41 Paris and suburban area ICUs participating in the CUBREA database (January 2005-December 2014). Women were identifed through the ICD-10 database with an obstetric code (O00-O99 or Z35-Z39) and an acute respiratory failure (J96) or pneumonia code (J10-J22). Charts were reviewed. The primary outcome was to determine the rate of CAP diagnoses within this population admitted for acute respiratory failure. The secondary outcomes were to compare CAP and non-CAP women, regarding comorbid conditions, ICU course, therapies and fetal outcome; and fnally to describe the etiologies of CAP episodes. Results Our search retrieved 367 women pregnant or during the postpartum period. Seventy-one of those (22.5%) had a CAP, and had been admitted in the intermediate (11; 15.5%) or intensive (60; 84.5%) care units. CAP women had a median age of 32 years [28-37] (vs. 32 [27-36] for non-CAP), and a median SAPSII score of 21 [13-29] (vs. 23 [16-41] for non-CAP). Thirty-four harbored at least one comorbid condition (47.9 vs. 36.9%; p = 0.10), and they were more frequently active smokers (14.7 vs. 7%; p = 0.044) than non-CAP women. Fiftyone CAP women were admitted during prepartum (71.8 vs. 36.21% for non-CAP; p < 0.0001), 7 in intermediate care unit, and 44 in ICU, at 31 weeks [26-33] of gestational age, while 20 (4 in intermediate care unit, and 16 in ICU) were admitted during the postpartum period (28.2 vs. 63.8% for non-CAP). Thirty (42.3 vs. 54.3% for non-CAP; p = 0.08) underwent mechanical ventilation, 12 (16.9 vs. 11.5% for non-CAP; p = 0.23) non-invasive ventilation and 7 (9.9 vs. 2.9% for non-CAP; p = 0.001) high-flow nasal cannula oxygen therapy. Compared to non-CAP, CAP women had longer duration of mechanical ventilation (7 days [4-13] vs. 2 [1-5]; p < 0.0001). Acute respiratory distress syndrome occurred in 20 CAP women (28.2 vs. 3.7% for non-CAP; p < 0.0001), and 6 required extra-corporeal membrane oxygenation (8.4 vs. 4.5% for non-CAP; p = 0.23). Preterm extraction occurred for maternal reasons in 15 CAP women (21.1 vs. 7.8% for non-CAP; p = 0.004), and more frequently by cesarean section (84.2 vs. 53% for non-CAP; p = 0.0003). Fetal survival did not difler signifcantly, as live births occurred in 85 vs. 77.4% for non-CAP (p = 0.39). Length of ICU and hospital stays were signifcantly longer in CAP compared to nonCAP women (respectively 4 [2-8] vs. 3 [1-5] days; p = 0.001), and 12 [7-22] vs. 9 [4-15] days; p = 0.001). ICU and hospital mortality were null for CAP versus 5.8 and 6.6% for non-CAP (respectively p = 0.045 and p = 0.027). Regarding CAP microbial etiologies, no causative pathogen was found in 25 CAP subjects (39.7%); Influenza was identifed alone in 18 (25.7%), Streptococcus pneumoniae in 6 (8.6%), Haemophilus sp. in 3 (4.3%), methicilin-resistant Staphylococcus aureus in 2 (2.3%) and methicillin-susceptible S. aureus in one (1.4%). Finally, another respiratory virus was diagnosed in 3 patients (4.3%). Discussion In this series, CAP was the cause of nearly a quarter of pregnancy or postpartum respiratory failure requiring intermediate or intensive care unit admission. Despite a longer ICU and hospital stay, no woman died. As in the non-pregnant population, the absence of any causative pathogen is frequent. Influenza was the most frequent pathogen identifed. Conclusion Pneumonia during pregnancy and postpartum requiring intermediate or intensive care unit has important maternal and fetal implications. As such, a rigorous multidisciplinary approach is warranted.

**Database:** EMBASE

**77. Clinical analysis of the first maternal patient infected with novel avian Influenza A (H5N6) virus in the world**

**Author(s):** Shuang L.; Yang C.; Li Z.; Lin S.; Zhou J.; Mai Y.

**Source:** Zhonghua Wei Zhong Bing Ji Jiu Yi Xue; Nov 2016; vol. 28 (no. 11); p. 988-993

**Publication Date:** Nov 2016

**Publication Type(s):** Article

**Abstract:**Objective To report the treatment of the first maternal patient infected with novel avian Influenza A (H5N6) virus in the world, and to investigate the clinical features and treatment of the maternal patient. Methods On December 28th, 2015, a maternal patient infected with H5N6 virus was admitted to the First Municipal Hospital of Zhaoqing City. The clinical features and treatments of this patient were analyzed. Results ? A 40-year-old female in 35-week gestation was admitted with the complaint of fever and cough for 6 days with the following characteristics: fever 6 days ago after getting a cold, mainly in the afternoon and night, the maximum body temperature was 39 ?, with chills, shiver, single cough, short of breath after walking 50 meters which could be relieved after having a rest, but no expectoration, sore throat, nasal obstruction, rhinorrhea, chest tightness, chest pain, paroxysmal nocturnal dyspnea. The body temperature could be decreased after taking antibiotic and antipyretic which was prescribed by the doctor in the local hospital, and was repeatedly administrated. ? She had been to the local live poultry market before the onset of fever. ? Auxiliary examination: on admission, the patient's blood test showed that the white blood cell count was normal (7.94x109/L), the neutrophil was normal (7.42x109/L), but the lymphocyte was low (0.44x109/L); it was shown by the arterial blood gas analysis that pH was 7.441, the oxygen partial pressure was 68.7 mmHg (1 mmHg = 0.133 kPa), and the carbon dioxide partial pressure was 23.9 mmHg. Infiltration was found in the lung by chest X-ray on the 2nd day, specifically, with double lung texture thickening, fuzzy, visible patchy fuzzy shadow, and double lung portal shadow. On the 3rd day, the throat swab specimen and sputum for virus nucleic acid detection of H7N9-RNA was negative, the H1N1-RNA was negative, but the avian influenza virus (AIV)-RNA was positive. The throat swab specimens and sputum for virus nucleic acid detection were performed by Disease Prevention Control Center of Zhaoqing City on the 4th day and by Disease Prevention Control Center of Guangdong Province on the 5th day, which showed positive H5N6-RNA, but her child's nasal swab specimens for AIV-RNA was negative on the 3rd day of birth. On the 5th day, blood influenza A virus antibody IgM was negative. ? Treatment: a medium flow oxygen inhalation by nasal cannula was given after admission. On the 2nd day, the breath of the patient raised to 40 breaths/min, and the pulse oxygen saturation (SpO2) fell to 0.80, in order to avoid the fetal death because of hypoxemia, the patient was send for cesarean section, and invasive ventilation was given with 1.00 fraction of inspired oxygen (FiO2) in the intensive care unit (ICU) after the cesarean section, and the extracorporeal membrane oxygenation (ECMO) was given since the 4th day. 150 mg oseltamivir was given bid on the 4th day for 2 times a day, and it was changed to peramivir 600 mg everyday (qd) on the 6th day for 6 days, and oseltamivir 150 mg was given bid again on the 9th day for 14 days. ? Outcome: the throat appeared red, and the tonsils were swollen, breath sounds on both sides was weak, but no rale or rhonchi was found at admission. But from the 2nd day fine rales were detectable in both sides of chest. The temperature was normal except on the 1st day (the maximum body temperature was 38.2 ?), the 4th day (the maximum body temperature was 38 ?), and the 10th day (the maximum body temperature was 37.5 ?). The viral nucleic acid test of the throat swab specimen and sputum showed that the H5N6-RNA turned negative on the 9th day, the 10th day and the 11th day for 3 days. Pleural effusion was rapidly increased after the admission as shown by chest X-ray films, bilateral partial ground-glass opacities were observed in the low lung, and extended to all the lung fields on the 5th day, the bilateral lung infiltrations were absorbed slowly, and showed bilateral reticular opacities as the image of pulmonary fibrosis at last. The computed tomography scan of the chest showed bilateral irregular reticular opacities and basal discoid atelectasis on the 31st day. The color Doppler ultrasonography showed the systolic pressure of the pulmonary artery was about 78 mmHg on the 39th day. On the 49th day, norepinephrine was given for the hypotension, the serum creatinine (SCr) was 73.9 micro mol/L; the SCr raised to 160.2 micro mol/L on the 50th day, the urine output fell to less than 30 mL/h for 27 hours. Although the active antiviral, mechanical ventilation, ECMO and other therapies were prescribed, the patient eventually died due to multiple organ failure (MOF) on the 50th day. Conclusions The reported patient course was short, with an acute onset, with fever and cough as the chief complaint, and acute respiratory distress syndrome (ARDS) and MOF developed quickly. Her baby was born through cesarean delivery on the 2nd day after admission, and had not infected with H5N6 avian influenza. The clinical manifestations and the treatment strategy need to be further explored.Copyright © 2016 Heilongjiang Institute of Science and Technology Information. All rights reserved.

**Database:** EMBASE

**78. Extracorporeal Membrane Oxygenation in Pregnant and Postpartum Women With H1N1-Related Acute Respiratory Distress Syndrome**

**Author(s):** Saad A.F.; Rahman M.; Maybauer D.M.; Fraser J.F.; Costantine M.M.; Pacheco L.D.; Maybauer M.O.

**Source:** Obstetrics and Gynecology; Feb 2016; vol. 127 (no. 2); p. 241-247

**Publication Date:** Feb 2016

**Publication Type(s):** Review

Available at [Obstetrics and gynecology](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0029-7844.is%2Band%2B%22127%22.vo%2Band%2B%222%22.ip%2Band%2B%22241%22.pg%2Bor%2B%2210.1097%2FAOG.0000000000001236%22.di) - from Ovid (LWW High Impact Collection) - 2020

Available at [Obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Obstetrics and gynecology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**OBJECTIVE: To assess available evidence regarding the use of extracorporeal membrane oxygenation (ECMO) in pregnant and postpartum women with acute respiratory distress syndrome (ARDS) secondary to H1N1 infection. DATA SOURCES: Databases from MEDLINE (U.S. National Library of Medicine, 1946 to April 1, 2015), the Cochrane Library Controlled Trials Register, ClinicalTrials.gov, and Web of Science were queried for studies on ECMO in pregnant or postpartum patients with ARDS. Search terms included: "ARDS,""ECMO,""pregnant," and "postpartum." TABULATION, INTEGRATION, AND RESULTS: All relevant references in any language were reviewed. Literature for inclusion and methodologic quality were reviewed based on the meta-analyses and systematic reviews of observational studies (Meta-analysis Of Observational Studies in Epidemiology) guidelines. Of 266 citations, five retrospective studies (39 patients) fulfilled our inclusion criteria. No randomized controlled trials were found. The pooled estimate of the survival rate among pregnant and postpartum patients who received ECMO for ARDS secondary to H1N1 was 74.6% (95% confidence interval [CI] 60.7-88.6%). Neonatal outcomes were reported in two studies and the rate of live birth was 70% (95% CI 43.7-95.2). Heterogeneity was not significant among studies (I 2 ranged from 0% to 21%; P>.25). CONCLUSION(S): The role of ECMO in pregnant and postpartum women with ARDS from H1N1 remains unclear and the benefits suggested from our review should be interpreted with caution.Copyright © 2016 by The American College of Obstetricians and Gynecologists.

**Database:** EMBASE

**79. Acute respiratory failure and mechanical ventilation in pregnant patient: A narrative review of literature**

**Author(s):** Bhatia P.; Biyani G.; Mohammed S.; Sethi P.; Bihani P.

**Source:** Journal of Anaesthesiology Clinical Pharmacology; 2016; vol. 32 (no. 4); p. 431-439

**Publication Date:** 2016

**Publication Type(s):** Review

Available at [Journal of Anaesthesiology Clinical Pharmacology](http://europepmc.org/search?query=(DOI:10.4103/0970-9185.194779)) - from Europe PubMed Central - Open Access

Available at [Journal of Anaesthesiology Clinical Pharmacology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Journal of Anaesthesiology Clinical Pharmacology](https://doi.org/10.4103/0970-9185.194779) - from Unpaywall

**Abstract:**Physiological changes of pregnancy imposes higher risk of acute respiratory failure (ARF) with even a slight insult and remains an important cause of maternal and fetal morbidity and mortality. Although pregnant women have different respiratory physiology and different causes of ARF, guidelines specific to ventilatory settings, goals of oxygenation and weaning process could not be framed due to lack of large-scale randomized controlled trials. During the 2009 H1N1 pandemic, pregnant women had higher morbidity and mortality compared to nonpregnant women. During this period, alternative strategies of ventilation such as high-frequency oscillatory ventilation, inhalational of nitric oxide, prone positioning, and extra corporeal membrane oxygenation were increasingly used as a desperate measure to rescue pregnant patients with severe hypoxemia who were not improving with conventional mechanical ventilation. This article highlights the causes of ARF and recent advances in invasive, noninvasive and alternative strategies of ventilation used during pregnancy.Copyright © 2016 Journal of Anaesthesiology Clinical Pharmacology Published by Wolters Kluwer - Medknow.

