

ROHIT RAMASWAMY, Ph.D., MPH, Graduate Diploma (Biostatistics)

University of North Carolina at Chapel Hill
Gillings School of Global Public Health
Public Health Leadership Program
Department of Maternal and Child Health
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EDUCATION

Graduate Diploma Biostatistics August 2008-December 2010	University of Sydney Sydney School of Public Health Department of Biostatistics
Master of Public Health September 2005-December 2007	University of North Carolina Chapel Hill Gillings School of Global Public Health Public Health Leadership Program
Doctor of Philosophy September 1984-May 1989	Massachusetts Institute of Technology Department of Civil Engineering
Master of Science September 1981-February 1983	Massachusetts Institute of Technology Department of Civil Engineering
Bachelor of Technology May 1976-April 1981	Indian Institute of Technology Madras Department of Mechanical Engineering

PROFESSIONAL EXPERIENCE

Professor
June 2018 to present

University of North Carolina
Gillings School of Global Public Health
Public Health Leadership Program and Department of Maternal and Child Health
Affiliate Faculty, The Water Institute at UNC

Clinical Associate Professor

February 2013 to March 2019
University of North Carolina
Gillings School of Global Public Health
Public Health Leadership Program and Department of Maternal and Child Health
Affiliate Faculty, The Water Institute at UNC

Gillings Visiting Clinical Associate Professor

February 2009 to January 2013
University of North Carolina
Gillings School of Global Public Health
Public Health Leadership Program

Adjunct Assistant Professor

February 2008 to January 2009
University of North Carolina
Gillings School of Global Public Health
Public Health Leadership Program

Adjunct Professor

January 2017 to present
Richard M. Fairbanks School of Public Health
IUPUI
Department of Health Policy and Management

Adjunct Faculty

February 2014 to February 2018
Public Health Foundation of India

Founder and President

May 1997 to December 2012
Service Design Solutions Inc.
Des Moines, IA

Service Design Solutions, Inc. is a management consulting firm for corporations and non-profit organizations, assisting in the achievement of operational excellence through better design of services.

Technical Manager

May 1990 to May 1997
AT&T Bell Laboratories
Holmdel, NJ

Visiting Research Scholar

September 1991 to August 1992
Rutgers University
Graduate School of Education
New Brunswick, NJ

Senior Transportation Analyst

July 1989 to May 1990
United Airlines, Inc.
Chicago, IL

Transportation Analyst

February 1983 to September 1984
Cambridge Systematics Europe
The Hague, The Netherlands

LEADERSHIP POSITIONS

Member, UNC Chapel Hill Chancellor's Advisory Committee (forthcoming)

September 2019 to May 2022

The Advisory Committee consists of nine elected members across the university. The committee advises the chancellor in any matter deemed important by the chancellor or the committee.

SPH Representative, UNC Chapel Hill Faculty Council

September 2016 to May 2022

The Faculty Council exercises the legislative power of the general faculty. Members of the Faculty Council are elected for terms of three years by the general faculty.

Co-lead, MPH Global Health Concentration, Gillings School of Global Public Health

February 2018 to present

Co-lead the new MPH global health concentration area in the School of Public Health shared by four departments. Responsible for curriculum design, instructor management, student admissions and evaluation for all online and residential students in this concentration.

Faculty Advisor, Executive DrPH program, IUPUI

February 2019 to present

Work with the director of the program to provide guidance to students on developing practice informed dissertation proposals. Also teach a course on implementation science in the program. Program was launched in Fall 2018.

Associate Director, Global Practice, Office of Research, Innovation and Global Solutions, Gillings School of Global Public Health

2016 to 2018.

Responsible for facilitating the enhancement of the School of Public Health's global footprint by creating opportunities to bring together public health faculty within the school and across the UNC campus with organizations within the area create a venue for ongoing interdisciplinary collaboration in global practice.

Co-Director, UNC/RTI Consortium for Implementation Science

2016 to present

Provided direction to facilitate collaboration among scientists, practitioners and policymakers at the Gillings School/Research Triangle Institute to advance dissemination and implementation science through research, practice, education, and training and policy.

Faculty Director, Global Online MPH (GO MPH), Gillings School of Global Public Health

2015 to 2019

Designed the curriculum, led the development of courses and provided direction and oversight for the Global Online MPH program, a completely online program intended to provide working professionals with interdisciplinary skills to develop global health solutions. Ensured that the program was compliant with CEPH requirements. In 2019, the GO MPH merged with the school wide MPH@UNC program.

UNC Faculty Lead, M.Sc Program in Implementation Science, Department of Epidemiology and Biostatistics, University of the Witswatersrand (Wits), Republic of South Africa

2015 to 2018

Designed the implementation science curriculum, led the development of core courses and partnered with Wits University leadership to train faculty and students with the tools and methods to implement programs at scale in 8 African countries. Mentored field supervisors in these countries to guide students through practice experiences to apply their skills in the field. The program has now been handed over to Wits University.

Faculty Director, Online Global Health Certificate, Gillings School of Global Public Health

2012 to 2019

Designed the curriculum, led the development of courses and provided direction and oversight for this program intended to equip practicing professionals with global health skills. The certificate program is currently on hold pending the launch of the new MPH program in Fall 2019.

Member, Advisory Committee, Executive DrPH program, Gillings School of Global Public Health

2013 to 2017

Worked with the director of the program to provide strategic guidance on student recruitment, globalization, curriculum development and marketing for the executive DrPH program.

Member, Admissions Committee, Executive DrPH program, Gillings School of Global Public Health

2013 to 2017

Reviewed applications, short listed candidates, conducted phone interviews, participated in admission committee meetings and made admissions recommendations.

PUBLICATIONS

PEER-REVIEWED PUBLICATIONS

1. Reid, A., Abraczinskas, M., Scott, V., Stanzler, M., Parry, G., Scaccia, J., Wandersman, A. and **Ramaswamy, R.** (2019). Using Collaborative Coalition Processes to Advance Community Health, Well-Being, and Equity: A Multiple-Case Study Analysis From a National Community Transformation Initiative.

