

## CCC respiratory section

### Sample Protocols, Order Sets, Guidelines and Teaching Tools Sample guidelines and protocols:

ARDSnet ventilator protocol  
.pdf labelled ventilator\_protocol\_2008-07 (2008)

Rutgers-Robert Wood Johnson guidelines for adult mechanical ventilation  
.pdf labelled mecahnical ventilation 2015 (2015)  
Credit Constantine Bulautan, MD, Rutgers-Robert Wood Johnson School of Medicine

Non-invasive positive pressure ventilation protocol  
Already on website. .pdf labelled Non-invasive (2014)  
Credit Orlando Kirton, MD

### Sample guidelines and protocols

Percutaneous trach guideline  
Already on the website, .pdf labelled Percutaneous (2014)  
Credit Orlando Kirton

Emergent airway management for laryngectomy/tracheostomy patients  
.pdfs labelled Patent Airway algorithms and Laryngectomy Algorithm (2014)  
Credit statement: The Association of Anaesthetists of Great Britain & Ireland grants readers the right to reproduce the algorithms included in this article (Figs 1 and 2) for non-commercial purposes (including in scholarly journals, books and non-commercial websites), without the need to request permission. Each reproduction of any algorithm must be accompanied by the following text:  
Reproduced from McGrath BA, Bates L, Atkinson D, Moore JA. Multidisciplinary guidelines for the management of tracheostomy and laryngectomy airway emergencies. Anaesthesia. 2012 Jun 26. doi: 10.1111/j.1365-2044.2012.07217, with permission from the Association of Anaesthetists of Great Britain & Ireland/Blackwell Publishing Ltd

Prone protocol from supplementary appendix of NEJM article  
Supplemental material from NEJM prone article, Pages 6 – 8 describe prone protocol:  
supplemental appendix to article N Engl J Med 2013; 368:2159-2168 labelled as .pdf nejmoa1214103\_appendix

Vanderbilt University School of Medicine, Division of Trauma and Surgical Critical Care ventilator management guidelines link (2015):

[https://medschool.vanderbilt.edu/trauma-and-scc/files/trauma-and-scc/public\\_files/Protocols/Ventilator%20Management.pdf](https://medschool.vanderbilt.edu/trauma-and-scc/files/trauma-and-scc/public_files/Protocols/Ventilator%20Management.pdf)

CDC flowsheet for diagnosis of healthcare associated pneumonia

.pdf labelled 6pscVAPcurrent

Freely available on CDC website

### Sample ordersets

Ventilator liberation orderset. Credit Orlando Kirton

.pdf labelled Ventilator\_liberation\_order\_set-resp

### Refresher materials/talks/power points/ curriculum outlines

Online ventilator primer:

[https://courses.washington.edu/med610/mechanicalventilation/mv\\_primer.html](https://courses.washington.edu/med610/mechanicalventilation/mv_primer.html)

Ventilator basics lecture:

.PPT labeled MechVentilation 2016 c

Created 1/2016, credit: Dr. John Denny, Rutgers-Robert Wood Johnson School of Medicine

APRV/ARDS lecture

Created 2015 .pdf labelled ARDS/APRV lecture credit Matthew Lissauer, Rutgers-Robert Wood Johnson School of Medicine

### Published evidence based guidelines:

Secretion clearance:

AARC Clinical Practice Guideline: Effectiveness of Non-pharmacologic Airway Clearance Therapies in Hospitalized Patients. AARC evidence based guideline (2013) freely available at <http://www.rcjournal.com/cpgs/>  
.pdf labelled nonpharmacologic\_2013

AARC Clinical Practice Guideline: Effectiveness of Pharmacologic Airway Clearance Therapies in Hospitalized Patients. AARC evidence based guideline (2015) freely available at <http://www.rcjournal.com/cpgs/>  
. pdf labelled pharm.cpg

## Trauma

Management of Pulmonary Contusion and Flail Chest. EAST clinical practice guideline: J Trauma. 73(5):S351-S361

.pdf freely available at <http://www.east.org/education/practice-management-guidelines/pulmonary-contusion-and-flail-chest,-management-of>

. Pdf labelled Management\_of\_pulmonary\_contusion

The Acute Cardiopulmonary Management of Patients With Cervical Spinal Cord Injuries: <http://journals.lww.com/neurosurgery/pages/articleviewer.aspx?year=2013&issue=03002&article=00011&type=abstract>

Open access article: Neurosurgery 72:84-92 (2013)

PMID 23417181

## Obstructive Sleep Apnea:

Practice guidelines for the perioperative management of patients with obstructive sleep apnea: an updated report by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Obstructive Sleep Apnea

Anesthesiology. 2014 Feb;120(2):268-86

PMID: 24346178; open access .pdf labelled OSA\_surgery

## Treatment of hospital acquired pneumonia

IDSA guidelines (2005...update in progress)