**Database:** EMBASE

**80. Extracorporeal membrane oxygenation for influenza a related severe acute respiratory distress syndrome in a pregnant woman: A case report and literature review**

**Author(s):** Hsieh C.-C.; Chen C.-W.; Huang Y.-F.; Tsai M.-T.

**Source:** Journal of Internal Medicine of Taiwan; Dec 2015; vol. 26 (no. 6); p. 353-362

**Publication Date:** Dec 2015

**Publication Type(s):** Review

Available at [Journal of Internal Medicine of Taiwan](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Acute respiratory distress syndrome is a major cause of death in patients with influenza A infection. Immunocompromised host, diabetes meilitus, pregnancy and obese are risk factors tor severe complicated influenza. We report a 35-year-old multigravida women at 34 weeks of gestation with acute respiratory distress syndrome caused by influenza A virus who was successfully treated by extracorporeal membrane oxygenation. We further discuss about the current treatment of acute respiratory distress syndrome, the use of extracorporeal membrane oxygenation in acute respiratory distress syndrome and the current evidence about corticosteroids in influenza A related acute respiratory distress syndrome.

**Database:** EMBASE

**81. Combination ecmo and cytokine adsorption therapy for severe sepsis with cardiogenic shock and ards**

**Author(s):** Lees N.; Rosenberg A.; Popov A.; Hurtado-Doce A.; Jones J.; Marczin N.; Simon A.

**Source:** Critical Care Medicine; Dec 2015; vol. 43 (no. 12); p. 311

**Publication Date:** Dec 2015

**Publication Type(s):** Conference Abstract

Available at [Critical Care Medicine](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0090-3493.is%2Band%2B%2243%22.vo%2Band%2B%2212%22.ip%2Band%2B%22311%22.pg%2Bor%2B%2210.1097%2F01.ccm.0000475069.10810.39%22.di) - from Ovid (Journals @ Ovid)

Available at [Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Case Report: A 33 year old previously fit female, 5 mo postpartum, presented with a four-day history of flu-like symptoms, breathlessness, delirium, chest and abdominal pains. On initial assessment she was pyrexial, tachypneic and shocked, with ARDS (Murray score 3.7), metabolic acidosis (pH 7.1) and neutropenia. Transthoracic echocardiography showed a severely impaired, nondilated left ventricle (ejection fraction <15%) and normal right ventricle. She rapidly deteriorated requiring mechanical ventilation and treatment was initiated for community-acquired pneumonia. but requiring significant vasopressor support (norepinephrine (1-1.5mcg.kg-1.min-1) and vasopressin 0.04U.hr-1) in addition to dobutamine. She was transferred to our center for consideration of extracorporeal life support. In view of the severity of the combined respiratory and cardiac failure and worsening organ function with rising lactate, venoarterial ECMO (percutaneous femoral cannulation) was instituted within 5 hr of arrival. A cytokine hemoadsorption column (CytosorbTM, Linc Medical, Leicestershire, UK) was added to the hemofilter circuit (Prismaflex, Gambro, Sweden) and continued for 24hr. Anticoagulation was achieved with unfractionated heparin. From direct bronchoscopy staphylococcus aureus expressing Panton-Valentine leukocidin (PVL) and H1N1 Influenza A were isolated. Clindamycin was added and intravenous immunoglobulin G (IVIg) therapy was commenced. There was improvement in oxygenation and gradual resolution of lactic acidosis after institution of these therapies. Most notably the vasopressors could be weaned off after 12 hr. Levosimendan was loaded. There was recovery and LV function was normal by day 9 when ECMO was discontinued. The patient was discharged to the ward on day 30. She was reviewed two mo later and was asymptomatic. This case demonstrates the novel and successful use of ECMO and cytokine removal in severe PVL-S.aureus sepsis with ARDS and cardiomyopathy and adds to the evidence showing cytokine adsorption as a compelling adjuvant therapy in severe sepsis.

**Database:** EMBASE

**82. ECMO in H1N1 pregnant and postpartum women with ards: A systematic review and meta-analysis**

**Author(s):** Saad A.; Rahman M.; Costantine M.; Maybauer D.; Pacheco L.; Fraser J.; Maybauer M.

**Source:** Critical Care Medicine; Dec 2015; vol. 43 (no. 12); p. 268-269

**Publication Date:** Dec 2015

**Publication Type(s):** Conference Abstract

Available at [Critical Care Medicine](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0090-3493.is%2Band%2B%2243%22.vo%2Band%2B%2212%22.ip%2Band%2B%22268%22.pg%2Bor%2B%2210.1097%2F01.ccm.0000474898.20700.90%22.di) - from Ovid (Journals @ Ovid)

Available at [Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Learning Objectives: To assess available evidence regarding the use of extracorporeal membrane oxygenation (ECMO) in pregnant and postpartum women with acute respiratory distress syndrome (ARDS) secondary to H1N1 infection. Method(s): Databases from MEDLINE (U.S. National Library of Medicine, 1946 -April 01, 2015), the Cochrane Library Controlled Trials Register, ClinicalTrials. gov, and Web of Science were queried for studies on ECMO in pregnant or postpartum patients with ARDS. All relevant references in any language were reviewed. Literature for inclusion and methodological quality was reviewed based on the meta-analyses and systematic reviews of observational studies (MOOSE) guidelines. Result(s): Out of 266 citations, five retrospective studies (39 patients) fulfilled our inclusion criteria. No randomized controlled trials were found. The pooled estimate of the survival rate among pregnant/postpartum patients who received ECMO was 74.6% (95% confidence interval, 60.7-88.6%). Heterogeneity was not significant among studies (I-squared 2.8%; p=.391). Neonatal outcomes were reported in two studies and the rate of live birth was 70%. Conclusion(s): Patients who were supported with ECMO had acceptable rates of both maternal and neonatal survival. The role of ECMO in this patient population, however, remains unclear and these results should be interpreted with caution. In the past yr, the emergence of highly specialized ECMO facilities and improvement in ECMO technology makes it a viable lifesaving procedure in peri-partum women suffering from ARDS. Further studies are needed to elaborate the proposed benefit of ECMO in pregnant and postpartum women.

**Database:** EMBASE

**83. A fatal case of giant cell pulmonary sarcomatoid carcinoma diagnosed in a pregnant woman: Case report**

**Author(s):** Fernandez L.; Sua L.F.; Garcia L.; Velasquez M.; Garcia C.

**Source:** American Journal of Respiratory and Critical Care Medicine; 2015; vol. 191

**Publication Date:** 2015

**Publication Type(s):** Conference Abstract

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**INTRODUCTION Cancer during pregnancy is rare, complicating only 0.02-0.1% of all pregnancies. The most common types of cancer are breast and cervical cancer, lymphoma, melanoma and leukemia. The association of lung cancer and pregnancy has rarely been described. Few more than 40 cases have been reported in the literature, 77% were non-small cell carcinoma (NSCLC) and most of them were adenocarcinoma. Usually patients are diagnosed with advanced disease during the second or third trimester of pregnancy.We describe a case of a 24-year-old woman, who was admitted to the hospital at 22 weeks of pregnancy, with fever, cough and dyspnea progressing to respiratory failure who was diagnosed with pulmonary giant cell carcinoma, these tumors represent 0.1 - 0.4% of lung cancer. METHODS Review of Medical History CASE REPORT A 24-year-old pregnant woman was admitted to hospital at 22 weeks gestation with a history of malaise, fatigue, exertional dyspnea, dry cough and fever since 5 months ago, without pathological antecedents. Initially she had a diagnosis of pneumonia and antibiotic treatment without improvement, so she was referred to our hospital.She was admitted with hypertension, tachycardia, desaturation, severe dyspnea, pulmonary auscultation revealed reduction of the breath sounds, no murmurs, no edema in MI and single live fetus. Chest X-ray showed bilateral infiltrates and pleural effusion. Respiratory support was needed quickly and then vasoactive support. She became hemodynamically unstable, so we decided to terminate the pregnancy. We rule out HIV, influenza, hepatitis, cytomegalovirus and the immunological profile was normal. FBO with BAL was performed with direct examination and culture negative, PCR for TB was negative, and cytology had cells suggestive of malignancy. Later, she had a thoracoscopy and biopsy. She showed progressive deterioration, so we started ECMO support until we received the pathology report with (NSCLC) Giant Cell Sarcomatoid Variety. She developed refractory hypoxemia with bilateral involvement of four quadrants, then the support was suspended and she died. DISCUSSION The giant cell tumor is an aggressive rare histological variant, which represents 0.1 to 0.4% of lung tumors. Is characterized by giant, anaplastic and pleomorphic cells, which form chains or cords infiltrating the stroma; in our case we observed lymphocyte emperipolesis by malignant giant cells and profuse vascular invasion. Immunohistochemistry showed TTF1 and Napsin A, confirming their lung origin, also strong expression of cytokeratin CKAE1 / AE3, CK7, EMA and Vimentin. Finally the proliferation index Ki-67 was 80% in neoplastic cells. (Figure Presented).

**Database:** EMBASE

**84. Extracorporeal membrane oxygenation (ECMO) in cystic fibrosis**

**Author(s):** Shah N.; Perrin F.

**Source:** Paediatric Respiratory Reviews; Jun 2014; vol. 15 ; p. 26-28

**Publication Date:** Jun 2014

**Publication Type(s):** Article

**PubMedID:** 24846285

Available at [Paediatric respiratory reviews](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Paediatric respiratory reviews](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Extracorporeal membrane oxygenation (ECMO) is a potential form of therapy in cystic fibrosis. We discuss this form of treatment, particularly in relation to respiratory failure secondary to influenza in a patient with cystic fibrosis whose condition deteriorated post partum. © 2014 Elsevier Ltd.

**Database:** EMBASE

**85. Death of woman with peripartum influenza b virus infection and necrotizing Pneumonia**

**Author(s):** Rein J.L.; Etra A.M.; Patel J.J.; Stein J.L.; Rivers A.L.; Gershengorn H.B.; Awerbuch E.; Koshy S.C.; Kreiswirth B.N.

**Source:** Emerging Infectious Diseases; Jul 2014; vol. 20 (no. 7); p. 1259-1260

**Publication Date:** Jul 2014

**Publication Type(s):** Letter

**PubMedID:** 24960253

Available at [Emerging infectious diseases](http://europepmc.org/search?query=(DOI:10.3201/eid2007.140230)) - from Europe PubMed Central - Open Access

Available at [Emerging infectious diseases](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=24960253) - from EBSCO (MEDLINE Complete)

Available at [Emerging infectious diseases](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Emerging infectious diseases](https://doi.org/10.3201/eid2007.140230) - from Unpaywall

**Database:** EMBASE

**86. Extreme physical therapy- Progression of functional mobility of 25 year old on ECMO 72 days**

**Author(s):** Pechulis R.; Lindauer L.; Miller C.; Wu J.; Pechulis M.

**Source:** Critical Care Medicine; Dec 2014; vol. 42 (no. 12)

**Publication Date:** Dec 2014

**Publication Type(s):** Conference Abstract

Available at [Critical Care Medicine](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0090-3493.is%2Band%2B%2242%22.vo%2Band%2B%2212%22.ip%2Band%2B%22A1653%22.pg%2Bor%2B%2210.1097%2F01.ccm.0000458722.72421.85%22.di) - from Ovid (Journals @ Ovid)

Available at [Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Learning Objectives: The patient is a 24 year old female postpartum day one admitted to Lehigh Valley Health Network in Allentown, PA for initiation of V-V ECMO secondary to ARDS from H1N1 pneumonia. Hospital course was complex including: veno-venous ECMO for 72 days, mechanical ventilation for 127 days, cardiac arrest two times, right femoral artery repair, pelvic hematoma with exploratory laparotomy and prolonged wound closure, cholecystectomy, bacteremia, fungemia, severe pulmonary hypertension, 3 months of immobility due to hemodynamic instability with profound weakness and bilateral ankle contracture. Physical therapy (PT) was initiated with the following progression: hospital day (HD) 18 bed exercise, HD 65 mobilized to sitting edge of bed with 2 PTs, 1 respiratory therapist (RT), 1 perfusionist and the bedside nurse, HD 109 ambulation with mechanical ventilation daily requiring 2 PTs, RT, bedside nurse and an aide for a chair follow, HD 136 a 6-minute walk test performed with total distance of 51ft, HD 155 discharge to acute rehabilitation and discharge home 3 weeks later. Throughout her stay, she presented many challenges to her health care team. Mobility was performed outside of generally accepted parameters with respiratory rates of 40-50bpm, heart rate of 150-160bpm and oxygen saturation as low at 75% necessitating continuous assessment of patient's tolerance. Ankle contractures were accommodated using makeshift wedge shoes with progression to custom made orthotics. Patient was often tearful requiring encouragement to participate in her care and multidisciplinary communication to promote independence. Mobility often required multiple personnel leading to extensive discussion regarding allocation of scarce resources due her unclear potential for recovery and the severity of this patient's prolonged critical illness. Her complex clinical condition and gratifying recovery highlight the need for close communication and problem solving among an interdisciplinary team and illustrates the need for early mobility even in a constrained environment.

