

**Alan Groves, MBChB, BSc, FRCPCH, FAAP, MD(Res)**  
Associate Professor of Pediatrics,  
Dell Medical School at The University of Texas at Austin  
Neonatologist  
Pediatrix Medical Group of Austin - Mednax  
4205 Lullwood Road  
Austin, TX, 78722  
917-847-7743  
alan.groves@austin.utexas.edu

---

### **Education**

MD(Res), Neonatal Medicine, University of Auckland, New Zealand Thesis Title: Systemic Blood Flow in the Newborn Infant. Advisor: Dr Jon Skinner	09/02 to 08/04
MBChB, Edinburgh University, Edinburgh, Scotland	09/90 to 07/96
BSc (Hons) Physiology Edinburgh University, Edinburgh, Scotland	09/90 to 07/94

### **Postdoctoral Training (United Kingdom and New Zealand)**

Specialist Registrar in Neonatal Medicine, Queen Charlotte's and Chelsea Hospital London, UK,	09/05 to 09/06
Specialist Registrar in Neonatal Medicine, St Mary's Hospital, London, UK	09/04 to 09/05
Fellow in Neonatal Medicine, National Women's Hospital, Auckland, New Zealand	09/02 to 08/04
Specialist Registrar in Pediatrics, Sunderland Royal Hospital, Sunderland, UK	09/00 to 09/02
Specialist Registrar in Pediatrics, Countess of Chester Hospital, Chester, UK	03/00 to 08/00
Senior SHO in Pediatrics, Blackpool Victoria Hospital, Blackpool, UK	08/99 to 01/00
Senior House Officer in Pediatrics, Alder Hey Children's Hospital, Liverpool, UK	08/97 to 07/99
Pre-Registration House Officer in General Medicine, Edinburgh Royal Infirmary Edinburgh, Scotland	02/97 to 07/97
Pre-Registration House Officer in Pediatric Surgery, Royal Hospital for Sick Children Edinburgh, Scotland	07/96 to 01/97

### **Licensure**

Texas, Faculty Temporary License, 47732, 08/01/2023  
Full Texas Physician License, U1023, 02/28/2025

### **Board Certification/Eligibility**

American Board of Pediatrics, General Pediatrics, 10/16/17  
American Board of Pediatrics, Neonatal-Perinatal Medicine, 04/10/18

### **Academic and Leadership Appointments**

Associate Professor Department of Pediatrics, Dell Medical School at The University of Texas at Austin, TX	08/20 to current
Associate Professor Department of Pediatrics, Icahn School of Medicine, New York, NY	11/17 to 07/20
Associate Professor Department of Pediatrics, Weill Cornell College of Medicine, New York, NY	09/13 to 09/17
Senior Lecturer Department of Pediatrics, King's College London, UK	04/12 to 09/13
Senior Lecturer Department of Pediatrics, Imperial College London, UK	12/08 to 03/12

### **Employment and Clinical Activities**

Attending Neonatologist, Pediatrix Medical Group of Austin, Austin, TX	07/20 to current
Attending Neonatologist, Mount Sinai Hospital, New York, NY	11/17 to 07/20
Attending Neonatologist, New York Presbyterian Hospital, New York, NY	09/13 to 09/17
Consultant Neonatologist, St Thomas' Hospital, London, UK	04/12 to 09/13
Consultant Neonatologist, Queen Charlotte's and Chelsea Hospital, London, UK	12/08 to 03/12
Locum Consultant Neonatologist, Queen Charlotte's and Chelsea Hospital, London, UK	04/07 to 11/08
Research Fellow in Neonatal Imaging, Imperial College London, UK	09/06 to 04/07

### **Honors and Awards**

Friedman Family Foundation Clinical Scholar in Newborn Medicine	05/14
Medical Research Council (UK) Centenary Award	12/12
Medical Research Council (UK) Clinician Scientist Award	12/08
Wellcome Trust Value in People Award	02/08
Perinatal Society of New Zealand, Young Investigator of the Year Award	04/04

## **Professional Memberships**

American Academy of Pediatrics, Section on Perinatal Pediatrics	06/14
American Society of Echocardiography	02/13
Royal College of Paediatrics and Child Health, United Kingdom	03/10
Society for Pediatric Research	12/09
European Society for Paediatric Research	12/09
Neonatal Society, United Kingdom	11/04

