

CURRICULUM VITAE
GWENYTH FISCHER, M.D.

PROFESSIONAL ADDRESS

University of Minnesota College of Medicine
Department of Pediatric Critical Care
Minneapolis, MN 55454

IDENTIFYING INFORMATION**Education**

Degree	Institution	Date Degree Granted
B.A. in Cognitive Science with Thesis Honors	Vassar College, Poughkeepsie, New York	1998-2002
M.D.	Loyola University Stritch School of Medicine, Maywood, Illinois	2002-2006
Residency/ Internship in Pediatrics	Dartmouth Hitchcock Medical Center Lebanon, New Hampshire	2006-2009
Medical Device Center Fellowship	University of Minnesota	2010-2011
Pediatric Critical Care Fellowship	University of Minnesota	2009-2012

Certifications, Licenses

American Board of Pediatrics, Critical Care Certification	2014
State of Minnesota License Number (#54104)	2011-present
DEA Registration	2011-present
American Board of Pediatrics	2009

Academic Appointments

University of Minnesota, Twin Cities Campus Associate Professor of Pediatric Critical Care	2021-present
University of Minnesota, Twin Cities Campus Assistant Professor of Pediatric Critical Care	2012-2021

Administrative Appointments

Associate Director, UMN Bakken Medical Device Center	2022-present
Associate Chair for Research, Pediatrics Department	2019-present
Pediatric Device Innovation Consortium Director	2011-present
Medical Device Center Fellows Clinical Advisor	2014-2019

Clinical Appointments

Medical Director, Pediatric Cardiopulmonary Services	2015-present
Clinical Advisor, Medical Device Center	2015-2019
Medical Director, Pediatric ECMO	2014-present

External Appointments

FDA Pediatric Advisory Committee Member	2022-present
FDA Pediatric Advisory Committee, Consultant	2016-present

HONORS AND AWARDS FOR RESEARCH WORK, TEACHING, PUBLIC ENGAGEMENT, AND SERVICE**University of Minnesota**

- University of Minnesota Pediatrics Innovator in Clinical Practice Award 2021
- UMN Rothenberger Leadership Academy 2020
- UMN LEAD Emerging Leader 2019
- University of Minnesota Pediatrics Innovator in Clinical Practice Award 2015
- AAMC Early Career Women Faculty Professional Development Seminar Scholarship, University of Minnesota Medical School 2014
- Nicholas Memorial Fund Award 2011

External Sources

- First Place, “DoseDial” American Society of Artificial Internal Organs (ASAIIO)
- Medical Device Entrepreneur’s Forum Competition, Chicago Illinois 2017
- Top Doctors Mpls St. Paul Magazine 2020-2023
- Top Doctors Minnesota Monthly 2016-2019, 2021,2023
- Top Doctors “Rising Stars” Mpls St. Paul Magazine 2015-2017
- Newborn Foundation Ted Thompsen Visionary Award 2015

Publications**Peer-Reviewed Publications**

1. Wu AG, Klein JR, John SC, et al. Reported Complications of Bubble Continuous Positive Airway Pressure Systems in Low-Resource Settings: An International Survey. *The American Journal of Tropical Medicine and Hygiene*. Published online 2023:tpmd230065-tpmd230065.
2. Boutzoukas AE, Olson R, Sellers MA, et al. Mechanisms to expedite pediatric clinical trial site activation: The DOSE trial experience. *Contemporary Clinical Trials*. 2023;125:107067.
3. Becker ML, Fischer G, Hornik CD, et al. Dexmedetomidine Opioid Sparing Effect in Mechanically Ventilated Children (DOSE): Trial of Fentanyl versus Fentanyl+ Dexmedetomidine for Maintenance of Sedation. *Journal of Pediatric Intensive Care*. Published online 2023.
4. Wu AG, Luch S, Floersch JR, et al. A Low-Resource Oxygen Blender Prototype for Use in Modified Bubble CPAP Circuits: Results from Design Feasibility Workshops. *The American journal of tropical medicine and hygiene*. 2022;107(3):724-727.