**Database:** EMBASE

**87. Two years outcomes of influenza a (H1N1)-associated acute respiratory distress syndrome survivors treated by extracorporeal membrane oxygenation**

**Author(s):** Amsallem M.; Boucly A.; Brechot N.; Trouillet J.-L.; Nieszkowska A.; Combes A.; Chastre J.; Luyt C.-E.

**Source:** Intensive Care Medicine; Oct 2013; vol. 39

**Publication Date:** Oct 2013

**Publication Type(s):** Conference Abstract

Available at [Intensive care medicine](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=24096313) - from EBSCO (MEDLINE Complete)

Available at [Intensive care medicine](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0342-4642&volume=39&issue=S2&spage=201) - from ProQuest (Health Research Premium) - NHS Version

Available at [Intensive care medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Intensive care medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [Intensive care medicine](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4262090) - from Unpaywall

**Abstract:**Introduction. Survivors of influenza A (H1N1)-associated acute respiratory distress syndrome (ARDS) treated with extracorporeal membrane oxygenation (ECMO) had psychological impairment and poor health-related quality of life (HR-QoL) 1 year after intensive care unit (ICU) discharge. No data exists on the persistence of these disabilities beyond 2 years. OBJECTIVES. To evaluate quality of life and psychological outcomes of survivors of influenza A (H1N1)-associated ARDS treated by ECMO 2 years after ICU discharge. METHODS. Thirteen survivors of influenza A (H1N1)-associated ARDS having required an ECMO and hospitalized in our ICU from October 2009 to February 2011 were evaluated in February 2013 during a phone-call interview. HR-QoL was evaluated using the SF-36 score, symptoms of posttraumatic stress disorder using the impact of event scale (IES) and anxiety and depression using the Hospital Anxiety and Depression (HAD) scale. HR-QoL was compared to the sex- and age- matched population. Patients were deemed at risk for post traumatic stress disorder (PTSD) if the IES score was above 30, and had signs of anxiety or depression when the corresponding HAD sub scores were above 10. Results are expressed as median [25-75th percentile]. RESULTS. At the time of influenza, patients were 39 years old [28-46], 7 (54 %) were women, 5 (38.5 %) were obese (BMI[30 kg/m2) and 3 (23 %) were pregnant. Two (15 %) had asthma, 3 (23 %) were smokers, and one had chronic respiratory insufficiency secondary to bronchopulmonary dysplasia. At ICU admission, median SAPS II was 59 [54-72] and PaO2/FIO2 ratio was 64 mmHg [52-114]. ECMO and MV duration were 25 days [10-51] and 34 days [15-75], respectively. Patients were evaluated 35 [23.8-40] months after ICU discharge. As compared to their weight after ICU discharge, they gained 8 kg [2.8-19.5 kg]. Only one patient was an actual smoker. Eight out of the 10 patients who previously worked have returned to work, and 7 patients practiced sport at the time of evaluation whereas only 2 did before influenza. Nine (69 %) had no dyspnea or dyspnea on moderate or strenuous exertion, 3 (23 %) had dyspnea when walking, and one (patient with previous chronic respiratory insufficiency) had dyspnea during minimal activity. Their mean SF-36 domains differed significantly from the normative values of the matched population, with lower physical functioning (p = 0.005), general health (p = 0.0003) and vitality scores (p = 0.05) whereas their mean physical and mental composite scores were not different (p values of 0.06 and 0.09, respectively). No patient was at risk of PTSD. Two patients (5 %) showed symptoms of both anxiety and depression, reported by themselves to social concerns. CONCLUSIONS. After 2 years, survivors of influenza A (H1N1)-associated ARDS having required an ECMO have no severe impairment in HR-QoL, and none are at risk of PSTD. However, 31 % have moderate-to-severe dyspnea. Lung function will be assessed more precisely in these patients.

**Database:** EMBASE

**88. Extra-corporal membrane oxygenation (ECMO) for influenza a(H1N1) induced acute respiratory distress: Preliminary results of a pairwise-matched propensity based analysis**

**Author(s):** Pham T.; Brun-Buisson C.; Combes A.; Roze H.; Richard J.-C.M.; Chevret S.; Mercat A.; Bastien O.; Roch A.; Brochard L.J.

**Source:** American Journal of Respiratory and Critical Care Medicine; 2012; vol. 185

**Publication Date:** 2012

**Publication Type(s):** Conference Abstract

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/gh.html) - from Glenfield Hospital Library Local Print Collection [location] : Glenfield Library.

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Introduction During the recent influenza A(H1N1) pandemic, ECMO has been proposed as a rescue therapy for the most severe patients with refractory ARDS. Since a randomized trial was not feasible in the context of the pandemic, we examined the potential survival benefit of ECMO by matching severe ARDS patients managed with or without this technique based on a propensity score. Materials and method The French REVA-SRLF H1N1 registry prospectively collected the main clinical, biological and ventilation parameters of ARDS patients hospitalized during the 2009 pandemic. Variables presumed to relate significantly to the decision of ECMO treatment or to the outcome (age, Mc Cabe SAPS3, SOFA, BMI, pregnancy, COPD, PF ratio and lactate) were included in a multivariable logistic regression model with ECMO in the first week as the dependant variable to calculate the propensity score for receiving ECMO treatment. Patients treated with ECMO were then matched with patients with severe ARDS managed without ECMO according to the propensity score. Quality of the statistical model chosen was assessed by comparing imbalances through standardized differences of variables between the 2 treatment groups before and after matching. Results Among the 217 patients with severe ARDS, 60 patients were treated by ECMO during the first week and 157 were selected as potential controls based on severity criteria for ARDS. The matching procedure satisfactorily minimized imbalances between the 2 groups, but allowed matching of only 31 pairs. No difference of mortality was observed between the 2 groups (OR=0.77 [0.28-2.11], p=0.61). ECMO patients who could not be matched were younger, had less comorbidities but more severe pre-ECMO respiratory failure as assessed by a lower oxygen saturation and P/F ratio and a higher plateau pressure. Discussion Only half of the ECMO patients could be matched based on the propensity score and we could not find a survival benefit from ECMO in this very similar matched population. Interestingly, the non matched ECMO population lacking comparator was very different and these results do not exclude that ECMO may be more beneficial in previously healthy and younger patients, even with extremely severe respiratory failure. Conclusion There was no difference in ICU mortality between ECMO treated and conventionally treated patients matched on a propensity score. However only 50% of the ECMO patients were successfully matched and those who were not matched were younger, had more severe respiratory failure and tended to have a lower mortality. (Table Presented).

**Database:** EMBASE

**89. Initial review of pregnancies in aberdeen related to H1N1 (SWINE FLU) 2009 influenza**

**Author(s):** Haque L.; Fatima F.; Mathur M.

**Source:** Archives of Disease in Childhood: Fetal and Neonatal Edition; Apr 2012; vol. 97

**Publication Date:** Apr 2012

**Publication Type(s):** Conference Abstract

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Ffn.bmj.com%2Flookup%2Fdoi%2F10.1136%2Ffetalneonatal-2012-301809.184) - from BMJ Journals - NHS

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1359-2998&volume=97&issue=Suppl%201&spage=A57.3) - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Aim To identify high risk patients and review management and outcome of swine flu affected pregnancies at Aberdeen Maternity Hospital. Methodology A retrospective case note review of women admitted to hospital with confirmed or suspected H1N1v influenza infection in pregnancy from Oct 2009 to Nov 2009. Total number of patients identified was six. Data was entered and analysed using SPSS 16. Results Among the affected women, 50% were between the age group of 16-25 years. 66% are primiparous or had one child. Average BMI was 30, Equal number of them were smoker and non-smoker. 67% had past medical problems such as asthma, Hypothyroid, depression. All had ITU admissions and average stay was 5 days. In relation to presenting symptoms all had tiredness/lethargy and 80% had cough, fever and 10% complained of breathlessness. There were 50% non immune (not vaccinated) women. All women were treated with Zanamivir and 2 patients had ECMO. Majority of them delivered at term and among these half had caesarean sections. Average birth weight was 2.9 kg. Conclusions There should be a high index of clinical suspicion in pregnant women developing fever. There is good evidence of safety for both flu vaccines and antiviral medication and therefore pregnant women should be constantly reassured and advised to take flu vaccine.

**Database:** EMBASE

**90. Extra-corporeal membrane oxygenation (ECMO) and H1N1-variant influenza A: The Aberdeen experience**

**Author(s):** Allen L.; Bloomfield R.; Dickson R.; Noble D.W.; Park G.

**Source:** Anaesthesia; Jul 2012; vol. 67 (no. 7); p. 808

**Publication Date:** Jul 2012

**Publication Type(s):** Conference Abstract

Available at [Anaesthesia](http://doi.wiley.com/10.1111/j.1365-2044.2012.07158.x) - from Wiley Online Library

Available at [Anaesthesia](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Anaesthesia](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Extra-corporeal membrane oxygenation (ECMO) has become accepted as a valid management strategy for adult patients with severe acute respiratory distress syndrome in whom effective mechanical ventilation has become either very difficult or impossible. Aberdeen Royal Infirmary intensive care unit (ICU) is a 12-bed facility which was commissioned as an ECMO surge centre in 2009 and 2010, in the face of the H1N1-variant Influenza A pandemic. We describe our experience of providing ECMO support during that time. Methods All patients who received veno-venous ECMO support for severe refractory respiratory failure were identified, and data retrospectively collected for analysis. Results We studied ten patients, four male and six female, with an age range of 21 to 51 years. In nine patients, oro-pharyngeal secretions tested positive for H1N1-variant influenza A, and one patient had a clinical diagnosis of influenza A but negative testing. Eight patients survived to hospital discharge, and two patients died of haemorrhagic complications. Median duration of ECMO was 7 (range 3-16) days. Eight patients were obese, and the median body mass index was 40 kg.m-2. Three patients were pregnant, two of whom were delivered prior to ECMO cannulation. Seven patients only ever had single organ failure. The median duration of ICU stay was 18 (range 11-36) days. Discussion Historically, extracorporeal circuits in various forms have been used to supplement mechanical ventilation [1], but without good evidence of improved patient-centred outcomes. There is an increasing weight of evidence to support ECMO as a technology that will improve survival of patients with severe respiratory failure [2,3]. Our results support the view that ECMO can be used within an adult general ICU-setting as an effective treatment option.

**Database:** EMBASE

**91. District hospital experience of organ support requirements for H1N1-associated pneumonia**

**Author(s):** Krige A.; Chukkambotla S.

**Source:** Critical Care; Mar 2012; vol. 16

**Publication Date:** Mar 2012

**Publication Type(s):** Conference Abstract

Available at [Critical Care](http://ccforum.biomedcentral.com/articles/10.1186/cc10660) - from BioMed Central

Available at [Critical Care](http://europepmc.org/search?query=(DOI:10.1186/cc10660)) - from Europe PubMed Central - Open Access

Available at [Critical Care](http://openurl.ebscohost.com/linksvc/linking.aspx?genre=article&issn=1466-609X&volume=16&issue=Suppl%201&spage=P53&title=Critical%20Care) - from EBSCO (MEDLINE Complete)

Available at [Critical Care](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Critical Care](https://ccforum.biomedcentral.com/track/pdf/10.1186/cc10660) - from Unpaywall

**Abstract:**Introduction The objective of our study was to describe the disease pattern, outcomes and organ support required in treating H1N1- associated pneumonia in a single-centre, district hospital ICU. Methods All of the patients with confirmed H1N1 infection admitted to our ICU during the months of December 2010 and January 2011 were studied. The outcome measures were incidence, severity and support for organ dysfunction, length of stay in ICU and mortality. Results During the study period 27 patients were admitted. The mean age was 46.6 years (SD 13.6) with 20 (74%) patients being female, of whom two were pregnant. The mean APACHE scores were similar between survivors and nonsurvivors, 14.1 and 13.7 respectively. Twenty patients (74%) required invasive mechanical ventilation with median duration of 9 days (range 2 to 54 days). Advanced techniques like prone position ventilation and high-frequency oscillatory ventilation were required in 20% and 10% of these patients respectively. Two patients were referred for ECMO. Ventilator-associated pneumonia (VAP) ensued in 25% of invasively ventilated patients resulting in an increase in ventilator days (median) from 9 to 19 and ICU stay (median) from 15 to 23 days. Four (15%) required advanced cardiovascular support, 14 (52%) developed acute kidney injury (AKI) of which nine (33%) patients required renal replacement therapy. The ICU mortality was 11.1% and hospital mortality was 14.8%. The cohort who developed AKI had 21% mortality. The median ICU stay (range) was 15 days (2 to 68 days). Conclusion H1N1 pneumonia was associated with significant morbidity and mortality requiring advanced multiorgan support in the majority of patients. Although the incidence of organ dysfunction in our cohort mirrored that found in the Swift study [1], in keeping with advances in management of H1N1-associated critical illness the mortality was lower in the current study.