## **Research Leadership Positions**

Director of Neonatal Research, Ascension Seton/Dell Children's NICUs	07/22
Data Safety and Monitoring Board, MD30 RCT, Dell Medical School Dept of Women's Health	03/22
Chair of Data Monitoring Committee, Pilot randomized trial comparing intervention levels for the support of blood pressure in extremely premature newborn babies, Queen Mary University of London, 2013-2016	
Vice-Chair, Weill Cornell Medical College Institutional Review Board (G2)	2014-2017
Member, Weill Cornell New York-Qatar Joint Institutional Review Board	2015-2017
Head of Cardiovascular Imaging, Department of Perinatal Imaging and Health, King's College London	2012-2013
Chair of Neonatal MRI Operational Group, Imperial College London 2009-2012, King's College London	2012-2013

## **Educational Activities**

### **Educational Administration and Leadership**

Founding Member and Executive Board Member, National Neonatal POCUS Collaborative	02/23
Co-Director of Point of Care Ultrasound, Dell Children's Medical Center	11/22
Director of Neonatal Point of Care Ultrasound, Ascension Seton/Dell Children's NICUs	07/22
Organization of Neonatal Training Program Directors POCUS Working Group	01/21
Member, Neonatal Hemodynamics Club Advisory Committee	03/15
Neonatal-Perinatal Medicine Fellowship Program Director, Dell Medical School	01/21
Neonatal Performed Echocardiography Special Interest Group: United States of America. Chair of sub-committee on TnEcho implementation	01/17
European Neonatologist Performed Echocardiography (NPE) Training Steering Group	09/15

### **Teaching Activities**

Neonatal Circulatory Function, Neonatal-Perinatal Fellowship, Dell Medical School	07/22
Point of Care Ultrasound, Neonatology Program, Dell Children's Medical Center	03/22
Basics of Statistics, Neonatal-Perinatal Fellowship, Weill Cornell	14-17
Critical Appraisal Small Group Sessions, Medical Students, Weill Cornell Medical College	15-17
Course Director for Neonatal Echo Skills Courses in London (2012, 2013), Budapest (2013), Nijmegen (2014) and New York (2016, 2017)	
Neonatal Echocardiography Workshop, Pediatric Academic Societies Meeting, Baltimore,	2016

### **Clinical Teaching and Supervision**

Fellow Program Training and Administration, Dell Medical School, 20% Effort	07/22
Resident and Fellow Training, Icahn School of Medicine, 10% Effort	11/17

### **Development of Curricula and Educational Materials**

US National Neonatal Point of Care Ultrasound Curriculum Development	07/22
Point of Care Ultrasound Training Curriculum Development, Mount Sinai Hospital	02/18
Point of Care Ultrasound for Newborn Vascular Access, Online Webinar	07/21

### **Advising and Mentoring**

#### **Students**

Chenyu Liu, MSc student, Masters in Biomedical Science, Icahn School of Medicine MS Awarded.	10/19
Amanda Garfinkel, Medical Student, Primary Supervisor for Area of Concentration Project Awarded Sarnoff Fellowship, Boston; Now in Residency, Massachusetts General Hospital	09/14
Kathryn Broadhouse, PhD Student, Primary Supervisor, Imperial College London PhD Awarded. Currently postdoc, University of Sydney, Australia	09/13

#### **Residents and Fellows**

David Cox, Clinical PhD Program, Primary Supervisor, PhD Awarded	09/12-08/15
Anna Finnemore, Clinical MD(Res) Program, Primary Supervisor, MD(Res) Awarded	09/10-08/13

#### **Postdoctoral Trainees**

Iman Salafian, PhD Student, National Science Foundation I-Corps (National) Technical Lead	03/23
---	-------

Joshua Chang, MDPH, K01 Applicant, Dell Medical School 07/21-current

## Faculty

Dr Adrienne Bischoff, M.D., Clinical Assistant Professor, University of Iowa 07/21-current

## Grants

### Current

The University of Texas at Austin, Discovery to Impact Proof of Concept Award 05/23 – 10/23  
Title - Trinity Tube Feeding Tube  
\$24,674  
Role: Principal Investigator

### Completed

Dell Medical School, Texas Health Catalyst Phase 2 Award 04/22 – 01/23  
Title - Trinity Orogastric Tube, A Next Generation Solution for Integrated Monitoring,  
Feeding, and Ventilatory Support in the Sick Newborn  
\$5,000  
Role: Principal Investigator