5. Boucher AA, Knutson S, Young L, et al. Prolonged Elevations of Factor VIII and von Willebrand Factor Antigen After Multisystem Inflammatory Syndrome in Children (MIS-C). *Journal of Pediatric Hematology/Oncology*. Published online 2022:10-1097.
6. Lehman A, Fischer G, Steiner M. Diffuse Thromboses in a 2-year-old With Sepsis and Respiratory Failure. *The Pediatric Infectious Disease Journal*. 2021;40(10):952-954.
7. Lamsal R, Fischer G, Shyne M, Somani A. Non-invasive Neurally Adjusted Ventilatory Assist (NAVA) in the pediatric ICU: assessing optimal Edi compliance. *Minerva Pediatrics*. Published online 2021.
8. Kucher NM, Dhaliwal DS, Fischer GA, Davey CS, Gupta S. Implementation of a critical asthma protocol in a pediatric ICU. *Respiratory care*. 2021;66(4):635-643.
9. Bauman BD, Louiselle A, Nygaard RM, et al. Treatment of hypothermic cardiac arrest in the pediatric drowning victim, a case report, and systematic review. *Pediatric emergency care*. 2021;37(10):e653-e659.
10. Prekker ME, Brunsvold ME, Bohman JK, et al. Regional planning for extracorporeal membrane oxygenation allocation during coronavirus disease 2019. *Chest*. 2020;158(2):603-607.
11. Phu HT, Park Y, Andrews AJ, et al. Design and evaluation of a portable negative pressure hood with HEPA filtration to protect health care workers treating patients with transmissible respiratory infections. *American journal of infection control*. 2020;48(10):1237-1243.
12. Kucher N, Larson JM, Fischer G, Mertaugh M, Peterson L, Gershan LA. 3-Dimensional nature-based therapeutics in pediatric patients with total pancreatectomy and islet auto-transplant. *Complementary Therapies in Medicine*. 2020;48:102249.
13. Floersch J, Hauschildt E, Keester A, et al. A low-resource oxygen blender prototype for use in modified bubble CPAP circuits. *Journal of Medical Devices*. 2020;14(1).
14. Juhnke B, Mattson AR, Saltzman D, et al. Use of virtual reality for pre-surgical planning in separation of conjoined twins: a case report. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*. 2019;233(12):1327-1332.
15. Heith CS, Hansen LA, Bakken RM, et al. Effects of an ex vivo pediatric extracorporeal membrane oxygenation circuit on the sequestration of mycophenolate mofetil, tacrolimus, hydromorphone, and fentanyl. *The Journal of Pediatric Pharmacology and Therapeutics*. 2019;24(4):290-295.
16. Fischer GA, Wells SM, Rebuffoni JF, Peterson BM, LeBien TW. A model for overcoming challenges in academic pediatric medical device innovation. *Journal of clinical and translational science*. 2019;3(1):5-11.
17. Bjorklund AR, Odongkara Mpora B, Steiner ME, Fischer G, Davey CS, Slusher TM. Use of a modified bubble continuous positive airway pressure (bCPAP) device for children in respiratory distress in low-and middle-income countries: a safety study. *Paediatrics and international child health*. 2019;39(3):160-167.
18. Juhnke B, Mattson A, Saltzman D, et al. Preparing for conjoined twins separation through virtual reality. In: *2018 Design of Medical Devices Conference*. Vol 9. American Society of Mechanical Engineers Digital Collection; 2018.
19. Heith C, Hume J, Hansen L, et al. Ex vivo Effects of a Pediatric Extracorporeal Membrane Oxygenation (ECMO) Circuit on the Sequestration of Mycophenolate Mofetil and Tacrolimus. *The Journal of Heart and Lung Transplantation*. 2018;37(4):S407.
20. Heith CS, Hume JR, Steiner ME, Fischer GA. Fulminant mycoplasma infection requiring ECMO in a previously healthy child: case report and review. *Journal of Pediatric Intensive Care*. 2018;7(02):106-109.
21. Gillis HC, Fischer G, Gupta S. Treatment of pulmonary hypertension with inhaled agents in the pediatric intensive care unit. *The Bulletin of the American Society of Hospital Pharmacists*. 2018;75(4):171-172.
22. Nelson KM, Hansen LA, Steiner ME, Fischer GA, Dehnel J, Gupta S. Continuous antithrombin III administration in pediatric veno-arterial extracorporeal membrane oxygenation. *The Journal of Pediatric Pharmacology and Therapeutics*. 2017;22(4):266-271.
23. Fischer G, Myers JA, Huang W, Shayani V. Gastric migration and strangulation after adjustable gastric banding. *Obesity surgery*. 2008;18:753-755.
24. Myers JA, Fischer GA, Sarker S, Shayani V. Gallbladder disease in patients undergoing laparoscopic adjustable gastric banding. *Surgery for Obesity and Related Diseases*. 2005;1(6):561-563.
25. Reddy V.Y., Houghtaling C., Fischer, G., Fallon J., Farr N., Clarke J. (2004). Use of a diode laser balloon ablation catheter to generate circumferential pulmonary venous lesions in an open thoracotomy caprine model, *PACE* (27):52-57.