Freely available at: [http://www.idsociety.org/Organ\\_System/](http://www.idsociety.org/Organ_System/)

Published: Am J Respir Crit Care Med ; 2005 ; 171 : 388 -416

.pdf labeled "HAP"

## Treatment of community acquired pneumonia

IDSA guidelines (2007...update in progress)

Freely available at: [http://www.idsociety.org/Organ\\_System/](http://www.idsociety.org/Organ_System/)

Published in Clinical Infectious Diseases ; 2007 ; 44 : S27 -S72

.pdf labeled "Clin Infect Dis.-2007-Mandell-S27-72"

## Key relevant articles

### ARDS definition

ARDS Berlin criteria:

<http://jama.jamanetwork.com/article.aspx?articleID=1160659>

PMID: 22797452

Low tidal volume ventilation

Link to NEJM article demonstrating improved survival with low tidal volumes

<http://www.nejm.org/doi/full/10.1056/NEJM200005043421801>

PMID: 10793162

Link to meta-analysis of lung protective ventilation in non-ARDS patients:

<http://www.ccforum.com/content/18/2/211>

PMID: 24762100

Another meta-analysis of LTV in non-ARDS patients:

<http://jama.jamanetwork.com/article.aspx?articleid=1386591>

PMID: 23093163

APRV:

APRV as open lung ventilation

Clinical introduction to APRV:

[http://www.ccjm.org/index.php?id=107953&tx\\_ttnews\[tt\\_news\]=365201&cHash=623cd2d8d73a88abcf0ce400a1b6237](http://www.ccjm.org/index.php?id=107953&tx_ttnews[tt_news]=365201&cHash=623cd2d8d73a88abcf0ce400a1b6237)

PMID: 21285342

[http://journals.lww.com/ccmjjournal/Abstract/2005/03001/Other\\_approaches\\_to\\_open\\_lung\\_ventilation\\_\\_Airway.19.aspx](http://journals.lww.com/ccmjjournal/Abstract/2005/03001/Other_approaches_to_open_lung_ventilation__Airway.19.aspx)

PMID: 15753733

Peep:

Link to JAMA article comparing higher to lower peep in ARDS

<http://jama.jamanetwork.com/article.aspx?articleid=185447>

PMID: 20197533

Prone Positioning:

Prone positioning for ARDS:

<http://www.nejm.org/doi/full/10.1056/NEJMoa1214103>

PMID: 23688302

Daily awakening/spontaneous breathing trial coordination:

ABCDE <http://journal.publications.chestnet.org/article.aspx?articleID=1045197>

PMID: 21051398

ECMO for ARDS:

Link to CESAR trial comparing ECMO to standard of care vent management:

<http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2809%2961069-2/fulltext>

PMID: 19762075

Link to ECMO use for H1N1 patients:

<http://jama.jamanetwork.com/article.aspx?articleid=184800>

PMID: 19822628

Pulmonary HTN:

Clinical summary of treatment of pulmonary hypertension in the ICU:

[http://www.atsjournals.org/doi/abs/10.1164/rccm.201104-](http://www.atsjournals.org/doi/abs/10.1164/rccm.201104-0662CI?url_ver=Z39.88-)

[0662CI?url\\_ver=Z39.88-](http://www.atsjournals.org/doi/abs/10.1164/rccm.201104-0662CI?url_ver=Z39.88-)

[2003&rfr\\_id=ori%3Arid%3Acrossref.org&rfr\\_dat=cr\\_pub%3Dpubmed&#.VoKhWFLD9IQ](http://www.atsjournals.org/doi/abs/10.1164/rccm.201104-0662CI?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org&rfr_dat=cr_pub%3Dpubmed&#.VoKhWFLD9IQ)

PMID: 21700906

Non-invasive ventilation for COPD and cardiogenic pulmonary edema: (there is mixed/poor evidence for use in other pathologies of respiratory failure)

<http://www.ncbi.nlm.nih.gov/pubmed/15266518>

PMID: 15266518 (2004)

<http://www.ncbi.nlm.nih.gov/pubmed?term=23728654>

PMID: 23728654 (2013)

Specialty society links:

Society of Critical Care Medicine:

<http://www.SCCM.org>

American College of Chest Physicians

<https://www.chestnet.org/>

American Thoracic Society

<http://www.thoracic.org/>

European Society of Intensive Care Medicine

<http://www.esicm.org/>

Health Care agencies:

AHRQ: Agency for Health Care Research and Quality

Links to Comprehensive Unit Safety Programs (CUSP) including those for ventilated patients

[www.ahrq.gov](http://www.ahrq.gov)

Center for Disease Control and Prevention (CDC) VAP website

<http://www.cdc.gov/HAI/vap/vap.html>

Institute for Healthcare Improvement ventilator associated pneumonia prevention bundle

(requires login/membership)

<http://www.ihc.org/resources/Pages/Tools/VentilatorBundleChecklist.aspx>