American Heart Association, 17GRNT33700284, Principal Investigator - Alan Groves 07/17 - 06/20  
Title - Delineating the Triggers and Impact of Cardiac Remodeling following Premature Birth  
Studying a cohort of prematurely born infants to quantify cardiac remodeling following preterm birth  
\$146,410  
Role: Principal Investigator, 15% Effort

Friedman Family Foundation, Weill Cornell Internal Funding, PI - Alan Groves  
05/14-09/17  
Development of markers of circulatory function  
Observational study of echo and cardiac MRI assessments in newborn infants  
Approx. \$55,000/year  
Role: 25% effort

British Heart Foundation, PG/13/38/30289, PI - Lucilla Poston  
08/14-08/17  
Effect of a complex lifestyle intervention in pregnant obese women on childhood cardiovascular  
function  
Assessment of Cardiac size and Autonomic function in newborns and 3 year old children born to  
obese mothers  
£203,157 (Approx US\$308,800)  
Role - Approx 5% effort

Sparks, Clinical Research Training Fellowship, PI - Alan Groves  
09/12-08/15  
Development of an MR atlas of neonatal cardiac function  
Clinical PhD funding to support Dr David Cox, acquisition and analysis of cardiac MR images

Total - £115,878 (Approx US\$175,000)

Role - Approx 5% effort

**Grants, Completed, Continued**

King's College Biomedical Research Center, Internal Funding, PI - Alan Groves

09/12-09/13

Pharmacokinetic study of melatonin in the newborn

Development of a stable intravenous formulation of melatonin for trial of cardioprotection and neuroprotection

£45,011 (Approx US\$68,000)

Role - Approx 5% effort

British Heart Foundation, FS11/75/29030, PI - David Edwards

09/11-08/13

Assessing intra-cardiac blood flow in the newborn

3D phase contrast MRI study of intra-cardiac blood flow patterns in the newborn

Clinical MD(Res) funding to support Dr Anna Finnemore, acquisition and analysis of cardiac MR images

£113,403 (Approx US\$170,000)

Role - Approx 5% effort

Medical Research Council (UK) Centenary Award, G0701896-1, PI - Alan Groves

12/12-09/13

Validation of heart rate characteristic monitoring

Acquisition and analysis of heart rate variability data in preterm infants to predict sepsis and clinical deterioration

£79,965 (Approx US\$120,000)

Role - Approx 50% effort

Medical Research Council (UK) Clinician Scientist Award, G0701896, PI - Alan Groves

12/08-11/12

Development of cardiac MRI and advanced echocardiography techniques in newborns

£1,019,800 (Approx US\$1,500,000)

Role - Approx 50% effort

Imperial College Biomedical Research Center, Internal Funding, PI - Alan Groves

09/10-08/11

Develop MRI 3D flow imaging in preterm infants

£91,153 (Approx US\$135,000)

Role - Approx 5% effort

Imperial College Healthcare Charity, Equipment Funding, PI - Alan Groves

09/10

Purchase of dedicated neonatal cardiac MRI receive coil

£23,500 (Approx US\$35,000)

Role - NA

Wellcome Trust Value in People Award, PI - David Edwards

05/08-10/08

Early Stage Development of Neonatal Cardiac MRI

Recruitment and scanning of infants

£19,050 (Approx US\$28,000)

Role: 40% effort

### **Grants, Completed, Continued**

Starship Foundation Research Fellowship Award, PI - Alan Groves

12/03-08/04

Systemic blood flow in the newborn infant

Recruitment, image acquisition and data analysis in echo study of newborns

NZ\$50,000 (Approx US\$39,000)

Role: 40% effort

### **Other Active Research Activities and Clinical and Quality Improvements Projects**

Active collaboration with Dr David Paydarfar, Chair of Department of Neurology, Dell Medical School.

