

# The Hierarchy of Evidence



The Hierarchy of evidence is based on summaries from the National Health and Medical Research Council (2009), the Oxford Centre for Evidence-based Medicine Levels of Evidence (2011) and Melynyk and Fineout-Overholt (2011).

- I Evidence obtained from a systematic review of all relevant randomised control trials.
- II Evidence obtained from at least one well designed randomised control trial.
- III Evidence obtained from well-designed controlled trials without randomisation.
- IV Evidence obtained from well designed cohort studies, case control studies, interrupted time series with a control group, historically controlled studies, interrupted time series without a control group or with case- series
- V Evidence obtained from systematic reviews of descriptive and qualitative studies
- VI Evidence obtained from single descriptive and qualitative studies
- VII Expert opinion from clinicians, authorities and/or reports of expert committees or based on physiology

Melynyk, B. & Fineout-Overholt, E. (2011). Evidence-based practice in nursing & healthcare: A guide to best practice (2nd ed.). Philadelphia: Wolters Kluwer, Lippincott Williams & Wilkins.

National Health and Medical Research Council (2009). NHMRC levels of evidence and grades for recommendations for developers of guidelines (2009). Australian Government: NHMRC. [http://www.nhmrc.gov.au/\\_files\\_nhmrc/file/guidelines/evidence\\_statement\\_form.pdf](http://www.nhmrc.gov.au/_files_nhmrc/file/guidelines/evidence_statement_form.pdf)

OCEBM Levels of Evidence Working Group Oxford (2011).The Oxford 2011 Levels of Evidence. Oxford Centre for Evidence-Based Medicine. <http://www.cebm.net/index.aspx?o=1025>

Databases searched:	<input checked="" type="checkbox"/> CINAHL (Ebsco)	<input type="checkbox"/> Medline (Ebsco)	<input type="checkbox"/> Pubmed (NLM)	<input type="checkbox"/> Nursing (Ovid)	<input type="checkbox"/> Emcare (Ovid)
Keywords used:	(Neonates or preterm or infant or premature or newborn or baby), (nurse or nurses or nursing), (temperature or thermoregulation)				
Search limits:	Date: July 2016 to August 2021				

Other search comments:	
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Reference (include title, author, journal title, year of publication, volume and issue, pages)	Evidence level (I-VII)	Key findings, outcomes or recommendations
Cheng, C., Franck, L., Ye, X., Hutchinson, S., Lee, S., & O'Brien, K. (2021). Evaluating the effect of Family Integrated Care on maternal stress and anxiety in neonatal intensive care units. <i>Journal of Reproductive and Infant Psychology</i> , 39(2), 166-179.	II	<p>The clinical environment acts as a physical and an emotional barrier between the neonate and family. Maternal stress and anxiety can be decreased by increasing parental engagement and involvement through:</p> <ul style="list-style-type: none"> <li>• Kangaroo Care</li> <li>• Skin to skin contact</li> <li>• Enabling parental decision making</li> <li>• Promoting a positive &amp; supportive environment</li> <li>• Enabling family support systems</li> </ul>
Cooke, E. (2019, August). <i>Clinical Guidelines (Nursing) Temperature Management</i> . Retrieved from The Royal Children's Hospital Melbourne: <a href="https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Temperature_Management/">https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Temperature_Management/</a>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Temperature management</li> </ul>
Cramer, S. (2019, June). <i>Clinical Guidelines (Nursing) Neonatal hypoglycaemia</i> . Retrieved from The Royal Children's Hospital Melbourne: <a href="https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Neonatal_hypoglycaemia/">https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Neonatal_hypoglycaemia/</a>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Management of neonatal hypoglycaemia</li> </ul>

