

Curriculum Vitae: Elizabeth Keys, PhD, RN

Education

Year Completed

2019	Ph.D. (Nursing)	University of Calgary
2007	B.N. (Distinction)	University of Calgary
2003	B.Sc. (Cellular, Molecular, & Microbial Biology)	University of Calgary

Academic Appointments

Year of Appointment

Institution

Academic Rank

2019 – Present	University of Calgary	Adjunct Clinical Associate
2019 – 2021	Dalhousie University	Postdoctoral Fellowship
2019	University of Calgary	Instructor (Sessional), Sessional - Nursing Practice
2014	University of Calgary	Instructor
2012 – 2013	University of Calgary	Limited Term Academic - Nursing Practice Instructor
2011 – 2012	University of Calgary	Sessional - Nursing Practice Instructor

Non-Academic Employment

Years of Employment

Institution

Position

2014 - 2018	University of Calgary	Graduate Teaching Assistant
2012 - 2014	Northwest Community Health Centre, Alberta Health Services	Community Health Nurse I, Casual, Well-Child & Influenza Clinics
2007 - 2011	Northwest Community Health Centre, Alberta Health Services	Community Health Nurse I, 1.0 FTE, School Health Team
2003 - 2007	Department of Pathology & Laboratory Medicine, Faculty of Medicine, University of Calgary	Research Assistant

Publications

1. Schwichtenberg AJ, Abel EA, **Keys E**, & Morsbach Honaker S. In Press. Diversity in Pediatric Behavioral Sleep Intervention Studies, *Sleep Medicine Reviews*, doi: [10.1016/j.smrv.2019.07.004](https://doi.org/10.1016/j.smrv.2019.07.004)
2. Bright, K., Ginn, C., **Keys, E.**, Brockway, M., Benzies, K., Tomfohr-Madsen, L., Doane, S. (2018). Study protocol: Determining research priorities of young Canadian families (the Family Research Agenda Initiative Setting Project – FRAISE). *Frontiers in Public Health, Public Health Education and Promotion*, 6(228). doi: [10.3389/fpubh.2018.00228](https://doi.org/10.3389/fpubh.2018.00228)
3. **Keys, E.**, Benzies, K. M., Kirk, V., & Duffett-Leger, L. (2018). Using Play to Improve Infant Sleep: A Mixed Methods Protocol to Evaluate the Effectiveness of the Play2Sleep Intervention. *Frontiers in Psychiatry*, 9(109). doi: [10.3389/fpsy.2018.00109](https://doi.org/10.3389/fpsy.2018.00109)
4. **Keys, E.**, & Benzies, K. (2018). A proposed nursing theory to inform nursing research and practice related to infant sleep and development. *Nursing Science Quarterly*, 31(3): 279-286. doi: [10.1177/0894318418774947](https://doi.org/10.1177/0894318418774947)
5. Gunasekara, L., Al-Saiedy, M., Green, F., Pratt, R., Bjornson, C., Yang, A., Schoela, W., Mitchell, I., Brindley, M., Montgomery, M., **Keys, E.**, Dennis, J., Shresthad, G., & Amrein, M. (2017). Pulmonary