Project Title - Movement as a Vital Sign in Preterm Infants

Funder – National Science Foundation

### **Technology Development**

#### **Patents**

Multifunction gavage tube - Initial application submitted September 2022

#### **Devices/Software Applications**

None

### **Publications**

#### **Peer-reviewed publications**

1. Jhaveri S, Battersby E, Stern KWD, Cohen J, Yang Y, Price A, Hughes E, Poston L, Pasupathy D, Taylor P, Matias C, Vieira MC, Groves A. Normative ranges of biventricular volumes and function in healthy term newborns. *Journal of Cardiovascular Magnetic Resonance* 2023, In Press
2. St John Sutton EM, Polidoro E, Ratner V, McKinsey S, Groves A. Rapid simulator-based training for heart rate assessment in the newborn. *Resuscitation* 2022. Epub ahead of print
3. Taylor PD, Gu H, Saunders H, Fiori F, Dalrymple KV, Sethupathi P, Yamanouchi L, Miller F, Jones B, Vieira MC, Singh C, Briley A, Seed PT, Pasupathy D, Santosh PJ, Groves AM, Sinha MD, Chowienczyk PJ, Poston L on behalf of the UPBEAT Consortium. A Lifestyle Intervention in Obese Pregnancy and Cardiac Remodelling in 3-year-olds: Children of the UPBEAT RCT. *International Journal of Obesity*. 2022. Epub ahead of print
4. Ficial B, Corsini I, Bonafiglia E, Petoello E, Iride Flore A, Nogara S, Tsatsaris S and Groves AM. Echocardiographic Quantification of Superior Vena Cava (SVC) Flow in Neonates: Pilot Study of Modified Technique.. *Diagnostics* 2022, 12(9), 2083
5. Kozyak BW, Fraga MV, Juliano CE, Bhombal S, Munson DA, Brandsma E, Stoller JZ, Jain A, Kesman R, Meshkati M, Noh CY, Dewitt AG, Costarino AT, Hehir DA, Groves AM. Real-Time

Ultrasound Guidance for Umbilical Venous Cannulation in Neonates With Congenital Heart Disease. *Pediatr Crit Care Med*. 2022; 2022;23(5):e257-e266

6. Groves AM, Price AN, Russell-Webster T, Jhaveri S, Yang Y, Battersby EE, Shahid S, Costa Vieira M, Hughes E, Miller F, Briley AL, Singh C, Seed PT, Chowienczyk PJ, Stern KWD, Cohen J, Pasupathy D, Edwards AD, Poston L, Taylor PD. Impact of maternal obesity on neonatal heart rate and cardiac size. *Arch Dis Child Fetal Neonatal Ed*. 2022;107:481-487
7. Siegel EJ, Groves AM, Silver G, Hojsak J, Lim A, Traube C. Delirium in the Neonatal ICU: A Point Prevalence Study. *Hospital Pediatrics*. 2021 11(11):e321-e326.
8. Crump C, Groves A, Sundquist J, Sundquist K. Association of Preterm Birth With Long-term Risk of Heart Failure Into Adulthood. *JAMA Pediatr*. 2021;175:689-697
9. Groves A. The Future of Cardiac Ultrasound in the NICU. *Clin Perinatol*. 2020;47:499-513.
10. Suell JV, Meshkati M, Juliano C, Groves A. Real-time point-of-care ultrasound-guided correction of PICC line placement by external manipulation of the upper extremity. *Arch Dis Child Fetal Neonatal Ed*. 2020;105:25
11. Nieves A, Cozzo, A, Kosoff Z, Traube C, Groves A. A 3D Airway Model to Assess Airway Dead Space. *Arch Dis Child Fetal Neonatal Ed*. 2019;104:F321-F323
12. Cox DJ, Bai W, Price AN, Edwards AD, Rueckert D, Groves AM. Ventricular remodeling in preterm infants: computational cardiac magnetic resonance atlas shows significant early remodeling of the left ventricle. *Pediatric Research*. 2019;85:807-815
13. Kharrat A, Rios D, Weisz DE, Giesinger RE, Groves A, Yang J, McNamara PJ, Shah PS, Jain A. The Relationship between blood pressure parameters and left ventricular output in neonates. *J Perinatol*. 2019;39:619-625
14. Dyke JP, Garfinkel AC, Groves AM, Kovanlikaya A. High Resolution Rapid Neonatal Whole Body Composition Using 3.0 Tesla Chemical Shift Magnetic Resonance Imaging. *Pediatric Research* 2018;83:638-644
15. Dayton JD, Groves AM, Hammad HT, Ching K, Gerber LM, Glickstein JS, Flynn PA. Effectiveness of Echocardiography Simulation Training for Pediatric Cardiology Fellows in Congenital Heart Disease. *Cardiol Young*. 2018;28:611-615
16. Groves AM, Singh Y, Dempsey E, Molnar Z, Austin T, El-Khuffash A, de Boode WP; European Special Interest Group 'Neonatologist Performed Echocardiography' (NPE). Introduction to Neonatologist Performed Echocardiography. *Pediatr Res*. 2018 Jul;84(Suppl 1):1-12
17. Singh Y, Roehr C, Tissot C, Rogerson S, Gupta S, Bohlin K, Breindahl M, El-Khuffash A, de Boode WP; European Special Interest Group 'Neonatologist Performed Echocardiography' (NPE). Education, Training and Accreditation of Neonatologist Performed Echocardiography in Europe – Framework for Practice. *Pediatr Res*. 2018 Jul;84(Suppl 1):13-17
18. Nestaas E, Schubert U, de Boode WP, EL-Khuffash A; European Special Interest Group 'Neonatologist Performed Echocardiography' (NPE). Tissue Doppler Velocity Imaging and Event Timings in Neonates. A guide to Image Acquisition, Measurement, Interpretation and Reference Values. *Pediatr Res*. 2018 Jul;84(Suppl 1):18-29
19. EL-Khuffash A, Schubert U, Levy PT, Nestaas E, de Boode WP; European Special Interest Group 'Neonatologist Performed Echocardiography' (NPE). Deformation Imaging and Rotational