Health education & behavior: the official publication of the Society for Public Health Education.

2. Eboreime, E. A., Nxumalo, N., **Ramaswamy, R.**, Ibisomi, L., Ihebuzor, N. and Eyles, J. (2019). Effectiveness of the Diagnose-Intervene- Verify-Adjust (DIVA) model for integrated primary healthcare planning and performance improvement: an embedded mixed methods evaluation in Kaduna state, Nigeria. *BMJ Open*, 9(3), e026016.
3. Fischer, M., **Ramaswamy, R.**, Fischer-Flores, L. and Mugisha, G. (2019). Measuring and Understanding Depression in Women in Kisoro, Uganda. *Culture, medicine and psychiatry*, 43(1), 160-180.
4. Pfeiffer, E., Owen, M., Pettitt-Schieber, C., Van Zeijl, R., Srofenyoh, E., Olufolabi, A. and **Ramaswamy, R.** (2019). Building health system capacity to improve maternal and newborn care: a pilot leadership program for frontline staff at a tertiary hospital in Ghana. *BMC medical education*, 19(1), 52.
5. **Ramaswamy, R.**, Mosnier, J., Reed, K., Powell, B. J. and Schenck, A. P. (2019). Building capacity for Public Health 3.0: introducing implementation science into an MPH curriculum. *Implementation Science* 14(1), 18.
6. Manyeh, A. K., Ibisomi, L., Baiden, F., Chirwa, T. and **Ramaswamy, R.** (2019). Using intervention mapping to design and implement quality improvement strategies towards elimination of lymphatic filariasis in Northern Ghana. *PLoS neglected tropical diseases*, 13(3), e0007267.
7. Eboreime, E. A. , Eyles, J. Nxumalo, N., Eboreime, O.L. & **Ramaswamy, R** (2019). Implementation process and quality of a primary health care system improvement initiative in decentralized context: A retrospective appraisal using the quality implementation framework. *International Journal of Health Planning and Management*, 1–18. doi 10.1002/hpm.2655.
8. Petcharoen, H., Suwannapong, N., Howteerakul, N., Tipayamongkhogul, M. and **Ramaswamy, R.** (2018). Participatory capacity building for improving quality of childcare centers in Thailand. *Rural and remote health*, 18(2), 4570

9. Eboreime, E. A., Nxumalo, N., **Ramaswamy, R.**, & Eyles, J. (2018). Strengthening decentralized primary healthcare planning in Nigeria using a quality improvement model: how contexts and actors affect implementation. *Health Policy and Planning, 33*(6), 715-728.
10. Steeb, D. & **Ramaswamy, R.** (2018). Recognizing and engaging pharmacists in global public health in limited resource settings. In press. (5 pages).
11. Kallam, B. (*), Pettitt-Schieber, C. (*), Owen, M., Asante, R., Darko, E. & **Ramaswamy, R.** (2018). Implementation Science in Low-Resource Settings: Using the Interactive Systems Framework (ISF) to Implement the WHO Guidelines on Hand Hygiene in a Tertiary Hospital in Ghana. *International Journal for Quality in Healthcare*. <https://doi.org/10.1093/intqhc/mzy111>.
12. Hirschhorn, L. R., **Ramaswamy, R.**, Devnani, M., Wandersman, A., Simpson, L. A., & Garcia-Elorrio, E. (2018). Research versus practice in quality improvement? Understanding how we can bridge the gap. *International Journal for Quality in Health Care, 30*(suppl_1), 24-28.
13. Goodman, D. M., Srofenyoh, E. K., **Ramaswamy, R.**, Bryce, F., Floyd, L., Olufolabi, A., Owen, M. D. (2018). Addressing the third delay: implementing a novel obstetric triage system in Ghana. *BMJ Global Health, 3*(2), e000623
14. Floyd, L., Bryce, F., **Ramaswamy, R.**, Olufolabi, A., Srofenyoh, E., Goodman, D. & Pearson, N. (2018). The introduction of a midwife-led obstetric triage system into a regional referral hospital in Ghana. *Midwifery, 61*, 45-52.
15. **Ramaswamy, R.**, Reed, J., Livesley, N., Boguslavsky, V., Garcia-Elorrio, E., Sax, S., Houleymata, D., Kimble, L. & Parry, G. (2018). Unpacking the black box of improvement. *International Journal for Quality in Health Care, 30*(suppl_1), 15-19.
16. Peterson, H. B., Haidar, J., Fixsen, D., **Ramaswamy, R.**, Weiner, B. J., & Leatherman, S. (2018). Implementing Innovations in Global Women's, Children's, and Adolescents' Health. *Obstetrics & Gynecology, 131*(3), 423-430.
17. **Ramaswamy, R.**, Shidhaye, R., & Nanda, S. (2018). Making Complex Interventions Work in Low Resource Settings: Developing and Applying a Design