Websites

Fischer GA and Rebuffoni, J. Pediatric Device Innovation Consortium Website (<http://www.thepdic.org/>) Published 2016. Role: content creation, concept design, content update

Presentations

Invited Oral Presentations at *International Professional Meetings, Conferences, etc.*

1. Fischer, G. *Developing Devices for Kids: Where we are and where we're going*, invited speaker, session chair. Design of Medical Devices China, Shanghai, China, December 6-9, 2019.
2. Fischer, G. *Medical Device Design Workshop*. Workshop leader and speaker. Design of Medical Devices China, Shanghai, China, December 2019.
3. Fischer, G. *Medical Device Design Workshop*. Workshop leader and speaker. Design of Medical Devices China, Beijing, China, December 2018.
4. Fischer, G. *Pediatric Innovation in the U.S.*, invited speaker, session chair. Design of Medical Devices China, Beijing, China, December 2018.
5. Fischer, G. *U.S. Orphan Medical Devices Landscape*, invited speaker, Pediatric Medical Device Conference, Lubeck Germany, November 16, 2018
6. Fischer, G. *Defining and Finding Clinical Needs*, invited speaker, Pediatric Medical Device Conference, Lubeck Germany, November 16, 2018
7. Fischer, G. *Pediatric Innovation*, invited speaker, session chair. Design of Medical Devices China, Beijing, China, November 2017.
8. Fischer, G. *Pediatrics as an Example of Orphan Device Development*, invited speaker, session chair, moderator. Global Summit on Rare Diseases and Orphan Drugs, Dubai, United Arab Emirates, November 2016.
9. Fischer, G. *Pediatric Mechanical Ventilator Management*, podium speaker, Grand Rounds at Maternity and Children's Hospital, Dammam, Saudi Arabia, February 2013

Invited Oral Presentations at *National Professional Meetings, Conferences, etc.*

1. Fischer, G. *Providers Panel: What do Customers Want? Panel member*, Device Talks, Minneapolis June 2018
2. Fischer, G. *International Medical Device Expo-session chair, speaker* San Francisco, March 2018
3. Fischer, G. *Resources for Innovators in the Pediatric Space*. Design of Medical Devices Conference, Minneapolis, April, 2018
4. Fischer, G. *Introduction to Pediatric Innovation*, event founder and organizer, session chair, moderator, speaker, Pediatric Device Breakthrough at Design of Medical Devices Conference, Minneapolis, April 2018
5. Fischer, G. *Pediatric Medical Devices Breakthrough*, speaker, session chair, conference organizer, Pediatrics Breakthrough Event at the Design of Medical Devices Conference, Minneapolis, MN, April, 2016.
6. Fischer, G. *Pediatric Medical Device Development*, speaker, session chair, 4th International Conference on Pediatrics, Atlanta, GA, March 2016
7. Fischer, G. *Development and Use of Pediatric Medical Devices*, session organizer and podium speaker, Design of Medical Devices Conference, Minneapolis, MN, April 2015
8. Fischer, G. *International Need for Pediatric Medical Devices*, session organizer and podium speaker, Design of Medical Devices Conference, Minneapolis, MN, April 2014
9. Fischer, G. *Funding a Small Market Device-Pediatrics As An Example*, podium speaker, Midwest Medical Device Summit, Minneapolis, MN, October 2013
10. Fischer, G. *Funding a Small Market Device*, session organizer and podium speaker, Design of Medical Devices Conference, Minneapolis, MN, April 2013
11. Fischer, G. *Mobile Healthcare Devices and Systems in Pediatrics*, podium speaker, Mobile Healthcare Summit, San Francisco, CA, June 2013
12. Fischer, G. *Pediatric Innovation for the Inventor*, podium speaker, International Medical Device Exposition, Chicago Illinois, September, 2012

13. Fischer, G. *Five areas that Need Pediatric Innovators*, podium speaker, Design of Medical Devices Conference, Minneapolis, MN, April 2012

Invited Oral Presentations at Local and Regional Professional Meetings, Conferences, etc