Mechanics in Neonates: A guide to Image Acquisition, Measurement, Interpretation and Reference Values. *Pediatr Res.* 2018;84(Suppl 1):30-45

20. Van Laere D, Van Overmeire B, Gupta S, El-Khuffash A, Savoia M, McNamara PJ, Schwarz CE, de Boode WP; European Special Interest Group 'Neonatologist Performed Echocardiography' (NPE). Application of Neonatologist Performed Echocardiography in the Management of a Patent Ductus Arteriosus. *Pediatr Res.* 2018;84(Suppl 1):46-56
21. de Boode WP, van der Lee R, Horsberg Eriksen B, Nestaas E, Dempsey E, Singh Y, Austin T, El-Khuffash A; European Special Interest Group 'Neonatologist Performed Echocardiography' (NPE). The role of Neonatologist Performed Echocardiography (NPE) in the assessment and management of neonatal shock. *Pediatr Res.* 2018;84(Suppl 1):57-67
22. de Boode WP, Singh Y, Molnar Z, Schubert U, Savoia M, Sehgal A, Levy PT, McNamara PJ, El-Khuffash A; European Special Interest Group 'Neonatologist Performed Echocardiography' (NPE). Application of Neonatologist Performed Echocardiography in the assessment and management of persistent pulmonary hypertension of the newborn. *Pediatr Res.* 2018;84(Suppl 1):68-77
23. Levy PT, Tissot C, Horsberg Eriksen B, Nestaas E, Rogerson S, McNamara PJ, El-Khuffash A, de Boode WP; European Special Interest Group 'Neonatologist Performed Echocardiography' (NPE). Application of Neonatologist Performed Echocardiography in the Assessment and Management of Neonatal Heart Failure unrelated to Congenital Heart Disease. *Pediatr Res.* 2018;84(Suppl 1):78-88
24. Ficial B, Bonafiglia E, Padovani EM, Prioli MA, Finnemore AE, Cox DJ, Broadhouse KM, Price AN, Durighel G, Groves AM. A modified echocardiographic approach improves reliability of superior vena caval flow quantification. *Arch Dis Child Fetal Neonatal Ed.* 2017;102:F7-F11
25. Ntigurirwa P, Mellor K, Langer D, Evans M, Robertson E, Tuyisenge L, Groves A, Lissauer T. A health partnership to reduce neonatal mortality in 4 hospitals in Rwanda by capacity building and provision of basic respiratory support. *Globalization and Health,* 2017;13:28
26. Singh Y, Gupta S, Groves AM, Gandhi A, Thomson J, Qureshi S, Simpson JM. Expert consensus statement 'Neonatologist-performed Echocardiography (NoPE)'-training and accreditation in UK. Singh Y, Gupta S, Groves AM, Gandhi A, Thomson J, Qureshi S, Simpson JM. *Eur J Pediatr.* 2016 Feb;175:281-7
27. Groves AM, Traube C, Silver G. Detection and Management of Delirium in the Neonatal Unit - A Case Series. *Pediatrics* 2016 Mar;137:1-4.
28. de Boode WP, Singh Y, Gupta S, Austin T, Bohlin K, Dempsey E, Groves A, Eriksen BH, van Laere D, Molnar Z, Nestaas E, Rogerson S, Schubert U, Tissot C, van der Lee R, van Overmeire B, El-Khuffash A. Recommendations for neonatologist performed echocardiography in Europe: Consensus Statement endorsed by European Society for Paediatric Research (ESPR) and European Society for Neonatology (ESN). *Pediatr Res.* 2016;80:465-71
29. Wellington AC, Spigland NA, Worgall S, Groves AM. Decreasing mean airway pressure as a management strategy for tension pneumatoceles. *Arch Dis Child Fetal Neonatal Ed.* 2015;100(2):F101
30. Finnemore A, Groves AM. Physiology of the Fetal and Transitional Circulation. *Semin Fetal Neonatal Med.* 2015;20(4):210-6