- Focused Implementation Approach to Deliver Mental Health through Primary Care in India. *International Journal of Mental Health Systems*, 12(5).
18. **Ramaswamy, R.**, Rotschild, C., Alabi, F. , Wachira, E., Muigai, F., & Pearson, N. (2017). Using Value Stream Mapping to improve quality of care in low resource facility settings. *International Journal for Quality in Healthcare*, 29(7) 961-965.
 19. Goodman, D. M., **Ramaswamy, R.**, Jeuland, M., Srofenyoh, E. K., Engmann, C. M., Olufolabi, A. J., & Owen, M. D. (2017). The cost effectiveness of a quality improvement program to reduce maternal and fetal mortality in a regional referral hospital in Accra, Ghana. *PLOS ONE*, 12(7).
 20. Kumar, M. , Mostafa, J. and **Ramaswamy, R.** (2017). Federated health information architecture: Enabling healthcare providers and policymakers to use data for decision-making. *Health Information Management Journal*. Published online May 2017.
 21. Wandersman, A., Alia, K.(*), Cook, B. S., Hsu, L. L., & **Ramaswamy, R.** (2016). Evidence-based interventions are necessary but not sufficient for achieving outcomes in each setting in a complex world: Empowerment Evaluation, Getting to Outcomes and demonstrating accountability. *American Journal of Evaluation*, 37(4), 544-561.
 22. Owen, M.D., Floyd, L., Bryce, F., **Ramaswamy, R.**, Pearson, N., Morgan, K., Srofenyoh, E.K. (2016). Implementation of a triage system to reduce wait time and prioritise care for high-risk obstetric patients in a regional hospital in Accra, Ghana. *The Lancet Global Health*, 4, S16.
 23. **Ramaswamy, R.**, Kallam, B. (*), Srofenyoh, E.K., & Owen, M. (2016). Multi-tiered quality improvement strategy to reduce maternal and neonatal death in complex delivery systems in Ghana. *The Lancet Global Health*, 4, S24.
 24. **Ramaswamy, R.**, Kallam, B., Kopic, D., Pujic, B., & Owen, M. D. (2016). Global health partnerships: building multi-national collaborations to achieve lasting improvements in maternal and neonatal health. *Globalization and Health*, 12(1).
 25. **Ramaswamy, R.**, Iracane, S., Srofenyoh, E.K., Bryce, F., Floyd, L., Kallam, B.(*), & Owen, M.D. (2015). Transforming maternal and neonatal outcomes in tertiary

- hospitals in Ghana: an integrated approach for systems change. *Journal of Obstetrics and Gynaecology Canada*, 37(10), 905-914.
26. Wandersman, A., Alia, K.A., Cook, B., & **Ramaswamy, R.** (2015). Integrating empowerment evaluation and quality improvement to achieve healthcare improvement outcomes. *BMJ Quality & Safety*, 24(10), 645-652.
 27. Onuoha, O., **Ramaswamy, R.**, Srofenyoh, E. K., Kim, S. M., & Owen, M. D. (2015). The effects of resource improvement on decision-to-delivery times for cesarean deliveries in a Ghanaian regional hospital. *International Journal of Gynecology & Obstetrics*, 130(3), 274-278.
 28. Shidhaye, R., Shrivastava, S., Murhar, V., Samudre, S., Ahuja, S., **Ramaswamy, R.**, & Patel, V. (2015). Development and piloting of a plan for integrating mental health in primary care in Sehore district, Madhya Pradesh, India. *The British Journal of Psychiatry*, 208(s56), s13-s20.
 29. Shidhaye, R., Raja, A., Shrivastava, S., Murhar, V., **Ramaswamy, R.**, & Patel, V. (2015). Challenges for transformation: a situational analysis of mental health care services in Sehore district, Madhya Pradesh. *Community Mental Health Journal*, 51(8), 903-912.
 30. **Ramaswamy, R.**, Segal, S. (*), Harris, J., Randolph, G. D., Cornett, A., Harrison, L. M., & Lea, C. S. (2012). Standardizing environmental health processes at the Iowa Department of Public Health. *Journal of Public Health Management and Practice*, 18(1), 27-35.
 31. **Ramaswamy, R.**, Storer, G., & Van Zeijl, R. (2005). Designing sustainable communities at CARE. *Knowledge Management for Development*, 1(1), 79-93.
 32. Van Rooij, P., **Ramaswamy, R.**, Vaillancourt-Laflamme, C., & Lamoureux, L. (2005). Understanding the role of culture in knowledge sharing: making the invisible visible. *Knowledge Management for Development*, 1(3), 2-5.
 33. Gopinath, D., Ben-Akiva, M., & **Ramaswamy, R.** (1994). Modeling performance of highway pavements. *Transportation Research Record*, 1449, 1-7.

34. Ben-Akiva, M., & **Ramaswamy, R.** (1993). An approach for predicting latent infrastructure facility deterioration. *Transportation Science*, 27(2), 174-193.
35. Ben-Akiva, M., Humplick, F., Madanat, S., & **Ramaswamy, R.** (1993). Infrastructure management under uncertainty: latent performance approach. *Journal of Transportation Engineering*, 119(1), 43-58.
36. **Ramaswamy, R.**, & McNeil, S. (1991). Calculation of aggregate pavement condition indices from damage data using factor analysis. *Transportation Research Record*, 1311, 214-222.
37. Geltner, D., & **Ramaswamy, R.** (1987). Economic efficiency implications of optimal highway maintenance policies for private vs. public highway owners. *Transportation Research Record*, 1116.

BOOKS AND CHAPTERS

1. **Ramaswamy, R.** and Barach, P. Towards a Learning System for Enhanced Recovery After Surgery (ERAS): Embedding Implementation and Learning Evaluation, in Urman, R., Ljungvist, O., Nader, F. Enhanced Recovery After Surgery – A Complete Guide to Optimizing Outcomes, 2019, Springer (in press).
2. Hirschorn, L. and **Ramaswamy, R.** Quality Improvement in Resource Poor Countries, in Sollecito, W. and Johnson, J. Continuous Quality Improvement in Health Care, 5th Ed., 2018. Jones and Bartlett Publishers.
3. **Ramaswamy, R.**, Johnson, J. and Hirschhorn, L. The Intersection between Quality Improvement and Implementation Science in Sollecito, W. and Johnson, J. Continuous Quality Improvement in Health Care, 5th Ed., 2018. Jones and Bartlett Publishers.
4. **Ramaswamy, R.** and P.M. Barker. Quality Improvement in Resource Poor Countries, in Sollecito, W. and Johnson, J. Continuous Quality Improvement in Health Care, 4th Ed., 2010. Jones and Bartlett Publishers, Sudbury MA, pages 537-565.

