

To identify countries for inclusion in this study, we performed a literature search for critical care research published in three prominent general medical journals – *New England Journal of Medicine (NEJM)*, *Journal of the American Medical Association (JAMA)*, and *The Lancet* – between January 2001 and December 2005. Articles for inclusion were original research articles on adult, critical care topics (patients, interventions and outcomes) that included patient data derived from a stay in an ICU. Articles were excluded that: 1) related to the Severe Acute Respiratory Syndrome, as these were not representative of routine critical care research; 2) were not primarily focused on a critical care topic, but included patients cared for in a critical care setting (e.g. peri-operative management interventions); 3) focused on surgical cardiac patients; 4. focused on pediatric or neonatal critical care. The following Medline search strategy was used: *Subject headings:* Critical Care, Intensive Care Unit; *Keywords:* Critical Care, Intensive Care, Intensive Therapy, ICU, ITU. Further searching was performed using individual journal websites. For the *NEJM* website: original and special articles under the “Critical Care” Topic Collection; *JAMA* website: articles under the “Critical Care/Intensive Care Medicine” Collection; *The Lancet* website: articles with the phrases “critical care” or “intensive care” anywhere in the title, abstract, or main text of the article. All articles identified by this search strategy were reviewed by hand by one of the authors (HW). For all articles that met the inclusion criteria, a list of the countries where data collection occurred was extracted based on available information regarding data sources in the text of the articles. A point was then awarded to each country that contributed patient data from at least one ICU.

Reference list of all papers included from literature search

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Table 1 Studies identified using the search criteria with a breakdown by number of countries, and number of units/centers included in each study

Author	Journal	Year	# of Countries	# ICUs (H)*	List of Countries
Bernard	<i>NEJM</i>	2001	11	164 (H)	Australia, Belgium, Brazil, Canada, France, Germany, The Netherlands, New Zealand, South Africa, Spain, US
Bottiger	<i>Lancet</i>	2001	1	NA	Germany (not specifically stated)
Cook	<i>Lancet</i>	2001	4	15	Australia, Canada, Sweden, US
Cremer	<i>Lancet</i>	2001	1	1	Netherlands (not specifically stated)
Ely	<i>JAMA</i>	2001	1	2	US
Ferrand	<i>Lancet</i>	2001	1	113	France
Ferreira	<i>JAMA</i>	2001	1	1	Belgium
Gattinoni	<i>NEJM</i>	2001	2	28	Italy, Switzerland
Hilbert	<i>NEJM</i>	2001	1	1	France
Merrer	<i>JAMA</i>	2001	1	8	France
Nouira	<i>Lancet</i>	2001	1	2 (H)	Tunisia
Rivers	<i>NEJM</i>	2001	1	1	US
Schortgen	<i>Lancet</i>	2001	1	3	France
Stiell	<i>Lancet</i>	2001	1	3 (H)	Canada
Van den Berghe	<i>NEJM</i>	2001	1	1	Belgium
Warren	<i>JAMA</i>	2001	19	211 (H)	Australia, Austria, Belgium, Brazil, Czech Republic, Denmark, Finland, Germany, Hungary, Israel, Netherlands, New Zealand, Poland, South Africa, Spain, Sweden, Switzerland, UK, US
Annane	<i>JAMA</i>	2002	1	19	France
Bernal	<i>Lancet</i>	2002	1	1	UK
Brealey	<i>Lancet</i>	2002	1	1	UK
Corwin	<i>JAMA</i>	2002	1	65 (H)	US
De Jonge	<i>JAMA</i>	2002	1	5	France
Esteban	<i>JAMA</i>	2002	20	361	Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Ecuador, France, Greece, Ireland, Italy, Mexico, Peru, Portugal, Spain, Tunisia, UK, Uruguay, US, Venezuela
Keenan	<i>JAMA</i>	2002	1	1	Canada
Manns	<i>NEJM</i>	2002	1	3 (H)	Canada
Mehta	<i>JAMA</i>	2002	1	4 (H)	US
Nuckton	<i>NEJM</i>	2002	1	2 (H)	US
Ostrowsky	<i>NEJM</i>	2002	1	1	US
Schiff	<i>NEJM</i>	2002	1	1 (H)	Germany
Vincent	<i>JAMA</i>	2002	15	146	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, UK
Abraham	<i>JAMA</i>	2003	17	245 (H)	Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Israel, Italy, The Netherlands, Poland, Spain, Sweden, Switzerland, UK, US
Bruynseels	<i>Lancet</i>	2003	1	1	Belgium
Chastre	<i>JAMA</i>	2003	1	51	France
Cook	<i>NEJM</i>	2003	4	15	Australia, Canada, Sweden, US
Davis	<i>JAMA</i>	2003	1	1	US
De Jonge	<i>Lancet</i>	2003	1	2	The Netherlands
Ely	<i>JAMA</i>	2003	1	2	US
Finney	<i>JAMA</i>	2003	1	1	UK
Girou	<i>JAMA</i>	2003	1	1	France
Hebert	<i>JAMA</i>	2003	1	23 (H)	Canada
Herridge	<i>NEJM</i>	2003	1	4	Canada
Neuhauser	<i>JAMA</i>	2003	1	77–117	US
Richard	<i>JAMA</i>	2003	1	36	France
Schneiderman	<i>JAMA</i>	2003	1	7 (H)	US
Sharshar	<i>Lancet</i>	2003	1	1	France