<p>Crowle, A. (2018, April). <i>Clinical Guidelines (Nursing) Neonatal Intravenous Fluid Management</i>. Retrieved from The Royal Children's Hospital Melbourne : <a href="https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Neonatal_Intravenous_Fluid_Management/">https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Neonatal_Intravenous_Fluid_Management/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Neonatal Intravenous Fluid Management</li> </ul>
<p>Devsam, B. (2020, December). <i>Clinical Guidelines (Nursing) Neonatal Pain Assessment</i>. Retrieved from The Royal Children's Hospital Melbourne: <a href="https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Neonatal_Pain_Assessment/">https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Neonatal_Pain_Assessment/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Neonatal Pain Assessment including mPATs and FLACC</li> </ul>
<p>Donnellan, D., Moore, Z., Patton, D., O'Connor, T., &amp; Nugent, L. (2020). The effect of thermoregulation quality improvement initiatives on the admission temperature of premature/verylow birth-weight infants in neonatal intensive care units: A systematic review. <i>J Spec Pediatr Nurs</i>, 1-13.</p>	I	<ul style="list-style-type: none"> <li>• Cochrane Review</li> </ul> <p>Skin to skin or kangaroo care reduces the pain response to multiple procedures and clinical interventions. Resulting in:</p> <ul style="list-style-type: none"> <li>• Decrease in heart rate</li> <li>• Decrease in duration of cry post procedure</li> <li>• Decrease in intensity of cry post procedure</li> </ul>
<p>Doyle, T. (2018, December). <i>Clinical Guidelines (Nursing) Breastfeeding support and promotion</i>. Retrieved from The Royal Children's Hospital Melbourne: <a href="https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Breastfeeding_support_and_promotion/">https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Breastfeeding_support_and_promotion/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Breastfeeding support and establishment</li> <li>• Maternal child health support</li> <li>• Lactation consultation</li> </ul>
<p>Fanham, A. (2020, January). <i>Clinical Guidelines (Nursing) Extravasation injury management</i>. Retrieved from The Royal Children's Hospital Melbourne: <a href="https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Extravasation_injury_management/">https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Extravasation_injury_management/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Extravasation management</li> <li>• Pressure injury management</li> </ul>

<p>Fanham, A. (2020, June). <i>Clinical Guidelines (Nursing) Safe Sleeping</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Safe_sleeping/">https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Safe_sleeping/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Safe sleeping recommendations</li> <li>• Parent support and education</li> </ul>
<p>Gardner, S. (2020, June). <i>Clinical Guidelines (Nursing) Assisted thermoregulation</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Thermoregulation_in_the_Preterm_Infant/">https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Thermoregulation_in_the_Preterm_Infant/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Thermoregulation</li> <li>• ATOM infant warmer</li> </ul>
<p>Harding, J., Hegarty, J., Crowther, C., Edlin, R. G., &amp; Alsweiler, J. (2021, January 28). Evaluation of oral dextrose gel for prevention of neonatal hypoglycemia (hPOD): A multicenter, double-blind randomized controlled trial. <i>PLOS Medicine</i>, pp. 1-16.</p>	II	<ul style="list-style-type: none"> <li>• Hypoglycaemia is common in clinically unwell neonates</li> <li>• Dextrose gel is a non-invasive, safe &amp; inexpensive treatment option for hypoglycaemia</li> <li>• Separation of Mother and baby disrupts the establishment of breastfeeding</li> <li>• Transient hypoglycaemia is associated with impaired visual- motor coordination</li> </ul>
<p>Kendrick, A. (2021, February). <i>Clinical Guidelines (Nursing) Sucrose (oral) for procedural pain management in infants</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Sucrose_oral_for_procedural_pain_management_in_infants/">https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Sucrose_oral_for_procedural_pain_management_in_infants/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Oral sucrose for procedural pain management</li> </ul>
<p>Kennedy, R., &amp; Crowle, A.-R. (2020, May). <i>Clinical Guidelines (Nursing) Neonatal &amp; Infant Skin Care</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Neonatal___infant_skin_care/">https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Neonatal___infant_skin_care/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Neonatal skin care</li> <li>• Prevention of skin breakdown and development of pressure areas</li> </ul>
<p>Long, K., &amp; Holdbrooks, H. (2020). Achieving Normothermia in Low-Birth-Weight Neonates. <i>JOGNN</i>, 49, S73.</p>	IV	<ul style="list-style-type: none"> <li>• Achieving normothermia in the neonatal population is directly correlated to improving clinical outcomes</li> </ul>