1. Fischer, G. ECMO: The Good, the Bad, and the Ugly. Children's Minnesota-University of Minnesota 4th annual neonatal and pediatric respiratory and critical care conference, Sept 13, 2018
2. Fischer, G. Innovation Workshop. Topics and Advances in Pediatrics University of Minnesota, Minneapolis, June 2, 2018.
3. Fischer, G. *Pediatric ECMO*, ECMO Symposium: Advanced Management of the Failing Lung or Heart, Session moderator, Minneapolis, MN, Oct 2017
4. Fischer, G. *Innovation for the Clinician*. P2P Program, Pediatrics Department, Minneapolis MN Oct 2017
5. Fischer, G. *Pediatric Medical Device Innovation*, PDIC Breakthrough Event April 2017
6. Fischer, G. *Low Volume Medical Device Manufacturing for Orphan Populations*, UMN Workshop. October 2016
7. Fischer, G. *Innovation in Pediatric Medical Devices, Thinking Outside the Box*, invited speaker, Boston Scientific Global Technology Expo, Arden Hills, MN June 2016
8. Fischer, G. *Pediatric Medical Device Development at the University of Minnesota*, invited speaker, University of Minnesota Philanthropic Board Meeting, Minneapolis MN
9. Fischer, G. *Panel of Physician Experts: Emerging Medical Technologies Every Medical Device Company Should Know About*, panel member, Minnesota MedTech Week Conference, November 5, 2015.
10. Fischer, G. *Teaching Across Colleges: Biomedical Engineering Students at Amplatz Children's Hospital*, podium speaker, University of Minnesota Med-Ed Conference, Minneapolis, May 2013
11. Fischer, G. "*Pediatric Innovation*", speaker and panel member, Maker Nurse Conference, University Of Minnesota, December 9, 2015.
12. Gupta, S, Fischer, G. *Devices Utilized in the Cardiac Pediatric Intensive Care Unit*, invited speaker Bakken Symposium, Minneapolis MN, Sept 2013
13. Fischer, G. "*Emergency Airways*", speaker, Pediatric Critical Care Systems Based Practice Conference, University of Minnesota, November 19, 2012
14. Fischer, G. "*Trophic vs. Enteral Feeds in the ICU-Review of the Evidence*", speaker, Pediatric Critical Care Journal Club Conference, University of Minnesota, October 1, 2012
15. Fischer, G. "*Mercury Boot Technology*", podium speaker, University of Minnesota Institute of Engineering in Medicine Innovation Showcase, University of Minnesota, September 2011
16. Fischer, G. "*Late Presentation of a Coarctation*", podium speaker, University of Minnesota Pediatrics 3M Conference, University Of Minnesota, September 2009
17. Fischer, G. "*White Out: Advances in ARDS*", podium speaker, Pediatric Grand Rounds, Dartmouth Hitchcock Medical Center, Lebanon, NH, April 2009

Peer Reviewed Oral Presentations at National Professional Meetings

1. Fischer, G. *Novel Collaborative Approaches for Accelerating Pediatric Device Development, platform presentation*, Science of Team Science Conference, Phoenix, AR, May, 2016
2. Fischer, G. *DoseDial: Weight Based Dosing for Pediatric Emergencies*. Invited Speaker, ASAIO, Chicago, IL, June 2017
3. Bjorklund, A., Fischer, G. *Acute Therapy with IVIG in a Pediatric Patient with Idiopathic Capillary Leak Syndrome*, SCCM, Orlando, FL, February 2016.
4. Bjorklund, A., Fischer, G., Slusher, T. Advancement of bubble CPAP for use in children in low resource areas. Peds 2040, Anaheim, CA, January 2013.
5. Fischer, G. *Autoinjector for Pediatric Weight Based Dosing of Epinephrine During Cardiac Arrest*. January 2013 Pediatrics 2040 Conference, Anaheim, CA