5. Wild, C. and **Ramaswamy, R.** (eds.) Improving Testing: Applying Quality Tools and Techniques. Lawrence Erlbaum Associates, 2007.
6. **Ramaswamy, R.** Design and Management of Service Processes. Addison-Wesley, 1996

CONFERENCE PRESENTATIONS AND POSTERS

1. **Ramaswamy, R.**, The intersection between implementation science and quality improvement. Oral presentation at the BMJ Quality and Safety Conference, Glasgow, UK, March 2019.
2. **Ramaswamy, R.**, Powell, B., A tiered training model to build system wide capacity in implementation science - current learning and future research. Oral presentation at the 11th Annual Conference on the Science of Dissemination and Implementation in Health, Washington, DC, December 2018.
3. **Ramaswamy, R.**, Mosnier, J., Building competencies for next generation of public health practitioners: Developing multi-disciplinary Implementation Science training for MPH students Oral presentation at the American Public Health Association Annual Meeting, San Diego, CA, November 2018.
4. **Ramaswamy, R.** Integrating Implementation and Improvement Science: Using the Interactive Systems Framework to adapt a Hand Hygiene change package for local implementation in a NICU in Ghana. Oral presentation at the 1st Africa Forum on Quality and Safety in Healthcare, Durban, South Africa, February 2018.
5. Manyeh, A.K. , Baiden, F., Ibisomi, L., Chirwa, T. & **Ramaswamy, R.** Towards Elimination of Lymphatic Filariasis in Ghana: Refining the Strategy Through Quality Improvement. Poster presentation at the 1st Africa Forum on Quality and Safety in Healthcare, Durban, South Africa, February 2018.
6. Eborieme, E.A. , **Ramaswamy, R.**, Nxumalo, N., Eborieme O., Eyles, J. Assessing the implementation of a Plan-Do-Study-Act variant for improving health system bottlenecks in Nigeria. Poster presentation at the 1st Africa Forum on Quality and Safety in Healthcare, Durban, South Africa, February 2018.

7. **Ramaswamy, R.** The intersection of Improvement and Implementation Science: practical ways forward. Oral presentation at the IHI Annual Forum on Quality Improvement in Health Care. Orlando, Florida, December 2017.
8. Scaccia, J., Alia, K. ,& Wandersman, A & **Ramaswamy, R.** Building the Boat While Sailing: Using Formative Evaluation to Support Program Theory and Implementation in the IHI SCALE Initiative. Oral presentation at the IHI Annual Forum on Quality Improvement in Health Care. Orlando, Florida, December 2017.
9. **Ramaswamy, R.** , Ncayiyana, J., Ibisomi, L., Chirwa, T. , Salisbury, K. & Pettifor, A. Using implementation science to teach implementation science in Africa: The UNC/WITS University Collaboration. Oral presentation at the 10th Annual Conference on the Science of Dissemination and Implementation in Health, Washington, DC, December 2017.
10. **Ramaswamy, R.**, Wandersman, A., Scaccia, J., Stout, S. Formative Evaluation of a Complex Community Health Improvement Initiative: Lessons from SCALE. Oral presentation at the American Public Health Association Annual Meeting, Atlanta, GA, November 2017.
11. **Ramaswamy, R.** Building implementation science capacity: Global student projects in implementation science. Oral presentation at Global Implementation Conference, Toronto, Canada, July 2017.
12. Scaccia, J., Alia, K. ,Wandersman, A & **Ramaswamy, R.** Using formative evaluation to improve the 4 keys to success in a quality improvement and intercommunity spread initiative. Oral presentation at Global Implementation Conference, Toronto, Canada, July 2017.
13. Reed, J., **Ramaswamy, R.**, Parry, G., Sax, S. & Kaplan, H. Context Matters: Adapting the Model for Understanding Success in Quality Improvement (MUSIQ) for low and middle-income countries. Oral presentation at the 9th Annual Conference on the Science of Dissemination and Implementation in Health, Washington, DC, December 2016.
14. Alia, K., Scaccia, J., Scott, V., **Ramaswamy, R.** & Wandersman, A. Using formative evaluation to improve the quality of a support system for health community

- coalitions. Oral presentation at the 9th Annual Conference on the Science of Dissemination and Implementation in Health, Washington, DC, December 2016.
15. **Ramaswamy, R.** & Pearson, N. Learning from quality improvement to improve maternal and newborn health care in a low-resource setting: the Jacaranda Health approach. Oral presentation at the 4th Global Symposium on Health Systems Research, Vancouver, British Columbia, November 2016.
 16. Roy, B., Riley, C., **Ramaswamy, R.**, Scaccia, J., Reid, A., Parry, G., Stiefel, M. & Stout, S. Leading for outcomes: measurement, evaluation and spread of the 100 million healthier lives initiative. Poster presentation at the American Public Health Association Annual Meeting, Denver, CO, November 2016.
 17. Alia, K., Scaccia, J., Scott, V., **Ramaswamy, R.** & Wandersman, A. Building the boat as it is sailing: the role of formative evaluation in complex health initiatives. Oral presentation at Evaluation 2016, the annual conference of the American Evaluation Association, Atlanta, GA, October 2016.
 18. **Ramaswamy, R.**, Speizer, I., Lee, D., Karuntzos, G. & Bentley, M. Together we can: Leveraging the UNC/RTI Consortium for Implementation Science to improve global and local health outcomes. Panel presentation at the Triangle Global Health Annual Consortium, Durham, NC, September 2016.
 19. Owen, M. D., Floyd, L., Bryce, F., **Ramaswamy, R.**, Pearson, N., Morgan, K. & Srofenyoh, E. K. Implementation of a triage system to reduce wait time and prioritise care for high-risk obstetric patients in a regional hospital in Accra, Ghana. Oral presentation at the 7th Annual Consortium for Universities for Global Health conference, San Francisco, CA, May 2016.
 20. **Ramaswamy, R.**, Kallam, B., Srofenyoh, E., & Owen, M. Multi-tiered quality improvement strategy to reduce maternal and neonatal death in complex delivery systems in Ghana. Oral presentation at the 7th Annual Consortium for Universities for Global Health Conference, San Francisco CA, May 2016.
 21. **Ramaswamy, R.** & Atkinson, T. Achieving tobacco cessation in facility and community settings in North Carolina. Plenary presentation at the NC Breathe Easy Conference, Raleigh, NC, March 2016.