- surfactant dysfunction in pediatric Cystic Fibrosis: Mechanisms and reversal with a lipid-sequestering drug. *Journal of Cystic Fibrosis*, 16(5), 565-572. doi: [10.1016/j.jcf.2017.04.015](https://doi.org/10.1016/j.jcf.2017.04.015)
6. **Keys, E.**, McNeil, D., Wallace, D., Bostick, J., Churchill, J. A., & Dodd, M. (2017). The New Parent Checklist: A tool to promote parental reflection. *The American Journal of Maternal Child Nursing*, 42(5), 276-282. doi: [10.1097/nmc.0000000000000356](https://doi.org/10.1097/nmc.0000000000000356)
 7. Bright, K., Brockway, M., Carrera, G., Kathol, B., **Keys, E.**, Moules, N. J., . . . Virani, A. (2015). Out of Order: To Debbie and Dave, Chris and Bill, MJ and John. *Journal of Applied Hermeneutics* (1).
 8. **Keys, E. M.**, & Rankin, J. A. (2015). Bed Sharing, SIDS research, and the concept of confounding: A review for public health nurses. *Public Health Nursing*, 32(6), 731-737. doi: [10.1111/phn.12200](https://doi.org/10.1111/phn.12200)
 9. **Keys, E.**, Brownlee, C., Ruff, M., Baxter, C., Steele, L., & Green, F.H. (2008). How well do we communicate autopsy findings to next of kin? *Arch Pathol Lab Med*, 132(1), 66-71. doi: [10.1043/1543-2165\(2008\)132\[66:HWDWCA\]2.0.CO;2](https://doi.org/10.1043/1543-2165(2008)132[66:HWDWCA]2.0.CO;2)
 10. Clark, S., Ma, A., Tavener, S., McDonald, B., Goodarzi, Z., Kelly, M., Patel, K., Chakrabarti, S., McAvoy, E., Sinclair, G., **Keys, E.**, Allen-Vercoe, E., Devinney, R., Doig, C., Green, F.H., & Kubes, P. (2007). Platelet TLR4 activates neutrophil extracellular traps to ensnare bacteria in septic blood. *Nature Medicine*, 13(4), 463-469. doi: [10.1038/nm1565](https://doi.org/10.1038/nm1565)

Presentations (*denotes presenting author; ____ denotes mentored student)

Published abstracts

1. **Keys, E.***, Tomfohr-Madsen, L., Benzies, K., & Tough, S. (2017, June). Maternal history of child abuse is associated with infant sleep consolidation during the first year of life. Poster [[Abstract 0999](#)] presentation at 31st Annual Meeting of the Associated Sleep Professional Sleep Societies SLEEP 2017, Boston, MA, USA.
2. Green, F. H., Montgomery, M., Mody, C., **French (Keys), E.*** *Evaluation of high-resolution microscopy for rapid diagnosis of infection in BAL fluid from children with cystic fibrosis*. Poster discussion session [[Abstract 4622](#)] at the European Respiratory Society Annual Congress Copenhagen 2005, Copenhagen, Denmark. *Eur Respir J* 2005; 26: Suppl. 49, 4622

Oral presentations (reviewed)

1. **Keys, E.**, Beck, A., & Tomfohr-Madsen, L. (2019, May 28). *The development of sleep across the lifespan: An interactive review for community health nurses of applied sleep research and current tools to promote healthy sleep*. Community Health Nurses of Canada National Conference in Saint John, New Brunswick.
2. **Keys, E.**, Brockway, M., Bright, K., Ginn, C., Tomfohr-Madsen, L., Conlon, L., & Benzies, K. (2019, May 29). *The Family Research Agenda Initiative SETting Project: A community-based priority-setting partnership to determine the Top 10 research priorities for families with children from conception to 3 years*. Community Health Nurses of Canada National Conference in Saint John, New Brunswick.
3. **Keys, E.*** (2018, March 22). *Getting baby to "sleep like a baby": Parent-reported services, resources and strategies for managing infant sleep difficulties*. Oral presentation at the Nursing Graduate Students' Association Research Day, Faculty of Nursing, University of Calgary, Calgary, AB.
4. **Keys, E.*** & Benzies, K. (2016, October). *Applications of Knowledge Translation in Maternal Child Health Nursing*. Oral presentation at the 2016 Canadian Association of Perinatal and Women's Health Nurses 6th National Conference, Calgary, AB.
5. McNeil, D., **Keys, E.***, Wallace, D., Bostick, J., Churchill, J. A. & Dodd, M. (2016, May). *The New Parent Checklist: A tool to promote parental self-assessment and reflection*. Oral presentation at the Patient-Oriented Research Summer Institute, Calgary, AB.
6. McNeil, D., **Keys, E.***, Wallace, D., Bostick, J., Churchill, J. A. & Dodd, M. (2016, February). *The New Parent Checklist: A tool to promote parental self-assessment and reflection*. Oral Presentation at the Canadian National Perinatal Research Meeting, Banff, AB.
7. Ortiz, M.*, Csupak, J.*, Godwzon, C., Koch, L., Mahon, N., Shi, Z., Bang, R., Goojha, S., & **Keys, E.** (2014, January). *An innovative approach to addressing youth stress and anxiety*. Oral presentation at the Canadian Nursing Students Association 2014 National Conference, Vancouver, BC.
8. Ortiz, M., Csupak, J.*, Godwzon, C., Koch, L., Mahon, N., Shi, Z., Bang, R., Goojha, S., **Keys, E.**, & C. Lind. (2013, August). *A strengths-based approach to addressing stress and anxiety in junior high students*. Oral presentation at the 3rd Annual Strengths-Based Mount Royal University Nursing Conference, Calgary, AB.