Peer Reviewed Poster Abstract Presentations at Professional Meetings

+ = poster presentation, ^ = poster & discussion

1. Pitt M, Borman-Shoap E, Fischer G, Gaug A, Louie J, Marmet J, McRee AL, Muinde K, Murray K, Olson APJ, Resnick M, Scal P, Wright C, Moran A. *Peer-to-Peer Sessions – Creating a Personal, Sustainable, and Impactful Small Group Model for Faculty Development*. Pediatric Academic Societies Annual Meeting. April 26-30, 2019, Baltimore, MD
2. Morgan, L., Hiremath, G., Ameduri, R., Mattson, A., Fay, D., Saltzman, D., Juhnke, B., Azakie, A., Hoggard, E., Iazzio, P., Erdman, A., Fischer, G., Ambrose, M. *Cardiac Imaging and Virtual Reality Use in Management of Thoraco-omphalopagus Conjoined Twins*, 14th SPR Advanced Symposium on Pediatric Cardiovascular Imaging, October 14, 2018. Walnut Creek, CA ^
3. Heith C., Steiner, M, Hume J, Fischer G. *Mycoplasma pneumonia requiring ECMO: Case report and review of the ELSO database*, SCCM , Honolulu HI, January 2017^
4. Catherine S. Heith, MD, Lizbeth A. Hansen, PharmD, Rhonda M. Bakken, RRT, 2 Sharon L. Ritter, MS, RRT, 2 Breeanna R. Long, RRT, 2 Janet R. Hume, MD, PhD, 1 Lei Zhang, ScM, 3 Danielle B. Amundsen, 4 Marie E. Steiner, MD, MS, 1 and Gwenyth A. Fischer, MD. *Ex vivo Effects of a Pediatric Extracorporeal Membrane Oxygenation (ECMO) Circuit on the Sequestration of Mycophenolate Mofetil and Tacrolimus*, ISHLT, April 2018
1. Fischer, G. *Weight Based Dosing Syringe for Pediatric Cardiac Arrest*, ASAIO Pediatric Devices Day, San Francisco CA, June 2016+
2. Bjorklund, A., Slusher, T., Odongara, B., Fischer, G., Steiner, M. *Advancement of Bubble CPAP for use in Children in Low Resource Areas*, PAS, May 2016^
3. Fischer, G. *Liquid Ventilation in Pediatric ECMO Patient*. ASAIO, Chicago, IL, June 2015+
4. Fischer, G. *Building a Medical Device Consortium to Facilitate Development of Pediatric Specific Device Development*. Scientific poster presentation to be presented at American Academy of Chest Physicians World Congress, Madrid Spain, March 2014+
5. Fischer, G., Johnson, B. *Pneumothorax in Infants Full Term Infants Receiving Non Invasive Nasal Cannula BIPAP*. Scientific poster presentation to be presented at American Academy of Chest Physicians World Congress, Madrid Spain, March 2014+
6. Bardot, D., Fischer, G., Dahl, Michael, Miyosaka, Kiyoo. *Mercury Boot A way to Speed Recovery and Reduce Vascular Complications from Lower Extremity Surgery or Trauma*. Design of Medical Devices Conference, Minneapolis MN March, 2012 +
7. Fischer, G., Gupta, S. *Effect of a Pediatric Rapid Response Team on Hospital Wide Code Events and Mortality: Does a Team without a Critical Care Physician Make an Impact?* Pediatric Academic Society Meeting, Vancouver, BC, 2011 +
8. Fischer, G., Vander Heyden, M. *Initiation of a Pediatric Emergency, A 15 month analysis*. Pediatric Academic Society meeting, Honolulu, HI, 2008 +
9. Fischer, G., Casella, S. *Massive Thyroxin overdose in a child leading to acute hyperthyroid syndrome*. Pediatric Academic Society meeting, Toronto, ON, 2007+

Webinars

1. Fischer, G. *Temperature Correction of Blood Gas Measurements for Hypothermia*, Invited Speaker, POCC Group Webinar, June 2016

TEACHING AND CURRICULUM DEVELOPMENT

University of Minnesota

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|---|--------------|
| 1. Cardiovascular Engineering Fellows T32 Clinical Advisor | 2020-present |
| 2. 'Equation Rounds'-quarterly lecturer for ICU fellows, NPs | 2016-current |
| 3. Pediatric ECMO-lecturer for ICU and cardiology fellows, NPs | 2014-current |
| 4. Into the Hospital and Beyond-lecturer-
Technology Leadership Institute Masters Program Students | 2014-current |

5. Observing in the Hospital-lecturer- Medical Device Center Fellows 2012-2019

PROFESSIONAL SERVICE AND PUBLIC OUTREACH

Organization of conferences, workshops, panels, symposia

- Pediatric Session Organizer, Design of Medical Devices Conference 2017-present
- Conference Founder and Organizer, Pediatric Medical Device Annual Breakthrough Event, 2016-present
- Conference Founder and Organizer, Cardiology Breakthrough Program for Pediatric Physicians and Industry, February 2014
- Co-founder and Organizer, PDIC-ODAT Program for Pediatric Medical Device Development, March 2014
- Pediatric Session Organizer, Design of Medical Devices Conference 2013-2015, 2018