**Database:** EMBASE

**92. H1N1: Viral pneumonia as a cause of acute respiratory distress syndrome**

**Author(s):** Ramsey C.; Kumar A.

**Source:** Current Opinion in Critical Care; Feb 2011; vol. 17 (no. 1); p. 64-71

**Publication Date:** Feb 2011

**Publication Type(s):** Article

**PubMedID:** 21157318

Available at [Current opinion in critical care](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Current opinion in critical care](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Purpose of Review: To review the literature on novel swine origin influenza A (H1N1 2009) as a cause of respiratory failure and acute respiratory distress syndrome (ARDS). Recent Findings: H1N1 2009 was first recognized as a pathogen in March of 2009, when there was a spike in the number of cases of influenza-like illness leading to severe and at times fatal pneumonia. The etiologic agent was then identified as a novel H1N1 influenza A virus, which subsequent spread rapidly throughout the globe. Most countries reported cases of severe viral pneumonitis requiring intensive care unit (ICU) admission. Severe disease was noted to occur more commonly in younger patients than those typically affected by seasonal influenza and obesity and pregnancy were associated with severe disease. The majority of patients requiring ICU admission met criteria for ARDS and case fatality ratio was estimated at less than 0.5%. Chest radiographs and pathology resembled ARDS and most patients were treated with low tidal volume ventilation, high positive end expiratory pressure and at times, rescue therapies. Available evidence suggests that early antiviral treatment improves outcomes from H1N1 2009. Summary: H1N1 2009 has emerged as an important cause of ARDS in 2009-2010. Prompt recognition and treatment with antivirals improves outcomes. © 2011 Wolters Kluwer Health Lippincott Williams & Wilkins.

**Database:** EMBASE

**93. Factors associated with severe illness in pandemic 2009 influenza a (H1N1) infection: Implications for triage in primary and secondary care**

**Author(s):** Singanayagam A.; Wood V.; Chalmers J.D.

**Source:** Journal of Infection; Oct 2011; vol. 63 (no. 4); p. 243-251

**Publication Date:** Oct 2011

**Publication Type(s):** Review

**PubMedID:** 21839111

Available at [The Journal of infection](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Pandemic (H1N1) 2009 influenza virus (pH1N1/09) infection spread rapidly around the globe, leading to a phase 6 pandemic level of alert declared in June 2009. The WHO declared the end of the pandemic in August 2010. Although for the majority of infected patients, it manifest as a mild, self-limiting illness, a proportion appeared to follow an adverse clinical course, requiring higher level care and aggressive management strategies. Experience with previous pandemics suggests that H1N1 will continue to circulate for many years. The aim of this review is to evaluate data from published case series reporting patients with pH1N1/09 influenza to identify clinical markers of severe disease. Comorbid illnesses including chronic lung disease, obesity and pregnancy have been shown to confer increased risk of severe infection. Admission vital signs, laboratory investigations and chest radiographic features can guide admitting clinicians to stratify patients' risk of severe disease, however, the currently available severity scoring tools have only a limited role in risk assessment. Knowledge of high risk parameters remains important for clinicians triaging patients with suspected pH1N1/09 influenza and to inform strategies for future pandemics. © 2011 The British Infection Association.

**Database:** EMBASE

**94. Authors' reply**

**Author(s):** Knight M.; Pierce M.; Kurinczuk J.J.; Spark P.; Brocklehurst P.; Seppelt I.; McLintock C.; Sullivan E.

**Source:** BJOG: An International Journal of Obstetrics and Gynaecology; Aug 2011; vol. 118 (no. 9); p. 1140-1141

**Publication Date:** Aug 2011

**Publication Type(s):** Letter

Available at [BJOG: An International Journal of Obstetrics & Gynaecology](http://doi.wiley.com/10.1111/j.1471-0528.2011.02958.x) - from Wiley Online Library

Available at [BJOG: An International Journal of Obstetrics & Gynaecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [BJOG: An International Journal of Obstetrics & Gynaecology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Database:** EMBASE

**95. Influenza AH1N1v in pregnancy**

**Author(s):** Dickson M.; Anders N.

**Source:** BJOG: An International Journal of Obstetrics and Gynaecology; Aug 2011; vol. 118 (no. 9); p. 1140

**Publication Date:** Aug 2011

**Publication Type(s):** Letter

**PubMedID:** 21749611

Available at [BJOG : an international journal of obstetrics and gynaecology](http://doi.wiley.com/10.1111/j.1471-0528.2011.02957.x) - from Wiley Online Library

Available at [BJOG : an international journal of obstetrics and gynaecology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [BJOG : an international journal of obstetrics and gynaecology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Database:** EMBASE

**96. A fatal case in pregnant woman infected by H1N1 2009 in Korea**

**Author(s):** Hur J.A.

**Source:** Infection and Chemotherapy; Apr 2011; vol. 43 (no. 2); p. 225-228

**Publication Date:** Apr 2011

**Publication Type(s):** Article

Available at [Infection and Chemotherapy](http://synapse.koreamed.org/Synapse/Data/PDFData/0086IC/ic-43-225.pdf) - from Unpaywall

**Abstract:**Pregnant women is known to be at risk of high morbiding and mortality from H1N1 2009. Since the emergence of H1N1 2009 in Korean in April 2009, fatal case has not been reported in the Korean pregnant women yet. This is the first report of fatal case in pregnant women associated with H1N1 2009 infection in Korea. A 29-year-old woman at 32 weeks of gestation presented with pneumonia associated with H1N1 2009 infection, progressed into acute respiratory distress syndrome. On the fourth day of admission fetal distress development. The patient died from refractory critical hypoxemia and multiple organ failure on the 5th hospital day in spite of receiving extracorporeal membrane oxygenation therapy and intravenous peramivir. © 2011 by The Korean Society of Infectious Diseases & Korean Society for Chemotherapy.

**Database:** EMBASE

**97. The 2009 influenza pandemic - The experience in the southern hemisphere**

**Author(s):** Kelso A.

**Source:** Clinical Chemistry and Laboratory Medicine; May 2011; vol. 49

**Publication Date:** May 2011

**Publication Type(s):** Conference Abstract

Available at [Clinical Chemistry and Laboratory Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Clinical Chemistry and Laboratory Medicine](https://espace.library.uq.edu.au/view/UQ:309967/UQ309967_OA.pdf) - from Unpaywall

**Abstract:**After its first detection in Mexico and the USA in April 2009, the A(H1N1) 2009 pandemic virus took only a short time to reach the southern hemisphere. Many countries of the northern hemisphere experienced summer and autumn outbreaks, in some cases in two waves. By contrast, in the southern hemisphere, the new virus generally caused a single wave of infections which peaked in the winter months of June - August and had subsided by October 2009. Only sporadic cases were then detected until the next winter season in mid-2010. Despite these differences in the shape of the epidemic curve, the circulating pandemic viruses and the epidemiological and clinical features of disease were similar in the two hemispheres. Young people were preferentially infected and the disease was mild in most people but severe in some - particularly those with certain other conditions, in pregnant women and in indigenous populations. In Australia this presented the paradox of a largely unconcerned community at the same time that intensive care units were under intense pressure managing unprecedented numbers of patients requiring extended ventilation or extracorporeal membrane oxygenation for severe lung disease. As foreseen in pandemic plans, the many months required to develop, register, produce and distribute a specific pandemic vaccine presented a major issue for governments, public health authorities and the community. Australia, with an on-shore vaccine manufacturer, was in the fortunate position of having sufficient vaccine available for its population of 21 million from late September but, with the first pandemic wave largely ended by that time, uptake was initially modest. Serological surveys measuring serum antibodies to the pandemic virus in various populations in Australia and New Zealand have since shown that 10 - 20% of people had been infected with the pandemic virus by late 2009 while many older people had cross-reactive antibodies apparently induced by exposure to previous seasonal influenza viruses. A concerted immunisation campaign in early 2010 brought the proportion of Australian adults with specific antibodies up to about 40%. Perhaps reflecting this degree of population immunity, the Australian influenza season in 2010 was relatively mild and characterised by co-circulation of type B and A(H3N2) viruses with the former pandemic strain. Overall the behaviour of the A(H1N1) 2009 virus in the southern hemisphere in 2010 was consistent with the decision of the World Health Organisation to announce the post-pandemic phase in August 2010. By late 2010, A(H1N1) viruses were showing increasing genetic diversity but little evidence of antigenic drift. A major focus now is on surveillance to detect the emergence of variants which can escape antibody neutralisation, requiring a change in vaccine composition.

**Database:** EMBASE

**98. A comparison of the first and second waves of H1N1-related critical illness in Canada**

**Author(s):** Gu S.; Fowler R.; Long J.; ICU-Flu O.; Menon K.; Cook D.; McGeer A.; Kumar A.; Jouvet P.; Marshall J.; Hutchison J.

**Source:** American Journal of Respiratory and Critical Care Medicine; May 2011; vol. 183 (no. 1)

**Publication Date:** May 2011

**Publication Type(s):** Conference Abstract

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/gh.html) - from Glenfield Hospital Library Local Print Collection [location] : Glenfield Library.

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [American Journal of Respiratory and Critical Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Rationale: The 2009-2010 H1N1 pandemic flu occurred predominantly in 2 waves in the northern hemisphere; however, there are few comparisons of H1N1-related critical illness between waves. This is an important comparison because early case findings may provide inaccurate descriptions of baseline characteristics and severity of illness. Furthermore, risk factors for infection may change over time and clinical experience may influence prevention and treatment, all altering patient outcomes. Method(s): We employed an observational study of critically ill Canadian adults with 2009-2010 influenza A(H1N1) during two waves(April 16 - August 10, 2009; August 12 2009 - April 12, 2010), comparing baseline characteristics, illness progression, treatments and outcomes. The primary outcome was in-hospital mortality. Result(s): We describe 764 patients(155, 20.3% first wave; 609, 79.7% second wave). Mean age(SD) (wave 1 vs. 2) was 44.7(16.1) vs. 47.7(15.0) years(p=0.03); female sex 67.1% vs. 47.4%(p<0.0001); concomitant pregnancy(11.6% vs. 7.3%, p=0.0008); health-care worker 7.4% vs. 1.8%(p<0.0001); and Aboriginal 29.7% vs. 6.9%(p<0.0001). Fever was more common in wave 1(89.7% vs. 74.1%, p<0.0001) as was the presence of "any" co-morbidity(88.4% vs. 91.0% p=0.33). Obesity was more common in wave 2(20.6% vs. 31.9%, p=0.012) as was concomitant bacterial pneumonia(39.0% vs. 54.0%, p=0.003) and renal insufficiency(13.9% vs. 27.9%, p=0.0001). Wave 2 patients had a higher admission APACHE II score(19.4 vs. 21.5 p=0.03) although overall organ dysfunction was similar. Mean day 1 PaO2/FiO2 ratio was similar(150 vs. 153, p=0.32) as were rates of mechanical ventilation(invasive-86.2% vs. 83.7%, p=0.46; non-invasive - 36.0% vs. 35.0% p=0.82; HFO - 9.3% vs. 14.4%, p=0.10; ECMO - 2.7% vs. 3.3%, p=0.79) and tracheostomy(12.8% vs. 19.6%, p=0.3). Medications were similar between waves, including antibiotics(98.7% v. 96.9%, p=0.21); neuraminidase inhibitors(89.0% vs. 85.4%, p=0.24) and corticosteroids(48.4% vs. 55.3%, p=0.12). In-hospital mortality was 19.6% vs. 25.6%(p=0.13); mean length of stay in ICU was 16(14) vs. 14(15) days, (p=0.06) and mean hospital stay was 24(18) vs. 24(24) days(p=0.96). Conclusion(s): Among adult patients with H1N1-related critical illness in Canada, those in wave 2 were older, less likely to be female, pregnant or Aboriginal. Wave 2 patients had higher illness severity and a higher incidence of concomitant bacterial pneumonia and renal failure. However, organ dysfunction, treatments, and in-hospital mortality were similar. These findings highlight important differences in the characteristics but not the management or outcomes of critically ill patients during wave 1 and 2 of the Canadian H1N1 pandemic.

**Database:** EMBASE

**99. Long-termoutcomeof survivorsof acute respiratory distress syndrome (ARDS) due to pandemic 2009 influenza a (H1N1) virus infection: The respiflu study**

**Author(s):** Luyt C.-E.; Combes A.; Chastre J.; Richard J.-C.M.; Mercat A.; Brochard L.; Brun-Buisson C.

**Source:** Intensive Care Medicine; Sep 2011; vol. 37

**Publication Date:** Sep 2011

**Publication Type(s):** Conference Abstract

Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/gh.html) - from Glenfield Hospital Library Local Print Collection [location] : Glenfield Library.

Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**INTRODUCTION. No data exist on the long term outcomes of survivors of ARDS due topandemic 2009 H1N1 virus infection.OBJECTIVES. One-year after intensive care unit (ICU) discharge, we evaluated lungfunction, muscle strength, psychological impairment and quality of life of survivors of ARDSdue to the pandemic 2009 H1N1-virus infection according to the use or not of extracorporeallung support (ECLS), using the need for ECLS as a surrogate for ARDS severity.METHODS. ARDS survivors were selected from the French registry of critically ill patientswith 2009 H1N1 infection when they had previously been healthy without known risk factorsfor that infection, except pregnancy and/or moderate obesity (BMI <=35 kg/m2). All wereevaluated 1 year after ICU discharge: lung function was assessed with standard pulmonaryfunctiontests; alveolar-arterial O2 gradient was measured during a stress test; health-relatedquality of life (HRQoL) was evaluated with the short form health survey (SF-36); symptoms ofanxiety, depression and post-traumatic stress disorder (PTSD) were also assessed. The 12patients with ECLS were compared to 25 without.RESULTS. Patients' clinical characteristics at the time of H1N1 infection were similar forboth groups, except that patients with ECLS had longer median [IQR] mechanical ventilationduration, respectively: 36 [18-61.5] versus 13 [8.5-21] days than those without ECLS(p = 0.001). The median [IQR] ECLS duration was 10 [7.75-19.5] days. At 1 year, for thegroups with ECLS and without, respectively, 50 and 40% reported significant dyspnea onexertion; 83 and 64% had returned to work. All patients had normal muscle strength. Lungfunction test results were near normal and similar for both groups, whereas 75% of the patientswith ECLS and 64% of those without had decreased diffusion capacity across the blood-gasbarrier (assessed as DLCO, p = 0.49 for between-group comparison). For both groups, stresstestresults showed diminished but comparable exercise capacities, and their alveolar-arterialO2 gradients at maximum exercise were similar. SF-36-assessed HRQoL was lower for bothgroups than for a sex-and age-matched population, but without between-group difference.Patients with ECLS or without, respectively, had symptoms of anxiety (50 and 56%) anddepression (28 and 28%), and were at risk for PTSD (41 and 44%).CONCLUSIONS. One year after ICU discharge, survivors of ARDS due to 2009 H1N1infection had minor lung disabilities and diffusion capacities across the blood-gas barrier wasdecrease for a majority. Most had lower HRQoL, reported anxiety and/or depression, and wereat risk for PTSD. ECLS use for the most severely ill patients was not associated with worselong-term lung disabilities, QoL or psychological impairment.

**Database:** EMBASE

**100. Clinical analysis of twelve fatal cases with influenza a (H1n1) virus infection**

**Author(s):** Ban C.; Gu L.; Sun B.; Zhan Q.; Cao B.; Dai H.; Wang C.

**Source:** Respirology; Nov 2011; vol. 16 ; p. 51

**Publication Date:** Nov 2011

**Publication Type(s):** Conference Abstract

Available at [Respirology](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Fdoi.org%2F10.1111%2Fj.1400-1843.2011.02071.x) - from Wiley Online Library Medicine and Nursing Collection 2019 - NHS

Available at [Respirology](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Respirology](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Objective: To analyze the clinical characteristics and management of 12 fetal cases with influenza A (H1N1) virus infection. Method(s): We retrospectively analyzed the clinical data of 12 fetal cases with influenza A (H1N1) virus infection treated in Beijing Chao-Yang Hospital from November 2009 to March 2011. Result(s): Among 12 patients, 8 males, 4 females including 2 pregnant women, mean age 43.7 +/- 13.5 years old. Underlying diseases including: 1 case with fatty liver, 1 with hypertension, 1 with hypertension and diabetes, 2 with diabetes, hypertension and chronic nephritic disease, 1 with schizophrenia, and 1 aplastic anemia. All patients had fever, cough and dyspnea. Hemoptysis presented in 6 cases and one of them with large volume hemoptysis. Acute lung injury score (Murray score) was 3.4 +/- 0.7. The lowest mean oxygenation index during treatment was 89.8 +/- 64.1. Lower level of blood albumin was detected in all patients. Non-invasive positive pressure ventilation was applied in 8 cases, 7 of them were intubated about 2-6 days later. Four cases were intubated on admission. Patients were intubated on average 8.9 +/- 5.1 days from onset of illness. Three cases used extracorporeal membrane oxygenator (ECOM) for respiratory support. All were started Oseltamivir therapy with the mean time of 7.6 +/- 3.7 days from the onset of illness. Methylprednisolone was used in all patients with the dose of 1- 2 mg/(kg.d), qd, d1-3 and decreased with dose gradually. 3 of them were treated with the dose 500 mg qd d1-2. Time of therapy was from 1 to 24 days. Invasive pulmonary Aspergillus infection was detected in 5 patients. Conclusion(s): All fetal cases had severe lung acute injury. Delayed antivirus and combined with glucocorticoids therapy could not prevent the deterioration of the lung function. And treatment with glucocorticoids might increase the chance of fungus infection. ECMO could enhance the support of respiratory failure.

**Database:** EMBASE

**101. Pandemic H1N1 influence in pregnant women: Clinical features and one year follow up**

**Author(s):** Xiong H.F.; Jiao Y.-Q.; Liu J.-Y.; Li B.-S.; Yu G.W.

**Source:** International Journal of Infectious Diseases; Jul 2011; vol. 15

**Publication Date:** Jul 2011

**Publication Type(s):** Conference Abstract

Available at [International Journal of Infectious Diseases](https://linkinghub.elsevier.com/retrieve/pii/S120197121160221X?goto=sd) - from ScienceDirect Please click on 'Sign in' and then on 'OpenAthens' for the site to recognise your Athens account and provide access to the full range of issues.

Available at [International Journal of Infectious Diseases](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [International Journal of Infectious Diseases](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [International Journal of Infectious Diseases](https://doi.org/10.1016/s1201-9712(11)60221-x) - from Unpaywall

**Abstract:**Objective: To describe the clinical features and one year follow up condition of pandemic H1N1 influence in pregnant women. Method(s): The clinical features and supplemental data were analyzed. One year follow up was performed from Dec 2010 to Jan 2011. Result(s): From May 15 to Jan 10, 2010, 32 confirmed cases of pandemic H1N1 in pregnant women were admitted to hospital. They ranged in age from 22 33 years (media 26.1). 13 (40.6%) women were in the first or second trimester of pregnancy and 19 (59.4%) were in the third trimester. The most common symptoms were fever in 93.8%, coughing in 46.9%, sore throat in 40.6%, shortness of breath in 31.3%, hemoptysis in 12.5%. Six patients who had developed pneumonia and subsequent acute respiratory distress syndrome requiring mechanical ventilation, three patients requiring Extracorporeal Membrane Oxygenation (ECMO). Emergency caesarean delivery was preformed in four patients for premature rupture of membranes (in three cases) and dead fetus in uterus (in one case) and one patient delivered a dead fetus herself in the hospital. As to one year follow up condition: all patients and infants were healthy except one give induced abortion in the twenty-six patients. Two patients (all in critical group) have abnormal lung function, mainly a slight decrease in ventilation function and small airway obstruction. Cardiac structure and function are normal in all patients. Three patients have abnormal in CT scan, mainly focal chronic inflammation and fibrosis (3 cases) and bronchiectasis (1 case). Conclusion(s): Pregnant women might be at increased risk for complications from pandemic H1N1 virus infection. One year follow up condition show some patients may suffer from lingering effects such as pulmonary fibrosis.

**Database:** EMBASE

**102. Spontanni porod behem ECMO podpory zahajene pro ARDS u nemocne s H1N1 pneumonii - KazuistikaSpontaneous delivery during ECMO for H1N1 pneumonia-related ARDS - Case report**

**Author(s):** Kunstyr J.; Lips M.; Stritesky M.; Bartakova H.; Balik M.; Belohlavek J.; Prskavec T.; Mlejnsky F.; Koucky M.; Sebron V.

**Source:** Anesteziologie a Intenzivni Medicina; 2010; vol. 21 (no. 5); p. 258-261

**Publication Date:** 2010

**Publication Type(s):** Article

Available at [Anesteziologie a Intenzivni Medicina](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Authors present a case report of a woman in the 24th week of pregnancy who acquired intractable swine influenza-related ARDS. Failing conventional ICU therapy including aggressive mechanical ventilation, she was transferred to an ECMO centre where veno-venous (VV) ECMO provided oxygenation and ventilation together with the sanation of the lung injury and barotrauma. Thirty hours post commencing the VV-ECMO she spontaneously delivered. Besides a temporary cessation of the heparin infusion the delivery did not require special measures or changes to the ECMO therapy. The authors discuss the peri-partum issues in pregnant women suffering from severe respiratory failure on VV-ECMO. Complex ultrasound monitoring is highly recommended.

**Database:** EMBASE

**103. H1N1 induced ARDS: ECMO as rescue therapy in patients with failed mechanical ventilation -a review**

**Author(s):** Ismail A.H.; Marzida M.; Ong Grade S.Y.; Kumar N.M.

**Source:** Journal of the University of Malaya Medical Centre; 2010; vol. 13 (no. 2); p. 80-87

**Publication Date:** 2010

**Publication Type(s):** Review

Available at [Journal of the University of Malaya Medical Centre](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Since the outbreak of the novel influenza HI N1 in Mexico in April 2009, more than half a million cases have been recorded with close to 6000 deaths. In contrast to seasonal flu, this virus appears to have a predilection for the young, obese and pregnant. It's most important and almost fatal complication is Acute Respiratory Distress Syndrome (ARDS). ICUs around the world have scrambled to upgrade various treatment modalities including high frequency oscillation ventilation, inotropes, antivirals and antibiotics in an effort to reduce the mortality arising out of this complication. More importantly, this complication appears reversible if adequate and early therapy is instituted. In particular, rescue therapies that allow the lung to rest appear to have brought success in some clinical settings. This article describes the experiences of six centres that have used Extracorporeal Membrane Oxygenation (ECMO) as rescue therapy in patients having ARDS. ECMO has been instituted in many of these cases not only as a bridge to therapy but also to reduce further barotrauma in these patients. ECMO experiences regarding 2 patients at the University of Michigan, 7 in Canada, 68 patients at Leicester UK, 68 in Australia and New Zealand, 1 in Hong Kong and 2 in Singapore are described.

**Database:** EMBASE

**104. Remote extracorporeal membrane oxygenation support for severe respiratory failure after influenza a (H1N1) infection**

**Author(s):** Gariboldi V.; Grisoli D.; Jaussaud N.; Riberi A.; Chalvignac V.; Collart F.; Dizier S.; Kerbaul F.

**Source:** Interactive Cardiovascular and Thoracic Surgery; Sep 2010; vol. 11

**Publication Date:** Sep 2010

**Publication Type(s):** Conference Abstract

Available at [Interactive CardioVascular and Thoracic Surgery](https://academic.oup.com/icvts/article-lookup/doi/10.1510/icvts.2010.0000S9) - from Oxford Journals - Open Access

Available at [Interactive CardioVascular and Thoracic Surgery](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Objectives: Influenza A (H1N1) virus infection can lead to severe acute respiratory distress syndrome (ARDS), potentially fatal in adults. When optimal mechanical ventilation (associated with usual adjuvant therapies) fails, extracorporeal membrane oxygenation (ECMO) can treat refractory hypoxaemia- hypercapnia. For such critical patients outside our institution we create a mobile respiratory assistance unit (MRAU) to implant the ECMO and bring them back when stabilised in our ICU for follow-up. Our study was undertaken to evaluate the feasibility of the procedure and the results of our experience. Method(s): Between August 2009 and January 2010, 11 patients, mean age 36.9 years (17-61 years), four male, seven female (of whom one was pregnant), were implanted by our MRAU. We analysed logistic concerns, complications, and outcome of these patients. Result(s): There were no logistical problems during round trip and ECMO implantation. Mean distance from our ICU was 68 km (4-202). Time limit for arriving on site was 58 min (25-110), by air (helicopter: three cases) or road (ambulance: eight), and total duration of UMAR management was 6 h 18 min (2 h 58 min-11 h 57 min). When arriving, all patients were treated with Tamiflu and optimal mechanical ventilation. Mean body mass index was 30.4 (19.8-41.9). All patients received a veno-venous ECMO (femoro-femoral in eight patients and jugulo-femoral in three patients). Six patients died under ECMO. Five patients were successfully weaned from ECMO after 6.8 days (3.6-11.2). One month survival was 45%. Conclusion(s): The MRAU allowed the emergency implant of veno-venous ECMO for H1N1 infection with severe ARDS in remote institutions, with 45% survival in such critically ill patients.