9. MacLeod, C.* , **Keys, E.*** & Huskisson, R.* (2009, June). *Advancing Health Promotion in School Nursing Practice – Taking the Best from the Past to Shape the Future*. Round table discussion session presented at the annual Community Health Nurses of Canada Conference, Calgary, AB.

Invited & non-reviewed presentations

1. **Keys, E.** (June 21, 2019). *The “Keys” in Child Health Research: Working with Families to Use Play to Improve Infant Sleep*. 17th Annual Canadian Child Health Clinician Scientist Program National Symposium., Toronto, ON.
2. **Keys, E.** (June 7, 2019). *Infant sleep and parent child interactions: Implications for perinatal educators and programs*. Quarterly Staff Meeting, Perinatal Education Program, Calgary Zone, Alberta Health Services, East Calgary Health Centre, Calgary, AB..
3. **Keys, E.** (May 21, 2019). *The Play2Sleep study: Findings, implications, and future directions*. Live and recorded webinar for Well-Child Services, Public Health, Calgary Zone, Alberta Health Services, Calgary, AB.
4. **Keys, E.** (April 9, 2019). *Findings from the Play2Sleep Study: A mixed method study of using play to improve parent-child interactions and infant sleep*. Well Child Clinic Nursing Committee, Well Child Services, Public Health, Calgary Zone, Alberta Health Services, Calgary, AB.
5. **Keys, E.** & Brockway, M. (2019, February 27). *Update on the Family Research Agenda Initiative SETting (FRAISE) Project*. Maternal Newborn Child and Youth Strategic Clinical Network Strategic Clinical Network Core Committee Meeting, Edmonton, AB.
6. **Keys, E.** (2018, November 26). Invited panelist for TEDMEDLive 2018 Sleep, University of Calgary, Calgary, AB.
7. **Keys, E.** (2018, August 6). *Improving infant sleep in Calgary, Canada: Play2Sleep – A mixed methods study of using play to improve infant sleep*. Healthy Mothers, Healthy Families Theme, Murdoch Children’s Research Institute, Melbourne, Australia.
8. **Keys, E.*** (2019, February 20). *Family foundations of healthy sleep habits: Intersection of infant sleep and parent-child interactions*. Oral presentation at 2019 Sleep and Respiration Rounds, Cumming School of Medicine, University of Calgary, Calgary, AB.
9. **Keys, E.*** (2018, June 1). *Play2Sleep: An explanatory sequential mixed methods study using play to improve infant sleep*. Oral presentation at the Canadian Child Health Clinician Scientist Program Annual Symposium - Rapid Fire Abstracts, Toronto, ON.
10. **Keys, E.*** (2018, January 10). *Play2Sleep: A mixed methods study using play to improve infant sleep*. Oral presentation for the Nursing Research Office Lightning Talk series, Faculty of Nursing, University of Calgary, Calgary, AB.
11. **Keys, E.** (2017, July 27). *Family research in the community: Infant sleep, parent-child interactions, and strawberries!* Perinatal 503.47 Nursing mini-conference, Faculty of Nursing, University of Calgary, Calgary, AB.
12. **Keys, E.** (2017, March 28). *Play2Sleep: A Mixed Methods Study Using Play to Improve Infant Sleep*, Utrecht Medical Centre, Utrecht, Netherlands.
13. **Keys, E.** (February 24, 2017). *Play2Sleep: An Explanatory Sequential Mixed Methods Study Using Play to Improve Infant Sleep*. ACHRI Trainee Presentation Series, Foothills Campus, University of Calgary, Calgary, AB.
14. **Keys, E.** (November 30, 2016). *Infant Sleep Primer for Public Health Nurses*, Staff Education Day, Public Health Calgary-Zone Rural North East, Alberta Health Services Airdrie, AB.
15. **Keys, E.** (November 1, 10, 17, 22, 28, 2016 and January 23, 2017). *The Play2Sleep Study and Infant Sleep Primer*. Calgary-Zone Urban Community Health Centres, Alberta Health Services, Calgary, AB.
16. **Keys, E.** (September 16, 2016), *Sleep and the Perinatal Period*. Perinatal Education Meeting, Perinatal Education Program - Calgary Zone, Alberta Health Services, Calgary, AB.
17. Hass, S. and **Keys, E.** (October 7, 14, 19, and November 2, 2015) *In-Services for Public Health Nurses on Calgary Zone Infant Sleep Resource Development Initiative*, Calgary-Zone Community Health Centres, Alberta Health Services, Calgary, AB.