22. **Ramaswamy, R.** Using the Public Health Quality Aims to prioritize improvement opportunities. Oral presentation at the 27th Annual Forum on Quality Improvement in Healthcare, Orlando, FL, December 2015.
23. **Ramaswamy, R.** Using the Interactive Systems Framework to inform formative evaluation strategies - Advancing implementation and learning during evaluations. Oral presentation at Evaluation 2015, the annual conference of the American Evaluation Association, Chicago, IL, November 2015.
24. **Ramaswamy, R. & Wandersman, A.** Incorporating systematic implementation into quality improvement projects. Oral presentation at the Global Implementation Conference, Dublin, Ireland, May 2015.
25. **Ramaswamy, R.** Methodology for using the public health quality aims for quality. Oral presentation at the American Public Health Association Annual Conference, New Orleans, LA, November 2014.
26. **Ramaswamy, R.** Developing quality measures aligned with the public health quality aims for Leading Health Indicators – a fresh look. Oral presentation at the American Public Health Association Annual Conference, New Orleans, LA, November 2014.
27. **Ramaswamy, R., Farel, A. & Hobbes, S.** Gillings Global Implementation Laboratory – implementation in action. Oral presentation at the American Public Health Association Annual Conference, New Orleans, LA, November 2014.
28. **Ramaswamy, R.** From evidence to practice: harnessing the power of implementation science for mothers and children in Africa. Panel moderator at the Consortium of Universities for Global Health Conference, Boston, MA, May 2014.
29. **Ramaswamy, R, Honore, P., Randolph, G. & Wandersman, A.** Developing quality measures aligned with the public health quality aims for Leading Health Indicators. Oral presentation at the American Public Health Association Annual Conference, Boston, MA, November 2013.

30. **Ramaswamy, R**, Lesneski, C., Steinmetz, C , Saik, S. & Atkinson, T . Systematic design of patient and staff smoking cessation processes at state operated substance abuse facilities in North Carolina. Oral presentation at the American Public Health Association Annual Conference, Boston, MA, November 2013.
31. George R.B., Bernard A., **Ramaswamy R.**, Gumanga S. & Olufolabi A. Development of a collaborative continuous quality improvement team to improve maternal and newborn health in northern Ghana. Oral presentation at the Society of Obstetric Anesthesia & Perinatology (SOAP) Conference. San Juan, Puerto Rico, 2013.
32. Onuoha O., Srofenyoh E., **Ramaswamy R.**, Ahiapokpor E., Owen M. The effect of resource improvement on the decision-to-delivery and post-anesthesia care unit time intervals in a low-resource setting. Oral presentation at the Society of Obstetric Anesthesia & Perinatology (SOAP) Conference, San Juan, Puerto Rico, 2013.
33. **Ramaswamy, R.**, Lesneski, C. & Steinmetz, C. Implementing a smoking cessation program in alcohol and drug treatment centers: enabling the organization for change. Oral presentation at the Global Implementation Science Conference, Washington, DC, August 2013.
34. **Ramaswamy, R.** Developing indicators of public health quality. Oral presentation at the American Public Health Association Annual Conference, October 2012.
35. **Ramaswamy, R.**, Lesneski, C. & Randolph,G. Redesigning systems to improve organizational performance and health outcomes. Oral presentation at the American Association of Medical Colleges Annual Meeting, Chicago, IL, June 2012.
36. **Ramaswamy, R.** & Runyon, M. . Sustaining learning: experiences with a community of students from a global distance education program at the University of North Carolina. Oral presentation at the 62nd International Communication Association Annual Meeting, Phoenix, AZ, May 2012.
37. Bentley, M. & **Ramaswamy, R.** Technology and global capacity building: How does culture affect learning? Oral presentation at the American Association for the Advancement of Science Annual Meeting, Washington, DC, February 2012.

38. **Ramaswamy, R**, Segal, S. & Harris, J. Developing standard processes for the Iowa Department of Public Health. Oral presentation at the American Public Health Association Annual Conference, Washington, DC, November 2011.
39. **Ramaswamy, R.** & Barker, K. Factors contributing to successful engagement in on-line discussions in a global distance education program for public health professionals. Oral presentation at the American Public Health Association Annual Conference, Denver, CO, November 2010.

SELECTED INVITED LECTURES AND WORKSHOPS

1. Cincinnati Children's Medical Center. Workshops on Implementation Science for Practitioners and Researchers, May 2019.
2. Mahidol University, Bangkok Thailand, Workshop on Implementation Science for the Ministry of Health, March 2018.
3. Mahidol University, Bangkok Thailand. Invited lecture on Implementation Science at the School of Public Health, August 2018
4. Northwestern University, Feinberg School of Medicine. Workshop on Implementation Science, July 2018.
5. University of Cape Town, Cape Town, South Africa. Invited lecture on Implementation Science at the School of Public Health, April 2018
6. Academy Health and Jewish Health Foundation, Washington DC. Invited panelist on workshop on Learning from Each Other: Getting Evaluations of Complex Health Interventions Right. December 2017.
7. Ensign College of Public Health, Kpong, Ghana. Invited lecture on Implementation Science, March 2017.
8. University of Ibadan, College of Medicine, Ibadan, Nigeria. Invited lecture on Implementation Science to faculty at the Schools of Medicine and Public Health and to representatives from the Ministry of Health, February 2017.