31. Broadhouse KM, Price AN, Durighel G, Finnemore AE, Cox DJ, Edwards AD, Hajnal JV, Groves AM. 4D Phase Contrast MRI in the Preterm Infant: Visualization of Patent Ductus Arteriosus. *Arch Dis Child Fetal Neonatal Ed.* 2015;100:F164
32. Broadhouse KM, Finnemore AE, Price AN, Durighel G Cox DJ, Edwards AD, Hajnal JV, Groves AM. MRI Assessment of Cardiac Function and Myocardial Mass in Preterm Infants: A Preliminary Study of the Impact of Patent Ductus Arteriosus. *Journal of Cardiovascular Magnetic Resonance.* 2014;16:54
33. Ficial B, Groves AM. Superior vena flow quantification in the newborn: reply to a letter by Kluckow and Evans. *J Am Soc Echocardiogr.* 2014;27:794-6
34. Finnemore A, Toulmin H, Merchant N, Arichi T, Tusor N, Cox D, Ederies A, Nongena P, Edwards AD, Groves A. Chloral Hydrate Sedation for Magnetic Resonance Imaging in Newborn Infants. *Pediatric Anesthesia.* 2014;25:190-5
35. Price AN, Malik SJ, Broadhouse KM, Finnemore AE, Durighel G, Cox DJ, Edwards AD, Groves AM and Hajnal JV. Active Frequency Stabilisation for Prolonged Balanced SSFP Imaging: Application to 3T Neonatal Cardiac MRI. *Magnetic Resonance in Medicine.* 2013;70:776–784
36. Broadhouse KM; Price AN; Durighel G; Cox DJ; Finnemore AE; Edwards AD; Hajnal JV; Groves AM. Assessment of PDA shunt and systemic blood flow in newborns using cardiac MRI. *NMR Biomed.* 2013;26:1135-41
37. Arichi T; Gordon-Williams R; Allievi A; Groves A; Burdet E; Edwards A. Computer-controlled stimulation for functional Magnetic Resonance Imaging studies of the Neonatal Olfactory system. *Acta Paediatr.* 2013;102:868-75
38. Ficial B, Finnemore AE, Cox DJ, Broadhouse KM, Price AN, Durighel G, Ekitzidou G, Hajnal JV, Edwards AD, Groves AM. Validation Study on the Accuracy of Echocardiographic Measurements of Systemic Blood Flow Volume in Newborn Infants. *Journal of the American Society of Echocardiography.* 2013;26:1365-71
39. Cox D, Groves AM. Inotropes in preterm infants – evidence for and against. *Acta Paediatrica.* 2012;Suppl. 101:17-23
40. Li D, Jeyaprakash V, Foreman SM and Groves AM. Comparing oxygen targeting in preterm infants between the Masimo and Philips pulse oximeters. *Arch Dis Child Fetal Neonatal Ed.* 2012;97:F311-F312
41. Groves AM, Durighel G, Finnemore A, Tusor N, Merchant N, Razavi R, Hajnal JV, Edwards AD. Disruption of intracardiac flow patterns in the newborn infant. *Pediatr Res.* 2012;71:380-5.
42. Varela M, Groves AM, Arichi T, Hajnal JV. Mean Cerebral Blood Flow Estimates using Phase Contrast MRI in Infants under One Year of Age. *NMR in Biomedicine.* 2012;25:1063-1072
43. Groves AM. Cardiac magnetic resonance in the study of neonatal haemodynamics. *Semin Fetal Neonatal Med.* 2011,16:36-41.
44. Groves AM; Chiesa G; Durighel G; Goldring ST; Fitzpatrick JA; Uribe S; Razavi R; Hajnal JV; Edwards AD. Functional cardiac MRI in preterm and term newborns. *Arch Dis Child Fetal Neonatal Ed.* 2011,96:F86-F91.
45. Groves AM; Edwards AD. Heart rate characteristic monitoring-HeRO or villain?. *J Pediatr.* 2011;159:885-886