Table 1. —Continued

Author	Journal	Year	# of Countries	# ICUs (H)*	List of Countries
Sprung	<i>JAMA</i>	2003	17	37	Austria, Belgium, Czech Republic, Denmark, Finland, Germany, Greece, Ireland, Israel, Italy, Netherlands, Portugal, Spain, Sweden, Switzerland, Turkey, UK
Brower	<i>NEJM</i>	2004	1	23 (H)	US
Ely	<i>JAMA</i>	2004	1	2	US
Esteban	<i>NEJM</i>	2004	8	37 (H)	Argentina, Brazil, Colombia, Italy, Saudi Arabia, Spain, US, Venezuela
Finfer	<i>NEJM</i>	2004	2	16 (H)	Australia, New Zealand
Guerin	<i>JAMA</i>	2004	1	21	France
Landrigan	<i>NEJM</i>	2004	1	1 (H)	US
Lockley	<i>NEJM</i>	2004	1	1 (H)	US
Spragg	<i>NEJM</i>	2004	11	109 (H)	Austria, Belgium, Canada, France, Germany, The Netherlands, South Africa, Spain, Switzerland, UK, US
Taylor	<i>JAMA</i>	2004	1	46 (H)	US
Abraham	<i>NEJM</i>	2005	34	516 (H)	Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Czech Republic, Denmark, Egypt, Finland, France, Germany, India, Italy, Lebanon, Mexico, The Netherlands, New Zealand, Norway, Philippines, Romania, Russia, Saudi Arabia, Singapore, Slovak Republic, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, UK, US
Baudouin	<i>Lancet</i>	2005	1	1	UK
Cepeda	<i>Lancet</i>	2005	1	2 (H)	UK
Harvey	<i>Lancet</i>	2005	1	65	UK
Levy	<i>Lancet</i>	2005	1	NA	France
Rubinfeld	<i>NEJM</i>	2005	1	21 (H)	US
Uchino	<i>JAMA</i>	2005	23	54 (H)	Australia, Belgium, Brazil, Canada, China, Czech Republic, Germany, Greece, Indonesia, Israel, Italy, Japan, Netherlands, Norway, Portugal, Russia, Singapore, Spain, Sweden, Switzerland, UK, US, Uruguay
Vanhorebeek	<i>Lancet</i>	2005	1	1	Belgium

(H), hospitals; *NEJM*, *New England Journal of Medicine*; *JAMA*, *Journal of the American Medical Association*.

Some studies specify number of “centers” or “institution” rather than the number of intensive care units ICUs.