9. Robert Wood Johnson Foundation, Sharing Knowledge to Build a Culture of Health Conference. Invited panel moderator for “Failing forward to create a culture of health” panel. Louisville, KY, February 2017.
10. King’s College, School of Nursing and Midwifery, London, UK. Invited workshop on applied Implementation Science to students in the M.Sc program, and invited lecture to faculty and students the King’s Center for Implementation Science, January 2017.
11. Northwestern University, Feinberg School of Medicine, Department of Surgery, Chicago, IL. Invited seminar titled “Wading through the jungle of Implementation Science frameworks”, Institute of Public Health and Medicine seminar series, January 2017.
12. Institute for Healthcare Improvement Scientific Symposium, Orlando, FL. Invited workshop on simulation models in Improvement Science, December 2016.
13. Mahidol University, Bangkok, Thailand. Two invited lectures to DrPH and MPH students on the application of Implementation and Improvement Science in global health, September 2017.
14. Public Health Foundation of India, New Delhi, India. Invited lecture to MPH students on “Fundamentals of Applied Implementation Science”, September 2016.
15. Center for Addiction and Mental Health, Toronto, Canada. Invited lecture to participants in the Implementation Science Learning Institute on the intersection between Implementation Science and Quality Improvement, June 2016.
16. University of the Witswatersrand, Johannesburg, South Africa. Invited lecture to faculty, staff and students titled “Putting implementation into Implementation Science: Developing methods and tools for applied implementation in global health”, April 2016.
17. NC Breathe Easy Conference, Raleigh, NC. Invited workshops titled “From evidence to outcomes: Using Implementation Science to adapt knowledge to local practice”, March 2016.

18. Indiana University and Purdue University at Indianapolis, Indianapolis, IN. Invited lecture titled “Fundamentals of applied Implementation Science”, February 2016.
19. Center for Addiction and Mental Health, Toronto, Canada. Invited lecture titled “Improving implementation or implementing improvement?”, October 2015.
20. Public Health Foundation of India, New Delhi, India. Invited lecture to MPH students titled “An integrated approach to strengthening maternal and newborn healthcare capacity in regional hospitals in Ghana”, October 2015.
21. University of the Witwatersrand, Johannesburg, South Africa. Invited lecture titled “Where is the implementation in Implementation Science?”, July 2015.

TEACHING ACTIVITIES

COURSES DEVELOPED FOR THE UNIVERSITY OF NORTH CAROLINA

- **PUBH 718 Systems and Design Thinking for Public Health Leaders - online and residential versions (2019)**
Redesigned version of the global health course focused on the Leadership in Practice concentration for the new residential MPH and for the online MPH@UNC
- **PUBH 718 Designing Systems for Global Health Implementation (2016)**
Using powerful tools from engineering and management, this online course equips students to conceptualize, design and analyze public health and healthcare delivery systems for successful implementation. The emphasis of the course is on implementation challenges in low-resource settings.
- **PUBH 716 Applied Quality Improvement in Healthcare and Public Health (2014)**
This online course teaches student skills in planning, testing, implementing and spreading changes for organization improvement. The course follows the Plan-Do-Study-Act model (PDSA) to teach students how to conduct an improvement project using a case study and data analysis with “R” software.
- **PUBH 717 Gillings Global Implementation Lab (2014)**

Offered in conjunction with PUBH 716, this course trains students to apply their QI learning to field settings. Student teams partner with UNC faculty and local and global field members to improve public health delivery in field settings. Requires 2-4 weeks of field visit time.

- PUBH 711 Critical Issues in Global Health (2009)**
 This online course explores contemporary issues and controversies in global health through an interdisciplinary perspective and examines the complex tapestry of social, economic, political and environmental factors affecting global health.

COURSES DEVELOPED FOR IUPUI, INDIANA

- H762 Implementation Science 2 (2019)**
 This course in the DrPH program provides an overview of the core theories and methods in implementation research and practice. Through individual and group assignments, students apply these principles to their own areas of interest and to implementation problems in global public health.

COURSES DEVELOPED FOR THE UNIVERSITY OF THE WITSWATERSRAND, JOHANNESBURG, SOUTH AFRICA

- COMH 7261 Implementation Science 2 (2016)**
 This course follows the Plan-Do-Study-Act model (PDSA) to teach students how to conduct an improvement project using a case study.
- COMH 7160 Implementation Science 1 (2015)**
 This course provides skills demonstrating how proven and affordable interventions in sub-Saharan Africa can be implemented to improve health outcomes in the region.

COURSES TAUGHT AT THE UNIVERSITY OF NORTH CAROLINA

Semester	Course	Number of Students
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Spring 2019	Applied Quality Improvement for Healthcare and Public Health	15
Fall 2018	Designing Systems for Global Health Implementation	6
Spring 2018	Applied Quality Improvement for Healthcare and Public Health	20
Fall 2017	Designing Systems for Global Health Implementation	8
Spring 2017	Applied Quality Improvement for Healthcare and Public Health	24
Fall 2016	Designing Systems for Global Health Implementation	8
Spring 2016	Monitoring and Evaluation of Global Health Programs	6
Fall 2015	Critical Issues in Global Health	30
Summer 2015	Monitoring and Evaluation of Global Health Programs	25
Spring 2015	Applied Quality Improvement for Healthcare and Public Health	30
Fall 2014	Critical issues in Global Health	27
Summer 2014	Monitoring and Evaluation of Global Health Programs	20
Spring 2014	Applied Quality Improvement for Healthcare and Public Health	10
Fall 2013	Critical Issues in Global Health	25
Summer 2013	Monitoring and Evaluation of Global Health Programs	20
Fall 2012	Critical Issues in Global Health	22
Fall 2011	Critical Issues in Global Health	24
Fall 2010	Critical Issues in Global Health	25
Fall 2009	Critical Issues in Global Health	22

COURSES TAUGHT AT IUPUI

Semester	Course	Number of Students
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Summer 2019	The Science of Global Health Implementation	11
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COURSES TAUGHT AT THE UNIVERSITY OF THE WITSWATERSRAND, JOHANNESBURG, SOUTH AFRICA

Semester	Course	Number of Students
April 2018	Implementation Science 1	52
April 2017	Implementation Science 2	20
April 2016	Implementation Science 1	18
April 2016	Implementation Science 2	15
April 2015	Implementation Science 1	12