**Database:** EMBASE

**105. Extracorporeal membrane oxygenation for 2009 influenza a (H1N1) severe pneumonia: Experience from a single institution**

**Author(s):** Luyt C.; Combes A.; Trouillet J.; Chastre J.; D'Alessandro C.; Barreda E.; Leprince P.; Pavie A.

**Source:** Interactive Cardiovascular and Thoracic Surgery; Sep 2010; vol. 11

**Publication Date:** Sep 2010

**Publication Type(s):** Conference Abstract

Available at [Interactive CardioVascular and Thoracic Surgery](https://academic.oup.com/icvts/article-lookup/doi/10.1510/icvts.2010.0000S9) - from Oxford Journals - Open Access

Available at [Interactive CardioVascular and Thoracic Surgery](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

**Abstract:**Objectives: To describe the clinical course of the 2009 influenza A (H1N1)- related acute respiratory distress syndrome (ARDS) patients requiring extracorporeal membrane oxygenation (ECMO) in our centre. Method(s): We studied patients who were treated with ECMO in our centre during the 2009 influenza A (H1N1) pandemic. We only included confirmed cases of 2009 influenza A (H1N1)-related respiratory disease. Patients with an alternative diagnosis and who had no virus isolated were excluded. Data were retrospectively collected from the medical charts of the patients. Result(s): Among the 14 patients hospitalised for 2009 influenza A (H1N1)- related respiratory disease, 11 patients were placed on ECMO, all in the veno-venous position. For all but one patient, the ECMO was placed by the cardiac assist mobile unit, because of the severity of the disease, before the transfer to our hospital. Median age of patients was 33 years (range 14-53 years). Eight (73%) patients were female, of whom four were pregnant. Five (46%) patients were overweight (BMI >30). Of the 11 patients, nine survived (82%) and were discharged from hospital. The two deaths were due to septic shock complicating ventilator-associated pneumonia on day 3 and day 20. Median duration of veno-venous ECMO support among survivors was 23 days (range 6-47 days). ECMO complications were common, including significant bleeding in eight (73%) patients, and ECMO-related bacteraemia in five (45%). These latter complications were observed in patients with prolonged duration of ECMO support. Conclusion(s): In our experience, severe forms of influenza-associated ARDS required ECMO for a long period of time. Despite bleeding and infectious complications, most patients survived.

**Database:** EMBASE

**106. Case series: Pregnancy outcomes in women requiring ICU admission for severe H1N1 (SWINE FLU) related acute respiratory distress syndrome at a tertiary centre**

**Author(s):** Qin V.; Nayyor R.; Alahakoon I.

**Source:** Journal of Paediatrics and Child Health; Mar 2010; vol. 46 ; p. 84

**Publication Date:** Mar 2010

**Publication Type(s):** Conference Abstract

Available at [Journal of Paediatrics and Child Health](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fdoi.wiley.com%2F10.1111%2Fj.1440-1754.2010.01708.x) - from Wiley Online Library Medicine and Nursing Collection 2019 - NHS

Available at [Journal of Paediatrics and Child Health](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Journal of Paediatrics and Child Health](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Background: H1N1 virus has been identified as a cause of widespread outbreak of febrile respiratory infection worldwide. Pregnancy is a risk factor for severe morbidity requiring hospital admission and intensive care for H1N1 influenza. Method(s): We present a series of four patients requiring admissions to ICU with confirmed H1N1 infections at Westmead Hospital, Sydney, Australia. Result(s): Three patients were admitted antenatally at 28 and 34 weeks of gestation while one patient presented intra-partum. Two patients had associated co-morbidity. All four patients had severe pneumonia, dehydration, respiratory failure and acute respiratory distress syndrome (ARDS) requiring mechanical ventilation and intensive care unit (ICU) care. Average time of mechanical ventilation was 7 days, with one readmission to ICU. There were no maternal deaths, no preterm delivery prior to 34 weeks gestation and excellent neonatal outcome. Two patients with ARDS and artificial respiration at 28 weeks gestation were followed up in high risk antenatal clinic and proceeded to uncomplicated deliveries at term. These patients were managed avoiding extracorporeal membrane oxygenation (ECMO) for treatment of ARDS. Conclusion(s): Care of acutely ill pregnancy patients provided in a tertiary centre with multi-disciplinary inputs and a designated maternal fetal medicine team can lead to the excellent outcomes for both mother and neonate. Deliveries after 34 weeks are indicated to improve maternal ventilation. Extreme preterm deliveries are controversial and could be avoided.

**Database:** EMBASE

**107. The impact of the H1N1 pandemic in pregnancy - A District General Hospital perspective**

**Author(s):** Mullan C.; Davies J.

**Source:** Archives of Disease in Childhood: Fetal and Neonatal Edition; Jun 2010; vol. 95

**Publication Date:** Jun 2010

**Publication Type(s):** Conference Abstract

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Ffn.bmj.com%2Flookup%2Fdoi%2F10.1136%2Fadc.2010.189753.90) - from BMJ Journals - NHS

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1359-2998&volume=95&issue=Supplement%201&spage=Fa60) - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Introduction Swine flu (Influenza A H1N1) has been implicated in 289 deaths in England since it reached pandemic levels in April 2009. At least 2 pregnant women in the UK are thought to have died directly as a result of H1N1. The authors describe our experiences. Case 1: A 17-year-old brittle asthmatic, 22 weeks pregnant with twins, was admitted with bibasal pneumonia. Due to hypotension and respiratory failure, she was transferred to the intensive treatment unit. She quickly deteriorated, and ultimately died of fulminant sepsis. Nasal swabs were negative but a presumed diagnosis of H1N1 was made. Case 2: A 22 year old developed confirmed H1N1 infection in her 3rd trimester. After delivery she required transfer to Leicester for extracorporeal membrane oxygenation (ECMO). She was then transferred to our ITU for ongoing care, where she remains ventilated 9 weeks following delivery. Case 3: A 17 year old with known asthma was admitted with pneumonia at 22 weeks gestation. H1N1 infection was confirmed on bronchial swabs. She required ventilation for 2 weeks due to respiratory failure. Discussion Relative immune suppression in pregnancy means that pregnant women are more likely to become infected with H1N1 and suffer serious complications like pneumonia. They are also more likely to be more seriously affected by these complications. These cases emphasise the importance of taking swabs in feverish pregnant women and, as H1N1 is difficult to isolate from nasal swabs, broncheo-alveolar lavage is recommended. The vaccination of pregnant women should remain a high priority.

**Database:** EMBASE

**108. Pregnancy and the pandemic H1N1 influenza virus: Experiences in Leicester including the women referred for extracorporeal membrane oxygenation**

**Author(s):** Moronke A.; Faulkner G.; Firmin R.; Siddiqui F.; Roy C.

**Source:** Archives of Disease in Childhood: Fetal and Neonatal Edition; Jun 2010; vol. 95

**Publication Date:** Jun 2010

**Publication Type(s):** Conference Abstract

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Ffn.bmj.com%2Flookup%2Fdoi%2F10.1136%2Fadc.2010.189753.30) - from BMJ Journals - NHS

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1359-2998&volume=95&issue=Supplement%201&spage=Fa42) - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at [Archives of Disease in Childhood - Fetal and Neonatal Edition](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

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**Abstract:**Since April 2009, the novel pandemic A/H1N1 influenza virus began causing illness in the UK. While causing mild flu-like symptoms in the majority of cases, the virus has been also identified as the cause of an outbreak of febrile respiratory infection. 34 confirmed cases of pandemic H1N1 in pregnant women were admitted to the maternity unit in Leicester. Leicester Glenfield Hospital is the 'front door' for access to adult extracorporeal membrane oxygenation (ECMO) in the UK. In consequence, our experiences reflect the severe end of the clinical spectrum. The authors summarised cases of infection with pandemic H1N1 virus in pregnant women in Leicester between April and December 2009. Pregnant women represent approximately 1% of the general population of the UK. Three of the 11 patients (18.2%) admitted to the intensive care unit at Leicester Royal Infirmary, with the confirmed 2009 H1N1 influenza were pregnant women. Of the 53 patients referred for ECMO, 18 (34%) were pregnant or recently delivered. When compared to the non-pregnant cohort, perinatal women are at risk of severe respiratory failure. Adult respiratory distress syndrome requiring respiratory support is a documented complicated of the H1N1 influenza virus. ECMO support when conventional ventillatory methods have failed, improves the respiratory function. Pregnant or recently delivered women were over represented in the groups admitted for respiratory support, and experience a more complicated recovery. These data lend support to the present recommendation to promptly treat pregnant women with H1N1 influenza virus infection with anti-flu drugs and encourage the vaccination programme in pregnant women.

**Database:** EMBASE

**109. Standardized ards algorithm improves safe transport of critically ill patients for ECMO evaluation at a regional ARDS center**

**Author(s):** Masood M.; Jeffrey T.; Park P.; Lowell M.; Haas C.; Haft J.; Meldrum C.; Napolitano L.

**Source:** Critical Care Medicine; Dec 2010; vol. 38

**Publication Date:** Dec 2010

**Publication Type(s):** Conference Abstract

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Available at [Critical care medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Critical care medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

**Abstract:**Introduction: Transport of critically ill patients with severe acute respiratory distress syndrome (ARDS) is challenging related to severe hypoxemia, hypercarbia, and hemodynamic instability. An ARDS algorithm was created for stabilization of critically ill patients prior to air transport to our regional ARDS center. Hypothesis: The use of a standardized ARDS algorithm will facilitate safe transport of ARDS patients. Method(s): Retrospective review was performed of all Extracorporeal Membrane Oxygenation (ECMO) referrals transported to our institution over a 5 year period (7/2005-7/2010). This data serves as an update to previously reported 72 patients. The ARDS algorithm was initiated by the critical care air transport team on arrival at the referring institution with direct communication with the fellow/attending intensivist, and included recruitment maneuvers, advanced mechanical ventilation, inhaled nitric oxide, correction of respiratory acidosis with NaHCO3 and/or tromethamine, and critical care management. Optimal endpoints to initiate transport included target PaO2 60 mm Hg and arterial pH 7.30. Result(s): 162 patients with severe ARDS were successfully transferred by the critical care air transport team. 157 patients (96.9%) were successfully transported on first attempt; 5 patients (3.1%) failed initially and were transported after a second attempt. Patients were 47% female and 53% male; mean age was 39 (range, 8-80) years. 36 patients had 2009 Influenza A (H1N1) virus infection. Median (range) laboratory values: PaO2/ FiO2 ratio 66 (43-261), arterial pH 7.29 (6.90 -7.50), PaCO2 47 (20 -104) mmHg, PaO2 75 (42-290) mmHg, oxygen saturation 89% (63 - 100%), FiO2 1.0 (.90-1.0), PEEP 14.4 (5-32) cm H2O, peak inspiratory pressure 38 (18 -72) cm H2O. 59% of patients were on vasopressors, 3 were on drotrecogin alpha and 4 patients were pregnant. 28 patients received inhaled nitric oxide; 5 were nonresponders. 8 patients were transported on ECMO following cannulation at the referring hospital. No deaths occurred during air transport. Conclusion(s): Development and use of anARDSalgorithm for critical care air transport standardized management and facilitated safe transport of severe ARDS patients to definitive care.

**Database:** EMBASE

**110. Bacterial pneumonia complicating influenza a (H1N1)v viral pneumonia: Results of the esicm influenza a (H1N1)v registry**

**Author(s):** Matos R.G.; Moreno R.P.; Diogo A.C.; Pereira J.M.; Martin-Loeches I.; Cecconi M.; Rhodes A.; Lisboa T.; Rello J.

**Source:** Intensive Care Medicine; Sep 2010; vol. 36

**Publication Date:** Sep 2010

**Publication Type(s):** Conference Abstract

Available at [Intensive Care Medicine](http://link.springer.com/10.1007/s00134-010-2001-7) - from SpringerLink

Available at [Intensive Care Medicine](http://openurl.ebscohost.com/linksvc/linking.aspx?genre=article&issn=1432-1238&volume=36&issue=S2&spage=326&title=Intensive%20Care%20Medicine) - from EBSCO (MEDLINE Complete)

Available at [Intensive Care Medicine](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0342-4642&volume=36&issue=S2&spage=326) - from ProQuest (Health Research Premium) - NHS Version

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Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [Intensive Care Medicine](https://link.springer.com/content/pdf/10.1007%2Fs00134-010-2001-7.pdf) - from Unpaywall

**Abstract:**OBJECTIVES. To compare patients admitted in the Intensive Care Unit (ICU) due to pandemic Influenza A (H1N1)v virus with bacterial pneumonia with those with primary viral pneumonia some of them with whizzing as major clinical sign. METHODS. Prospective, multicentre, observational cohort study in patients admitted to ICUs of 33 Countries. Data were collected through a web-based eCRF (European Society of Intensive Care Medicine Influenza A (H1N1)v Registry). RESULTS. A total of 512 episodes of pandemic Influenza A (H1N1)v infections in critical care setting were analyzed: 169 with bacterial pneumonia (94 males and 73 females) and 343 with wheezing or viral pneumonia (182 males and 161 females). The mean age was 45 (+/- 17) years in patients with bacterial pneumonia and 40 (+/- 17) in patients viral pneumonia. The mean APACHE II score was 25 (+/- 9) and 20 (+/- 9), with a corresponding probability of death of 37 (+/- 25)% and 24 (+/- 21)%. Comorbidities were common, but without significant differences between the two groups (only exceptions pregnancy-more prevalent in patients without bacterial pneumonia-and dialysis dependence-more prevalent in patients with bacterial pneumonia). At ICU admission shock and acute renal failure were more common in patients with bacterial pneumonia. In patients without pneumonia; Severe hypoxia and ARDS did not presented significant differences between groups. Invasive mechanical ventilation was used more frequently in bacterial pneumonia (133 patients, 84.2%vs. 229 patients, 74.1%, p = 0.02), as well as non-invasive ventilation (61 patients, 40.7% vs. 128, 44.3%, p = NS). On the other side, ECMO was used in only 10 patients (7.9%) vs. 50 patients (18.5%), p<0.015. Wewere not able to demonstrate significant differences in the use of prone position, vasopressors, renal replacement therapies, corticosteroids, and anti-vital drugs between both groups. IV antimicrobial therapy was usedmore frequently in patientswith bacterial pneumonia (144 patients, 100% vs. 264, 94.6%, p = 0.009). (Table presented). Mortality was similar in both groups: at ICU discharge (26.0 vs. 26.5%), at 28 days (33.9 vs. 26.2%) and at hospital discharge (43.8 vs. 35.6%). CONCLUSIONS. Both presentation forms behaved similarly in terms of clinical picture and complications present at ICU admission. However, in patients with bacterial pneumonia at ICU admission it seems to exist a greater severity of illness, as very well captured by CAPPIRO system. We have not been able to show significant differences in mortality between both groups.