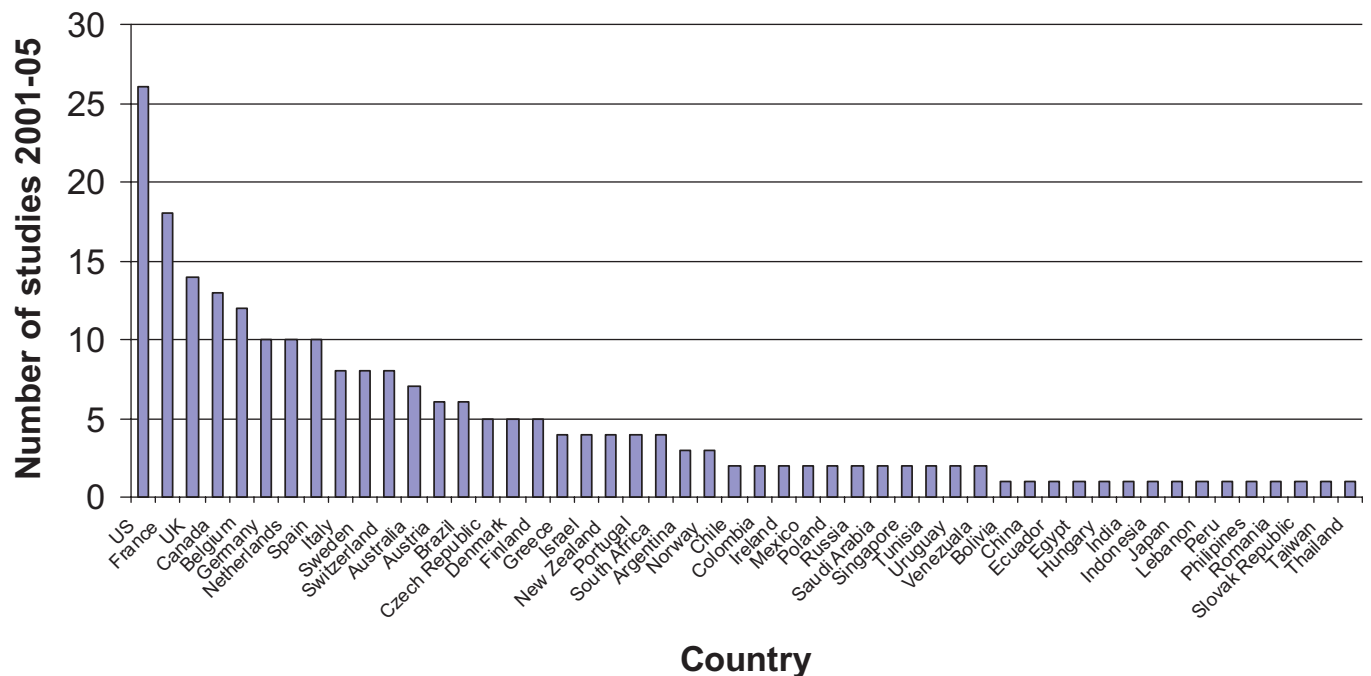


Figure 1. Number of critical care studies in selected general medical journals involving data from each country.

Sources used in each country for national data.

United States

Census Data

<http://www.census.gov/popest/national/asrh/NC-EST2005-sa.html>

Hospital Resources/Admissions

Direct calculations using National Medpars dataset, 2004.

ICU Resources/Admissions

Number of intensive care units from: Angus DC, Kelley MA, Schmitz RJ, White A, Popovich J Jr, for the Committee on Manpower for Pulmonary and Critical Care Societies (COMPACCS) Current and projected workforce requirements for care of the critically ill and patients with pulmonary disease. *JAMA* 2000; 284: 2762–2770.

Number of intensive care beds: diirect calculation using National Medpars dataset, 2004 for number of intensive care beds (subtracting 3,899 US pediatric intensive care beds, using data from Randolph AG, Gonzales CA, Cortellini L, Yeh TS, Growth of pediatric intensive care units in the United States from 1995 to 2001. *J of Pediatrics* 2004; 792–798.

Number of intensive care admissions: Kersten A, Milbrandt EB, Rahim MT, Watson RS, Clermont G, Angus DC, Linde-Zwirble WT. How big is critical care in the US? *Crit Care Med* 2003; 31(Suppl):A8.

France

Census Data

Institut National de la Statistique et des Etudes Economiques, (INSEE) http://www.insee.fr/fr/ffc/docs_ffc/elp_reg_dep.htm

Hospital Resources/Admissions

Direction de la Recherche des Etudes, de l'Evaluation et des Statistiques (DREES - Ministère de la Santé) (2003).

Organisation de Coopération et Développement Economique (OCDE)/Organisation for Economic Co-operation and Development (OECD) <http://www.oecd.org/home/> (2004).

ICU Resources/Admissions

ICUs directory, edited by the Société de Réanimation de Langue Française (2004).

Direction de l'Hospitalisation et de l'Organisation des Soins (DHOS - Ministère de la Santé) (2005).

United Kingdom

Census Data

<http://www.gad.gov.uk/Population/2004/uk/wuk045y.xls>

Hospital Resources/Admissions

England

M. Hensher, N. Edwards, Hospital provision, activity, and productivity in England since the 1980s, *BMJ* 1999 319; 7214:911–14.

<http://www.performance.doh.gov.uk/hospitalactivity/statistics/> 2000–01

Wales

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APPENDIX C

Distribution of population by age for eight countries (2005, except 2006 for Belgium).