MENTORSHIPS AND STUDENT SUPERVISION

JUNIOR FACULTY MENTORED

1. Dr. Karine Dube, Research Assistant Professor. Public Health Leadership Program onboarding mentor. January 2017 to present.
2. Dr. Jabulani Ncayiyana, Senior Lecturer. University of Cape Town. Research mentor. January 2015 to present.
3. Dr. Anant Kumar, Faculty member at Xavier's Institute of Social Sciences, Ranchi, India. Dr. Kumar visited UNC from September 2015 to May 2016 as a Fulbright Scholar. Under mentorship, Dr. Kumar worked on a paper entitled Use of Mobile, Internet Technology and Social Media in Promoting Community Public Health in India. The paper is under revision for submission to the Journal of Community Informatics. 2015 to 2016.

POST DOCTORAL ASSOICATES MENTORED

Dr. Michael Fisher, Post-doctoral Associate, UNC Water Institute. Worked with Dr. Fisher to build the WaSH CQI course and trained him to teach this course in Ghana, Ethiopia and Burkina Faso. 2014 to 2016.

DOCTORAL STUDENTS SUPERVISED

Completed Dissertations

1. Tamara Atkinson. Staff perception and patient intent to quit tobacco: applied implementation of evidence-based practices in behavioral healthcare. Doctor of Health Administration dissertation, Medical University of South Carolina. Defended November 2017.
2. Hataya Petcharoen, Capacity building of local administrative organization on childcare center management using participatory approach. DrPh dissertation, Mahidol University, Thailand. Defended April 2016.
3. Amy Rankin-Williams. How can HIV testing rates in rural, southern Malawi be increased? DrPH dissertation, Department of Health Policy and Management, UNC. Defended March 2016.
4. Kerry Bruce. Use of mobile technology for monitoring and evaluation in international health and development programs. DrPH dissertation, Department of Health Policy and Management, UNC. Defended 2013.

Dissertations In Progress

1. Marya Plotkin. Doppler to improve intrapartum care in Tanzania. Does it reduce perinatal mortality? What does it cost? What are barriers and facilitators to scale it up? DrPH dissertation. Department of Health Policy and Management, UNC. Anticipated completion 2019.
2. Oscar Fleming. How can implementation teams support improved implementation processes and outcomes in the context of complex, collective efforts to promote child wellbeing and prevent maltreatment? DrPH dissertation. Department of Health Policy and Management, UNC. Anticipated completion July 2018.
3. Alfred Kwesi Manyeh. Towards elimination of lymphatic filariasis in Ghana: refining the strategy through quality improvement. PhD dissertation. Department of Epidemiology and Biostatistics, The University of the Witwatersrand, Johannesburg, South Africa. Anticipated completion 2018.
4. Hanna Tesfayone. Innovative approach to improve HIV positive youth's linkage to medical care among three dyadic HIV service delivery partnerships in Los Angeles, New Orleans, and New York. DrPH dissertation. Department of Health Policy and Management, UNC. Anticipated completion 2018.

PRE-DOCTORAL CLINICAL INTERNSHIPS SUPERVISED

1. Kassy Alia. Department of Community Psychology, University of South Carolina. Completed May 2018.

2. Brittany Cook. Department of Community Psychology, University of South Carolina. Anticipated completion May 2019.

UNC MASTERS PAPERS SUPERVISED

2019

1. Anshula Nathan. U=U Implementation in Rural North Carolina: Lessons Learned from Successful Health Promotion and Education Campaigns
2. Ashley Weinberger. Comparing Cervical Cancer Prevention in Three Countries: Identifying Common and Context Specific Barrier
3. Dr. Andrew Ovenden. Developing A Crisis And Emergency Risk Communications Plan: A Formative Evaluation Of The Durham County, North Carolina Emergency Communications Program.

2018

4. Ashley Labat. Measuring Progressive Realization of Sustainable Development Goal 6: A Review of Implementation Outcomes for Improvement
5. Susie Shi. Effects of Dietary Nitrate Supplementation on Blood Pressure Reduction: A Systematic Review and Meta-Analysis
6. Dr. Joe Mosnier. Building Capacity for Public Health 3.0: Introducing Implementation Science into an MPH Curriculum.
7. Dr. Ebehiwele Ebhohon. Utilization of the Modified Tanahashi Model for Assessing Universal Effective Health Coverage: The Nigeria Bottleneck Instrument and its' Implications for Planning.
8. Dr. David Garcia. Community-Based Surveillance of Antimicrobial Use and Antibiotic Resistance in Manhica, Mozambique.
9. Joanna Marroquin. Addressing Mental Health Stigma in Hispanic Adolescents.

2017

10. Dr. Eva Lorenz. How useful are patient portals for hospitals in rural areas?
11. Dr. Kiran Khan. Reducing the burden of cardiovascular disease and its risk factors in the Navajo population through food stores in the Navajo nation.
12. Dr. Al-Mounawara Yaya. Reducing under 5 childhood mortality using eIMCI: implementation approaches in the case of Nigeria.
13. Dr. David Steeb. Defining opportunities for pharmacists in global public health in low resource countries.

2016

14. Dr. Mahendra Katta. Public health leadership failure at Flint.
15. Rachel Nelson. Assessment of maternal and neonatal health facility and service preparedness at tertiary hospitals in Ghana.
16. Dr. Ashini Fernando. A guidance document to assess quality of self-pregnancy tests.
17. Dr. Michael Fischer. Mental distress of women in Southwest Uganda: exposure and measurement.
18. Dr. Marie Lina Excellent. Policy and practice implications of addressing antimicrobial resistance in Haiti.
19. Leah Stansberry. Planning for the implementation of golden rice as a solution for Vitamin A deficiency: recommendations for India.
20. Dr. Rabiga Khozamkul. Using mHealth tools to promote oral health among women living in poverty in Peru: a program plan.