Poster presentations

1. Best, I.*, **Keys, E.** & Benzie, K. (2017, November). *Services, Strategies, and Resources Parents Use to Manage Infant Sleep Difficulties*. Poster presentation at the Students’ Union Undergraduate Research Symposium, Calgary, AB.

2. Best, J., **Keys, E.** & Benzie, K. (2017, October). *Services, Strategies, and Resources Parents Use to Manage Infant Sleep Difficulties*. Poster presentation at the Bachelor of Health Sciences Program Annual Research Symposium, Calgary, AB.
3. Brockway, M.*, Ginn, C., **Keys, E.**, Bright, K., Tomfohr-Madsen, L., Kingston, D., & Benzie, K. (2017, June) *The FRAISE (Family Research Agenda Initiative SETting) Project Protocol*. Patient Oriented Research, KT Canada Summer Institute, Toronto, ON.
4. Brockway, M., Ginn, C., **Keys, E.***, Bright, K., Tomfohr-Madsen, L., Kingston, D., & Benzie, K. (2017, June) *The FRAISE (Family Research Agenda Initiative SETting) Project Protocol*. Alberta Strategy for Patient Oriented Research (SPOR) Summer Institute, Lister Hall, Edmonton, AB.
5. Brockway, M., Ginn, C., **Keys, E.***, Bright, K., Tomfohr-Madsen, L., Kingston, D., & Benzie, K. (2017, May) *The FRAISE (Family Research Agenda Initiative SETting) Project Protocol*. Women's Mental Health Day, Calgary, AB.
6. **Keys, E.***, Tomfohr-Madsen, L., Benzie, K., & Tough, S. (2017, April). *Maternal History Of Child Abuse Is Associated With Infant Sleep Consolidation During The First Year Of Life*. Poster presentation at the Canadian Child Health Clinician Scientist Program (CCHCSP) 15th Annual National Symposium, Calgary, AB.
7. Brockway, M., Ginn, C.*, **Keys, E.**, Bright, K., Tomfohr-Madsen, L., Kingston, D., & Benzie, K. (2017, April) *The FRAISE (Family Research Agenda Initiative SETting) Project Protocol*. Canadian Child Health Clinician Scientist Program 15th Annual National Symposium, Calgary, AB.
8. **Keys, E.***, Tomfohr-Madsen, L. M., Benzie, K. M. & Tough, S. (2017, April). *Maternal history of child abuse is associated with infant sleep consolidation during the first year of life*. Sixty second rapid oral abstract and poster presentation, Alberta Children's Hospital Research Institute (ACHRI) Research Symposium, Calgary, AB.
9. Brockway, M.*, Ginn, C., **Keys, E.**, Bright, K., Tomfohr-Madsen, L., Kingston, D., & Benzie, K. (2017, April) *The FRAISE (Family Research Agenda Initiative SETting) Project Protocol*. Alberta Children's Hospital Research Institute Annual Symposium, Calgary, AB.
10. **Keys, E.*** & Benzie, K. (2017, March). *Play2Sleep: A sequential explanatory mixed methods protocol of using play to improve infant sleep*. Poster session accepted for presentation at the Frontiers in Science 2017 Annual Meeting, Pediatric Scientist Development Program, Tempe, AZ.