**Database:** EMBASE

**111. Clinical characteristics in a cohort of critically ill patients infected with pandemic influenza a (H1N1)v: The ESICM H1N1 registry**

**Author(s):** Lisboa T.; Rello J.; Moreno R.; Matos R.; Martin-Loeches I.; Cecconi M.; Rhodes A.; M. Pereira J.

**Source:** Intensive Care Medicine; Sep 2010; vol. 36

**Publication Date:** Sep 2010

**Publication Type(s):** Conference Abstract

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Available at [Intensive Care Medicine](http://openurl.ebscohost.com/linksvc/linking.aspx?genre=article&issn=1432-1238&volume=36&issue=S2&spage=326&title=Intensive%20Care%20Medicine) - from EBSCO (MEDLINE Complete)

Available at [Intensive Care Medicine](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0342-4642&volume=36&issue=S2&spage=326) - from ProQuest (Health Research Premium) - NHS Version

Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/gh.html) - from Glenfield Hospital Library Local Print Collection [location] : Glenfield Library.

Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [Intensive Care Medicine](https://link.springer.com/content/pdf/10.1007%2Fs00134-010-2001-7.pdf) - from Unpaywall

**Abstract:**INTRODUCTION. The recent pandemic influenza A (H1N1)v represents a new challenges to intensive care since it is associated with high morbidity and mortality (1). Data on clinical characteristics and outcomes are important to improve our knowledge and to design strategies to manage these patients. OBJECTIVES. To describe the clinical characteristics and outcomes of critically ill patients infected with pandemic Influenza A (H1N1)v from the European Society of Intensive Care Medicine (ESICM) Registry. METHODS. Prospective, multicentre, observational cohort study in patients admitted to ICU in 33 Countries. A specific data collection document was designed and data were collected through a web-based electronic CRF (ESICM(H1N1)v Registry). RESULTS. After exclusion of all patients with unknown ICU outcome, a total of 512 episodes of pandemic Influenza A(H1N1)v infections admitted to ICUwere analyzed fromESICMRegistry.The median agewas 42 [IQR 30-55] years; 53.9%weremale. ThemedianAPACHEII scorewas 20 [IQR 15-28] and the median admission SOFA score was 8 [IQR 6-10]. The top five recruiting countries were Norway, Spain, Portugal, Italy and UK. The most frequent comorbidities were obesity (BMI>35) (22.2%), hypertension (21.1%), COPD (17.8%) and diabetes mellitus (13.5%). There were 26 pregnant women in this analysis (5.1%). At presentation, the most common symptoms were dyspnoea (61.5%), fever (60.0%) and cough (58.0%). The most common presentation was primary viral pneumonia in 293 patients (57.2%). Bacterial pneumonia was present in 30.3% of patients and asthma/COPDexacerbation in 64 patients (12.5%). Invasivemechanical ventilation(MV)was used in 407patients (79.5%),pronepositioning in93 (18.2%),ECMOwas used in60 (11.7%), inhalednitric oxide in 60 (11.7%) and high-frequency oscillatory ventilation in 11 (2.1%) patients.At admission, vasopressors were used in 162 patients (31.6%), acute renal failure was present in 68 (13.3%) with renal replacement therapy used in 38 (7.4%), patients. TheOseltamivir dose distributionwas bimodal with two peaks at 150 and 300 mg/day. No correlation of dose with outcomes was found. ICUmortality was 26.4% with corresponding hospital mortality of 28.5%. Corticosteroids were used in 218 patients (42.6%), but no associationwith outcomes was found. ICUmortality was associatedwith organ dysfunction at admission [shock with vasopressors (OR = 4.17 95% CI 2.75-6.31), need for MV (OR = 13.29 95% CI 5.84-30.22) and renal replacement therapy (OR = 3.09 95% CI 1.59-5.98)]. Higher SOFA score at admission was associated with worse outcomes. CONCLUSIONS. Severity of disease and not comorbidities was the main determinant of high mortality in patients infected with pandemic Influenza A (H1N1)v infections in critical care setting.

**Database:** EMBASE

**112. Critically ill adult patients with 2009 influenza a(H1N1) infection in france**

**Author(s):** Richard J.-C.M.; Brochard L.; Brun-Buisson C.; Mercat A.

**Source:** Intensive Care Medicine; Sep 2010; vol. 36

**Publication Date:** Sep 2010

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Available at [Intensive Care Medicine](http://link.springer.com/10.1007/s00134-010-2000-8) - from SpringerLink

Available at [Intensive Care Medicine](http://openurl.ebscohost.com/linksvc/linking.aspx?genre=article&issn=1432-1238&volume=36&issue=S2&spage=205&title=Intensive%20Care%20Medicine) - from EBSCO (MEDLINE Complete)

Available at [Intensive Care Medicine](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0342-4642&volume=36&issue=S2&spage=205) - from ProQuest (Health Research Premium) - NHS Version

Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/gh.html) - from Glenfield Hospital Library Local Print Collection [location] : Glenfield Library.

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Available at [Intensive Care Medicine](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [Intensive Care Medicine](https://link.springer.com/content/pdf/10.1007%2Fs00134-010-2000-8.pdf) - from Unpaywall

**Abstract:**OBJECTIVES. To describe the main characteristics, risk factors, treatment and outcome of ICU patients with severe illness caused by 2009 Influenza A (H1N1) infection. METHODS.Prospective observational survey in ICUs affiliated to the French Society of Intensive Care (SRLF); physicians were invited to report on a dedicated web-based registry all patients admitted in ICU with probable or confirmed A (H1N1) influenza infection. RESULTS. From July, 25th to February, 10th, 2010, 548 patients aged>15 years with suspected severe A(H1N1) related illness were admitted to 103 ICUs, of which 509 were laboratory confirmed (PCR). An underlying condition was present in 433 of the 548 patients (79%), mostly obesity (BMI[30; 29%); immunodepression (22%); chronic respiratory disease (21%), asthma (10%); and pregnancy (5%). Antiviral therapy (oseltamivir 94%) was administered to 508 (93%) and corticosteroids (for pneumonia or associated shock) to 124 patients (23%). Mechanical ventilation (MV, invasive or noninvasive) was provided to 406/548 (74%) with a mortality of 25%, whereas only 3% of the 142 patients treated without MV died (Table 1). Among patients receiving MV, 318 (78%) presented clinical findings compatible with the acute respiratory distress syndrome (ARDS); their median duration of ICU stay was 23 days, and their hospital mortality 28%; 55 of these ARDS patients (17%) received ECMO, 21 of whom died (38%). Death during influenza was associated with age, male sex, immunodepression, higher severity, but not with obesity or pregnancy.(Table presented) CONCLUSIONS. This large cohort of critically ill patients with 2009 A(H1N1) influenza infection admitted to French ICUs during the pandemic period corroborates risk factors and population characteristics previously described. The high proportion of MVrequirements parallels the presence of ARDS associated with a 28% mortality rate in this subgroup, which confirms the severity of 2009 A(H1N1) influenza related disease.

**Database:** EMBASE

**113. Mechanical ventilation and ecmo in ards due to influenza infection: Data from the french reva-srlf-registry**

**Author(s):** Brochard L.; Pham T.; Brun-Buisson C.; Richard J.-C.M.; Mercat A.

**Source:** Intensive Care Medicine; Sep 2010; vol. 36

**Publication Date:** Sep 2010

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Available at [Intensive Care Medicine](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0342-4642&volume=36&issue=S2&spage=205) - from ProQuest (Health Research Premium) - NHS Version

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Available at [Intensive Care Medicine](https://link.springer.com/content/pdf/10.1007%2Fs00134-010-2000-8.pdf) - from Unpaywall

**Abstract:**OBJECTIVES. To describe the clinical characteristics and outcome of patients with ARDS associated with severe A (H1N1)2009 Influenza infection and receiving conventional mechanical ventilation (MV) only compared to those receiving ECMO. METHODS. Data extracted froma dedicated Frenchweb based registry for the flu epidemic.We describe the management of patients with early ARDS within the first 3 days of ICU admission. RESULTS. Of 550 adult patients admitted to the 121 ICUs contributing to the REVA registry during the flu pandemic, 326 had a final diagnosis of ARDS, and 180 had a complete form, fulfilling strict criteria for the syndrome (P/F <= 200 and bilateral infiltrates) within the first 3 days of ICU admission. These 180 patients with early ARDS were aged 47 +/- 15 years, 45 (25%) had no identified risk factor, 49 (27%) were immunocompromised, 8 (4.5%) were pregnant, 31 (17%) had chronic bronchopulmonary disease, including asthma. Mean Body Mass Index (BMI) was 28, and 59 (33%) had obesity (BMI >= 30). The mean PaO2/FiO2 ratio was 128 +/- 47.Assist-control ventilation was the most commonly used ventilatory mode (166/180), others mostly receiving pressure support ventilation. Paralyzing agents were used in 107 (59%) of them. During the first 3 days ofMV,vasopressors were required in71% and renal replacement therapy in 22%. Rescue therapies included iNO (46, 26%), prone positioning (38, 21%), and ECMO (31, 17%). The overall ICU mortality was 31% (56/180), and length of ICU stay 24 +/- 19 days.Patients receiving ECMO (17%) were younger, less often immunocompromised (23 vs. 28%), had a slightly higher frequency of obesity (39 vs. 32%) and of pregnancy (13 vs. 3%), were more severely ill, had a more severe lung impairment (oxygenation and compliance). Mortality, length of mechanical ventilation and of ICU stay were higher in this group. Before ECMO, ventilation was delivered with smaller tidal volumes, higher PEEP but similar plateau pressure (Pplat) than in MV patients (Table 1). (Table presented) CONCLUSIONS.The overall high mortality rate observed in this series confirms the severity of H1N1-associated early ARDS. Our findings suggest that ECMO was administered to the most severely ill and hypoxemic patients. Clinicians reduced Vt and increased PEEP while keeping Pplat in a reasonable range and switched to ECMO.

**Database:** EMBASE

**114. Treatment of a/H1N1 related severe ards by extracorporeal membrane oxygenation in pregnant and postpartum women, during the 2009 flu pandemic. Single center experience**

**Author(s):** Panarello G.; Occhipinti G.; Capitanio G.; Ferrazza V.; Arcadipane A.F.; Vitulo P.; Pilato M.; Di Lorenzo G.

**Source:** Intensive Care Medicine; Sep 2010; vol. 36

**Publication Date:** Sep 2010

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Available at [Intensive Care Medicine](http://openurl.ebscohost.com/linksvc/linking.aspx?genre=article&issn=1432-1238&volume=36&issue=S2&spage=205&title=Intensive%20Care%20Medicine) - from EBSCO (MEDLINE Complete)

Available at [Intensive Care Medicine](https://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=47856&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0342-4642&volume=36&issue=S2&spage=205) - from ProQuest (Health Research Premium) - NHS Version

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**Abstract:**INTRODUCTION. Pregnantwomen are at high risk of getting flu and developing severe complications;H1N1 outbreak confirmed the finding and pregnant women were over represented in the group of patients requiring intensive care management for respiratory impairment [1, 2]. OBJECTIVES. Aimof our paper was to confirmthe effectiveness of extracorporeal membrane oxygenation as bridge to recover in patients suffering of fulminant respiratory failure due to H1N1 infection. METHODS. From October 2009 through January 2010, 16 patients were referred to our ICU because of severe ARDSsecondary to virusA/H1N1 infection; in 12 casesECMOwas required as rescue therapy [3]. Among patients requiring extracorporeal oxygenation, three were pregnant or recently post partumwomen; one patient was bearing twins siblings. In one case our ECMO team had to place the extracorporeal support in the referring Institute [4, 5]. RESULTS. All three patients after a mean of 16 days were weaned from ECMO and required percutaneous tracheostomy to beweaned from mechanical ventilation. The pregnant woman had the cesarean delivery done while still on ECMO. The mean LOS was 37 days; all patients were discharged home in good general conditions and not requiring oxygen supply. None of the four newborns got flu infection; all infants requiredNICUadmission; invasive mechanical ventilation was necessary for the infant born while the mother was on ECMO support. CONCLUSIONS. ECMO treatment is still a debatable therapeutic option for refractory respiratory failure in adults because of results and costs [6]. Our very small case series demonstrates ECMO to be an efficacious bridge to recover, despite an underlying clinical condition burdened by mortality of 80% or greater. ECMO treatment should be considered in high specialized centers to reach such good results. The next future will rely on so advanced and biocompatible extracorporeal oxygenation technology that this therapeutic option might be validated for increasing numbers of ICUs and might become so popular such as CRRT is now.(Table presented).