<p>Moore, L., &amp; Stevens, A. (2020, March). <i>Clinical Guidelines (Nursing) Neonatal sleep maximisation in the hospital environment</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Neonatal_sleep_maximisation_in_the_hospital_environment/">https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Neonatal_sleep_maximisation_in_the_hospital_environment/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Maximising neonatal sleep in the clinical environment</li> <li>• Neonatal sleep cycle</li> </ul>
<p>Penrose, S. (2019, February). <i>Clinical Guidelines (Nursing) Pain assessment and measurement</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Pain_Assessment_and_Measurement/">https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Pain_Assessment_and_Measurement/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Neonatal pain assessment</li> <li>• FLACC</li> <li>• mPATs</li> </ul>
<p>Safer Care Victoria . (2018, December ). <i>Intravenous infusion for special care nursery admissions</i>. Retrieved from Victorian Agency for Health Information :  <a href="https://www.bettersafecare.vic.gov.au/clinical-guidance/neonatal/intravenous-infusion-for-special-care-nursery-admissions">https://www.bettersafecare.vic.gov.au/clinical-guidance/neonatal/intravenous-infusion-for-special-care-nursery-admissions</a></p>	VII	<ul style="list-style-type: none"> <li>• Neonatal intravenous fluid management</li> <li>• Intravenous fluid rates</li> </ul>
<p>Safer Care Victoria . (2019, January). <i>Clinical Practice Guidelines Suprapubic aspirate</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/clinicalguide/guideline_index/Suprapubic_Aspirate_Guideline/">https://www.rch.org.au/clinicalguide/guideline_index/Suprapubic_Aspirate_Guideline/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Gold standard for obtaining urine sample for culture</li> </ul>
<p>Safer Care Victoria. (2018). <i>The late preterm infant - care and management</i>. Retrieved from Victorian Agency for Health Information:  <a href="https://www.bettersafecare.vic.gov.au/clinical-guidance/neonatal/the-late-preterm-infant-care-and-management">https://www.bettersafecare.vic.gov.au/clinical-guidance/neonatal/the-late-preterm-infant-care-and-management</a></p>	VII	<p>Safer Care Victoria</p> <ul style="list-style-type: none"> <li>• Observations and Vital signs</li> <li>• Blood glucose levels</li> <li>• Weighing of the baby</li> <li>• Feeding</li> <li>• Parent education</li> <li>• Discharge management</li> </ul>

<p>Sly, S., &amp; Kinney, S. (2019, April). <i>Clinical Guidelines (Nursing) Observation and continuous monitoring</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Observation_and_Continuous_Monitoring/">https://www.rch.org.au/rchcpghospital_clinical_guideline_index/Observation_and_Continuous_Monitoring/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Observations and Monitoring</li> <li>• ViCTOR guideline</li> </ul>
<p>The Royal Children's Hospital Melbourne. (2019, November). <i>Clinical Practice Guidelines Hypoglycaemia</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/clinicalguide/guideline_index/Hypoglycaemia_Guideline/">https://www.rch.org.au/clinicalguide/guideline_index/Hypoglycaemia_Guideline/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Hypoglycaemia management at RCH</li> </ul>
<p>The Royal Children's Hospital Orthopaedics department. (2018, May). <i>Kids Health Information</i>. Retrieved from The Royal Children's Hospital Melbourne:  <a href="https://www.rch.org.au/kidsinfo/fact_sheets/Wrapping_your_baby_safely_to_help_prevent_developmental_dysplasia_of_the_hip_VIDEO/">https://www.rch.org.au/kidsinfo/fact_sheets/Wrapping_your_baby_safely_to_help_prevent_developmental_dysplasia_of_the_hip_VIDEO/</a></p>	VII	<ul style="list-style-type: none"> <li>• RCH CPG</li> <li>• Safe wrapping to prevent hip dysplasia</li> </ul>
<p>The Royal Women's Hospital . (2020, July 29). <i>Guideline: Infant feeding - Breastfeeding the Healthy Term Baby</i>. Retrieved from The Royal Women's Hospital :  <a href="https://thewomens.r.worldssl.net/images/uploads/downloadable-records/clinical-guidelines/infant-feeding-breastfeeding-the-healthy-term-baby_280720.pdf">https://thewomens.r.worldssl.net/images/uploads/downloadable-records/clinical-guidelines/infant-feeding-breastfeeding-the-healthy-term-baby_280720.pdf</a></p>	VII	<ul style="list-style-type: none"> <li>• Royal Women's Hospital Guideline</li> <li>• Promoting breastfeeding establishment and maintenance while in hospital</li> </ul>