11. **Keys, E.*** & Benzie, K. (2016, June). *Play2Sleep: A sequential explanatory mixed methods protocol of using play to improve infant sleep*. Poster session presented at the 2016 Canadian Child Health Clinician Scientist Program Annual Symposium, Calgary, AB.
12. **Keys, E.*** & Benzie, K. (2016, May). *Play2Sleep: A sequential explanatory mixed methods protocol of using play to improve infant sleep*. Poster session presented at the Patient-Oriented Research Summer Institute, Calgary, AB.
13. **Keys, E.*** & Benzie, K. (2015, April). *Play2Sleep: A sequential explanatory mixed methods protocol of using play to improve infant sleep*. Poster session presented at Alberta Children's Hospital Research Institute Symposium, Calgary, AB.
14. **Keys, E.*** & Benzie, K. (2015, November). *Play2Sleep: A sequential explanatory mixed methods protocol of using play to improve infant sleep*. Poster session presented at the Canadian Association of Perinatal and Women's Health Nurses 5th National Conference, Quebec City, QC.
15. **Keys, E.*** & Benzie, K. (2014, February). *What constitutes an infant sleep problem? A proposed theoretical model*. Poster session presented at the National Perinatal Research Meeting, Banff, AB.
16. **Keys, E.*** & Benzie, K. (2013, April). *What constitutes an infant sleep problem? A proposed theoretical model*. Poster session presented at the Alberta Children's Hospital Research Initiative Symposium, Calgary, AB.
17. **French (Keys), E.***, Pon, J., Schürch, S., Amrein, M., & Green, F.H.Y. (2004, May). *Evaluation of ultrafine particles with erythrocyte cell membranes using high resolution microscopy*. Poster session presented at the National Research Forum for Young Investigators in Circulatory and Respiratory Health, Winnipeg, MB.
18. **French (Keys), E.***, Pon, J., Schürch, S., Amrein, M., & Green, F.H.Y. (2003). *Evaluation of ultrafine particles with erythrocyte cell membranes using high resolution microscopy*. Oral presentation at the Annual Residents' & Graduate Student's Research Day, Department of Pathology & Laboratory Medicine, Calgary, AB.

Research Funding				
Year(s)	Granting Agency or Competition	Title	Amount	Team
2019 – 2021	Operating Grant: ECI grants in Maternal, Reproductive, Child & Youth Health Canadian Institutes of Health Research	<i>Sleeping for Two: A randomized controlled trial of cognitive behavior therapy for insomnia experienced during pregnancy</i>	\$104,975	PI: Tomfohr, L. Co-investigators: Campbell, T; Giesbrecht, G; Keys, E; Madsen, J; Metcalfe, A; Mrklas, K; Williamson, T.
2017 - 2020	Alberta Children's Hospital Research Institute Allied Health Award	<i>Family Research Agenda Initiative SEtting (FRAISE) Project</i>	\$60 000	Co-Principal Investigators: Benzies, K., Keys, E. , Brockway, M., Bright, K., Ginn, C. Co-Investigator: Tomfohr, L.