46. Morris AE, Pauliah S, Groves AM, Thomson MA, A Edwards AD. Multiple cerebral gaseous emboli in an infant with fulminant necrotising enterocolitis. *BMJ Case Reports* 2010; doi:10.1136/bcr.09.2008.0928
47. Merchant N; Groves A; Larkman DJ; Counsell SJ; Thomson MA; Doria V; Groppo M; Arichi T; Foreman S, Herlihy DJ, Hajnal JV, Srinivasan L, Foran A, Rutherford M, Edwards AD, Boardman JP. A patient care system for early 3.0 Tesla magnetic resonance imaging of very low birth weight infants. *Early Hum Dev.* 2009;85:779-783
48. Groves AM, Kuschel C, Knight D, Skinner J. The relationship between blood pressure and blood flow in newborn preterm infants. *Arch Dis Child Fetal Neonatal Ed* 2008 Jan;93(1):F29-32
49. Groves AM, Kuschel C, Knight D, Skinner J. Echocardiographic assessment of blood flow volume in the SVC and descending aorta in the newborn infant. *Arch Dis Child Fetal Neonatal Ed* 2008 Jan;93(1):F24-8
50. Groves AM, Kuschel C, Knight D, Skinner J. Does Retrograde Diastolic Flow in the Descending Aorta Signify Impaired Systemic Perfusion in Preterm Infants. *Pediatr Res* 2008 Jan;63(1):89-94.
51. Kuschel CA; Bach KP; Webster NJ; Page B; Groves AM; Battin MR. The reliability of 2D and colour Doppler ultrasound in localising longline position. *J Paediatr Child Health.* 2008;44:483-487.
52. Foran A; Cinnante C; Groves AM; Azzopardi DV; Rutherford MA; Cowan FM. Patterns of brain injury and outcome in term neonates presenting with postnatal collapse. *Arch Dis Child Fetal Neonatal Ed*, 2008, 94:F168-F177
53. West C, Groves A, Williams C, Harding J, Skinner J, Kuschel C, Battin M. Early low cardiac output is associated with compromised electroencephalographic activity in very preterm infants. *Pediatric Research* 2006;59:610-615
54. Groves A, Kuschel C, Skinner J. International Perspectives - The neonatologist as an echocardiographer. *NeoReviews* 2006;7:e391
55. Groves A, Kuschel C, Battin M. Neonatal long lines: Localisation with colour Doppler ultrasonography, *Arch Dis Child Fetal Neonatal Ed.* 2005;90:F5
56. Groves AM, Kuschel C, Knight D, Skinner J. Cardiorespiratory stability during echocardiography in preterm infants. *Archives of Disease in Childhood* 2005;90:86-87
57. Groves A, Briggs K, Kuschel C, Harding J. Predictors of chronic lung disease in the 'CPAP era', *Journal of Paediatrics and Child Health* 2004;40:290-4
58. Groves A, Cameron H, Barrett M. Intra-abdominal lymphangioma: further images of prenatal diagnosis, *Ultrasound in Obstetrics and Gynecology* 2003;22:97-98
59. Groves A, Clough V, Stevens R. Neonatal alloimmune thrombocytopenia may be less severe in a subsequent pregnancy. *Pediatric Hematology and Oncology* 2003;20:393-398

## **Books & Chapters**

Avery's Neonatology: Pathophysiology and Management of the Newborn. Co-Editor for 8th Edition - Boardman JP, Groves A, Ramasethu J.

Price AP, Groves AM. Cardiovascular magnetic resonance in the study of neonatal hemodynamics. Hemodynamics and Cardiology, Neonatology Questions and Controversies. 3rd Edition. Edited by Kleinman and Seri. Published by Elsevier Saunders, 2018.

### **Non-peer-reviewed publications**

None

### **Non-print/Online Materials**

[www.nicupocus.com](http://www.nicupocus.com) - educational site for point of care and echocardiography in the newborn

### **Editorial Responsibilities**

Manuscript Reviews for: JAMA Pediatrics, Journal of the American College of Cardiology, Journal of the American Society of Echocardiography, Echocardiography, Journal of Cardiac Magnetic Resonance, Journal of Pediatrics, Pediatric Research, Archives of Disease in Childhood, Journal of Perinatology, Neonatology, Journal of Pediatrics and Child Health