**Database:** EMBASE

**115. Clinical features of critically ill pregnant patients with influenza A (H1N1) infection**

**Author(s):** Xiong H.F.; Guo L.-M.; Li X.-W.; Jiao Y.-Q.; Li B.-S.; Xiang P.; Guo J.; Zhang M.; Li W.-L.; Pu L.; Zhang L.-C.

**Source:** International Journal of Infectious Diseases; Jul 2010; vol. 14

**Publication Date:** Jul 2010

**Publication Type(s):** Conference Abstract

Available at [International Journal of Infectious Diseases](https://linkinghub.elsevier.com/retrieve/pii/S1201971210601397?goto=sd) - from ScienceDirect Please click on 'Sign in' and then on 'OpenAthens' for the site to recognise your Athens account and provide access to the full range of issues.

Available at [International Journal of Infectious Diseases](http://www.uhl-library.nhs.uk/directpages/uhlblarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from non-NHS library) - click this link for more information Local Print Collection [location] : British Library via UHL Libraries - please click link to request article.

Available at [International Journal of Infectious Diseases](http://www.uhl-library.nhs.uk/directpages/uhlarticles.html) - from Available to NHS staff on request from UHL Libraries & Information Services (from NULJ library) - click this link for more information Local Print Collection [location] : UHL Libraries On Request (Free).

Available at [International Journal of Infectious Diseases](https://doi.org/10.1016/s1201-9712(10)60139-7) - from Unpaywall

**Abstract:**Objective: To describe the clinical features of critical ill patients with H1N1 influence in pregnant women. Method(s): From May 15 to Dec 20, 2009, seventeen cases of pandemic H1N1 in pregnant women were admitted to hospital and six were critical ill patients. The clinical features and supplemental data were analyzed. Result(s): They ranged in age from 22 27 years (media 24.7), the gestational weeks on falling ill was 25 36 years (media 30.5), all were in the third trimester. Two patients died, other four patients had been discharged from hospital. The most common symptoms were fever, coughing, shortness of breath, and hemoptysis. Shortness of breath and hemoptysis were only found in critically ill patients. Anemia, hypoproteinemia, elevation of CRP, LDH, HBDH and decrease of T lymphocyte subpopulations count were easily found in critically ill patients. All patients developed pneumonia and subsequent acute respiratory distress syndrome, and four patients required mechanical ventilation, three patients required Extracorporeal Membrane Oxygenation (ECMO). Emergency caesarean delivery was preformed in three patients for premature rupture of membranes (in two cases) and dead fetus in uterus (in one case) and one patient delivered a dead fetus herself in hospital. Other two patients continue their pregnancy after discharge from hospital. Conclusion(s): Pregnant women might be at increased risk for critical ill complications from pandemic H1N1 virus infection, especially in the third trimester. The symptoms of shortness of breath and hemoptysis may be helpful in detection of critically ill patients. Most critical care patients required mechanical ventilation and had a high case-fatality rate.

**Database:** EMBASE

**116. Swine flu: A Birmingham experience**

**Author(s):** Scriven J.; McEwen R.; Green C.; Bailey M.; Ellis C.; Mistry S.; Osman H.

**Source:** Clinical Medicine, Journal of the Royal College of Physicians of London; Dec 2009; vol. 9 (no. 6); p. 534-538

**Publication Date:** Dec 2009

**Publication Type(s):** Review

**PubMedID:** 20095293

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Available at [Clinical medicine (London, England)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4952289) - from Unpaywall

**Abstract:**By the beginning of July 2009 the West Midlands had seen more cases of novel H1N1 influenza (swine flu) than any other region in the UK. Over a threeweek period almost 850 people presented to Heartlands Hospital with flu-like symptoms. Of those admitted 52 adults were subsequently confirmed as having H1N1 infection. Most were younger than 30 and not from traditional influenza risk groups. The main risk factor for severe disease was asthma, and to a lesser extent pregnancy and obesity. Seven patients were admitted to intensive care and five developed an acute lung injury requiring prolonged admission. Two patients required extra corporeal membrane oxygenation and one died. Despite increased workload normal clinical services were unaffected. The hospital was not closed to admissions nor was it paralysed by staff absence. With a predicted second wave expected at the end of 2009, efforts to maintain effective community assessment remain crucial. © Royal College of Physicians, 2009. All rights reserved.

**Database:** EMBASE

**117. Long-term outcomes of pandemic 2009 influenza A(H1N1)-associated severe ARDS.**

**Author(s):** Luyt CE; Combes A; Becquemin MH; Beigelman-Aubry C; Hatem S; Brun AL; Zraik N; Carrat F; Grenier PA; Richard JM; Mercat A; Brochard L; Brun-Buisson C; Chastre J; REVA Study Group

**Source:** Chest; Sep 2012; vol. 142 (no. 3); p. 583-592

**Publication Date:** Sep 2012

**Publication Type(s):** Journal Article; Multicenter Study; Research Support, Non-U.S. Gov't

**PubMedID:** 22948576

Available at [Chest](https://go.openathens.net/redirector/nhs?url=http%3A%2F%2Fovidsp.ovid.com%2Fovidweb.cgi%3FT%3DJS%26PAGE%3Dfulltext%26D%3Dovft%26CSC%3DY%26NEWS%3DN%26SEARCH%3D0012-3692.is%2Band%2B%22142%22.vo%2Band%2B%223%22.ip%2Band%2B%22583%22.pg%2Bor%2B%2210.1378%2Fchest.11-2196%22.di) - from Ovid (Journals @ Ovid) UHL NHS Athens

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**Abstract:**BACKGROUND: No data on long-term outcomes of survivors of 2009 influenza A(H1N1) (A[H1N1])-associated ARDS are available. The objective of this study was to compare the 1-year outcomes of survivors of A(H1N1)-associated ARDS, according to use or no use of extracorporeal lung assist (ECLA), using its need as an ARDS severity surrogate.METHODS: Survivors of ARDS (12 with ECLA use vs 25 without, corresponding to 75% and 54% of the eligible patients for each group, respectively) selected from the Réseau Européen de Ventilation Artificielle (REVA) registry had previously been healthy, with only pregnancy and/or moderate obesity (BMI ≤ 35 kg/m²) as known risk factors for A(H1N1) infection. Lung function and morphology, health-related quality of life (HRQoL), and psychologic impairment were evaluated.RESULTS: At 1 year post-ICU discharge for the ECLA and no-ECLA groups, respectively, 50% and 40% reported significant exertion dyspnea, 83% and 64% had returned to work, and 75% and 64% had decreased diffusion capacity across the blood-gas barrier, despite their near-normal and similar lung function test results. For both groups, exercise test results showed diminished but comparable exercise capacities, with similar alveolar-arterial oxygen gradients at peak exercise, and CT scans showed minor abnormal findings. HRQoL assessed by the 36-Item Short-Form Health Survey was poorer for both groups than for a sex- and age-matched general population group, but without between-group differences. ECLA and no-ECLA group patients, respectively, had symptoms of anxiety (50% and 56%) and depression (28% and 28%) and were at risk for posttraumatic stress disorder (41% and 44%).CONCLUSIONS: One year post-ICU discharge, a majority of survivors of A(H1N1)-associated ARDS had minor lung disabilities with diminished diffusion capacities across the blood-gas barrier, and most had psychologic impairment and poorer HRQoL than a sex- and age-matched general population group. ECLA and no-ECLA group patients had comparable outcomes.TRIAL REGISTRY: ClinicalTrials.gov; No.: NCT01271842; URL: www.clinicaltrials.gov

**Database:** PubMed

**Reviewer’s note (11/09/2020):**

Regarding the ECMO part of the search, consider enclosing phrases in quotation marks (e.g. "extracorporeal membrane oxygenation", "extracorporeal life support") and including additional variations in spelling (e.g. "extra corporeal membrane oxygenation", "extra corporeal life support").

Strategy 889628

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Database** | **Search term** | **Results** |
| 1 | Medline | (Extracorporeal membrane oxygenation OR ECMO\*).ti,ab | 12159 |
| 2 | Medline | "EXTRACORPOREAL MEMBRANE OXYGENATION"/ | 10464 |
| 3 | Medline | (Extracorporeal life support OR ECLS\*).ti,ab | 3143 |
| 24 | Medline | (1 OR 2 OR 3) | 16257 |
| 4 | Medline | ("SARS-CoV-2" OR Coronavirus\* OR COVID\* OR 2019-nCoV OR ncov OR "novel betacov" OR "novel betacoronavirus" OR MERS OR "Middle East Respiratory Syndrome" OR SARS\* OR "severe acute respiratory syndrome\*" OR flu OR influenz\* OR H1N1 OR "swine flu\*").ti,ab | 183628 |
| 5 | Medline | "INFLUENZA, HUMAN"/ | 49122 |
| 6 | Medline | CORONAVIRUS/ | 3031 |
| 7 | Medline | exp BETACORONAVIRUS/ | 19147 |
| 8 | Medline | "INFLUENZA A VIRUS, H1N1 SUBTYPE"/ | 15286 |
| 25 | Medline | (4 OR 5 OR 6 OR 7 OR 8) | 190849 |
| 9 | Medline | (pregnan\* OR gestation\* OR postpartum OR puerperium).ti,ab | 621497 |
| 10 | Medline | PREGNANCY/ OR exp "PREGNANT WOMEN"/ | 874703 |
| 26 | Medline | (9 OR 10) | 1057077 |
| 30 | Medline | (24 AND 25 AND 26) | 78 |
| 11 | EMBASE | (Extracorporeal membrane oxygenation OR ECMO\*).ti,ab | 21546 |
| 12 | EMBASE | (Extracorporeal life support OR ECLS\*).ti,ab | 3827 |
| 13 | EMBASE | "EXTRACORPOREAL OXYGENATION"/ OR "EXTRACORPOREAL PUMP OXYGENATION"/ | 24213 |
| 27 | EMBASE | (11 OR 12 OR 13) | 32081 |
| 14 | EMBASE | ("SARS-CoV-2" OR Coronavirus\* OR COVID\* OR 2019-nCoV OR ncov OR "novel betacov" OR "novel betacoronavirus" OR MERS OR "Middle East Respiratory Syndrome" OR SARS\* OR "severe acute respiratory syndrome\*" OR flu OR influenz\* OR H1N1 OR "swine flu\*").ti,ab | 202897 |
| 15 | EMBASE | exp BETACORONAVIRUS/ OR CORONAVIRUS/ OR exp "CORONAVIRUS INFECTION"/ | 26816 |
| 16 | EMBASE | INFLUENZA/ OR exp "SWINE INFLUENZA"/ OR exp "PANDEMIC INFLUENZA"/ OR exp "INFLUENZA A (H1N1)"/ | 70897 |
| 28 | EMBASE | (14 OR 15 OR 16) | 224177 |
| 17 | EMBASE | (pregnan\* OR gestation\* OR postpartum OR puerperium).ti,ab | 795561 |
| 18 | EMBASE | PREGNANCY/ OR exp "FIRST TRIMESTER PREGNANCY"/ OR exp "SECOND TRIMESTER PREGNANCY"/ OR exp "THIRD TRIMESTER PREGNANCY"/ | 637777 |
| 29 | EMBASE | (17 OR 18) | 1009951 |
| 31 | EMBASE | (27 AND 28 AND 29) | 149 |
| 19 | PubMed | (Extracorporeal membrane oxygenation OR ECMO).ti,ab | 15620 |
| 20 | PubMed | (Extracorporeal life support OR ECLS).ti,ab | 16362 |
| 32 | PubMed | (19 OR 20) | 17154 |
| 21 | PubMed | ("SARS-CoV-2" OR Coronavirus\* OR COVID\* OR 2019-nCoV OR ncov OR "novel betacov" OR "novel betacoronavirus" OR MERS OR "Middle East Respiratory Syndrome" OR SARS\* OR "severe acute respiratory syndrome\*" OR flu OR influenz\* OR H1N1 OR "swine flu\*").ti,ab | 199517 |
| 22 | PubMed | (pregnan\* OR gestation\* OR postpartum OR puerperium).ti,ab | 1106099 |
| 33 | PubMed | (32 AND 21 AND 22) | 79 |