### **Invited Presentations, Posters & Abstracts (Selected)**

#### **International**

Ben Kozyak, Real-time Ultrasound Guidance to Increase Success of Umbilical Venous Cannulation, American Academy of Pediatrics National Conference	10/21
Alan Groves, Principles of Ultrasound for Vascular Access Point of Care Ultrasound for Newborn Vascular Access Webinar	07/21
Alan Groves, Advances in Assessment of Fluid Responsiveness Indian Academy of Pediatrics Neonatology Chapter and National Neonatology Forum Kerala Online Conference	03/21
Alan Groves, When is the Baby Adequately Fluid Resuscitated? NeoHeart Online Conference,	12/20
Alan Groves, Cardiovascular Assessment: Beyond Echocardiography. NeoHemodynamics, Toronto	05/18
Alan Groves, The Case Against PDA Treatment. International Cardiology/Neonatology Symposium, Miami	10/15
Alan Groves, Functional CMR in the Newborn Infant. Society for Cardiovascular Magnetic Resonance, San Francisco	02/13
Alan Groves, Magnetic Resonance Imaging of the Neonatal Heart. Society of Pediatric Research/ Pediatric Academic Societies Neonatal Hemodynamics Club, Boston	04/12

Alan Groves, Cardiac MRI for Assessment of Cardiac Function in the Newborn. Echo Assessment of the Newborn Circulation. European Society for Paediatric Research Newcastle, UK	10/11
Alan Groves, Inotropes in Preterm Infants – Evidence For and Against. Evidence-based Neonatology Conference (EBNEO), Stockholm, Sweden	06/11
Alan Groves, The Neonatal Transitional Circulation, Mechanisms of Action of Vasopressors /Inotropes, Assessment of Cardiac Output in the Neonate, Treatment of Neonatal Hypotension After the First Postnatal Day. Ipokrates Seminar on Neonatal Haemodynamics, Jakarta.	02/11
Alan Groves, Assessment of the Circulation: The Heart. European Society of Paediatric Research Workshop, Hamburg, Germany.	10/09

### **National**

Alan Groves. Organization of Neonatal Training Program Directors Webinars How to Set up a NICU POCUS Program	11/22-05/23
Alan Groves. Point of Care Ultrasound in the NICU. Pediatrix Grand Rounds	07/22
Alan Groves. Children's Hospital of Philadelphia; Pediatric Emergency Medicine, Neonatal and Critical Care Medicine: Bedside Ultrasound Course	11/18
Alan Groves. Children's Hospital of Philadelphia; Pediatric Emergency Medicine, Neonatal and Critical Care Medicine: Bedside Ultrasound Course	11/17
Alan Groves, New Trends in Cardiovascular Management. Achieving Improved Outcomes in Neonatology – A Practical Approach, Cardiff, Wales	03/15
Alan Groves, Managing the PDA in 2013. Achieving Improved Outcomes in Neonatology, A Practical Approach, Cardiff, Wales	02/13
Alan Groves, Advances in understanding neonatal haemodynamics: echocardiogram and MR imaging. Royal Society of Medicine Hot Topics in Paediatrics, London, UK	04/12
Alan Groves, Echo Assessment of PPHN and Exclusion of Structural Heart Disease. Teeside Neonatal Cardiology and Haemodynamics, Middlesbrough, UK	09/11
Alan Groves, Relationship Between Blood Pressure and Blood Flow in Preterm Infants. Role of MRI in Assessment of Cardiac Function. Symposium on Functional Echocardiography and Neonatal Hemodynamics, Melbourne, Australia	10/10
Alan Groves, Hypotension in the Preterm Infant. Brompton Hospital, Cardiology in the Newborn, London, UK	03/10

### **Regional**

Alan Groves, Delirium in the NICU. New York University School of Medicine. Pediatric Intensive, Cardiac and Neonatal Intensive Care Collaborative Conference	11/19
Alan Groves, PDA - To Treat or Not to Treat? On Site Neonatal Partners, Physician Update	11/16
Alan Groves, Inotropes on the NICU - What are we Aiming For? New York Presbyterian-Queens, Annual Neonatal Study Day.	10/15

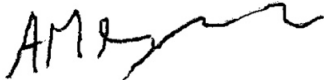
**Visiting Professorship**

Angela Ramos Visiting Professor, Children's Hospital of Los Angeles

03/14

**Community Service**

COVID Advisory Board, AHB School, Austin

A handwritten signature in black ink, appearing to read "AMG" followed by a stylized flourish.

Alan Groves

March 24th 2023