2015

21. Andrea Halverson. Unmet need for family planning services among women living with and vulnerable to HIV in Côte d'Ivoire: implications for programmatic priorities.
22. Celia Jewell. Policy considerations for the development and integration of Community Health Workers in North Carolina.
23. Katie McNabb. Shifting the paradigm of nutrition metrics: A proposed program plan to address child undernutrition and generate demand in low and middle-income countries.
24. Manish Kumar. Integrated health system architecture to facilitate national and statewide public health monitoring: a case study based in India.
25. Joel Jennings. Effect of the 2006 Army hearing readiness policy.
26. Ed Haugh. Challenges for scaling up mental health through the primary health care system in the state of Madhya Pradesh, India.
27. Dr. Tekleab Woldekiros (Maternal and Child Health Department). Successes and challenges of the Ethiopian health extension program from the implementation perspective.

2014

28. Bianca Patel. General attitudes towards and barriers to integrating tobacco interventions into substance abuse facilities: a study of RJ Blackley in Butner, North Carolina.

2013

29. Arti Ajmani. Understanding community awareness, discrimination and stigma associated with mental health in lower and middle-income countries: a systematic literature review with a case study from India.
30. Cecilee Steinmetz. Using systematic implementation methods to improve public health delivery: a smoking cessation case study.

MASTERS LEVEL STUDENT THESES SUPERVISED AT THE UNIVERSITY OF THE WITSWATERSRAND, JOHANNESBURG, SOUTH AFRICA

1. Heather Fraser (South Africa)
2. Dr. Abdu Adamu (Nigeria)
3. Dr. Oluyinka Dania (Nigeria)
4. James Simukoko (Zambia)
5. Lorraine Malepo (South Africa)
6. Dr. Desire Habonimana (Burundi)

CONTRACTS AND GRANTS

ONGOING RESEARCH SUPPORT

[D43TW009774] (Pettifor/Ramaswamy)	04/01/2019 – 03/31/2024
1.8 calendar months	\$298,396

**National Institute of Health Fogarty Center
Wits-UNC Partnership: Expanding Capacity in HIV Implementation Science in South Africa**

Role: Co-Principal Investigator

The University of North Carolina Schools of Medicine and Public Health are developing an Implementation Research graduate training program in collaboration with the University of the Witswatersrand in Johannesburg, South Africa

[5110538] (Ramaswamy)	07/01/2018-06/30/2019
1.8 calendar months	\$149,392

**NC State Divison of Social Services
Triple-P Strategic Planning
Role: Strategic Planning Facilitator**

Supporting the divisions of Public Health, Social Services, Mental Health and Juvenile Justice in the development of a strategic plan to scale up and sustain the Positive Parenting Program in North Carolina.

[IPF #16-5681] (Ramaswamy) 08/01/2017-07/31/2022
2.16 calendar months \$175,000

National Institute of Health

Enabling Translation of Science to Service to Enhance Depression Care

Role: Principal Investigator

Testing implementation strategies for the scale up of mental health interventions provided through the primary health care system in Madhya Pradesh, India.

[IPF 17-5306](Ramaswamy) 05/01/2017-07/31/2019
2.4 calendar months \$136,456

Robert Wood Johnson Foundation

Evaluation 2.0 : Summative Evaluation of SCALE 2.0

Role: Principal Investigator

Summative evaluation and assessment of community readiness and capability for the next set of communities participating in the SCALE project.

[505910] (Ramaswamy) 09/01/2013-08/31/2019
1.2 calendar months \$125,000

Children's International Foundation Fund

Establishing Centers of Excellence for Newborn Care in Ghana

Role: Principal Investigator

Development of a Quality Improvement (QI) program to reduce maternal and neonatal mortalities and stillbirths in regional hospitals in Ghana. The grant provides training for QI leaders and front line staff in QI principles, identifies system and operational issues affecting the quality of care, and provides mentorship to QI staff to launch and implement improvement projects to address these issues.

[D43TW009774] (Van der Horst) 06/01/2014 – 02/31/2019
1.2 calendar months \$290,598

National Institute of Health Fogarty Center

University of North Carolina/University of the Witswatersrand AIDS Implementation Research and Cohort Analyses Training Grant

Role: Implementation Science Lead

The University of North Carolina Schools of Medicine and Public Health are developing an Implementation Research graduate training program in collaboration with the University of the Witwatersrand in Johannesburg, South Africa.

COMPLETED RESEARCH SUPPORT

[D43TW009774] (Van der Horst)	06/01/2014 – 02/31/2019
1.2 calendar months	\$290,598

National Institute of Health Fogarty Center
University of North Carolina/University of the Witwatersrand AIDS Implementation Research and Cohort Analyses Training Grant

Role: Implementation Science Lead

The University of North Carolina Schools of Medicine and Public Health are developing an Implementation Research graduate training program in collaboration with the University of the Witwatersrand in Johannesburg, South Africa.

[803308] (Ramaswamy)	01/01/2018-06/30/2018
2.4 calendar months	\$38,900

NC State Division of Social Services
Triple-P Strategic Planning

Role: Strategic Planning Facilitator

Supporting the divisions of Public Health, Social Services, Mental Health and Juvenile Justice in the development of a strategic plan to scale up and sustain the Positive Parenting Program in North Carolina.

[1E25TW009708-01] (Chi)	05/01/2015-04/30/2018
1.2 calendar months	\$107,362

National Institute of Health Fogarty Center
The CIDRZ-UNZA eLearning Platform for Research and Training.

Role: e-Learning Lead

The University of North Carolina Schools of Medicine and Public Health in collaboration with the University of Zambia (UNZA) are developing an online public health informatics course for Zambian public health professionals. This course will teach Zambian professionals statistical programming using SAS, data management, basic biostatistics, and the principles of research design to enable these professionals to conduct and support epidemiologic research. The ten-week course was offered in May 2017. It was

followed by a twelve-week practical component in which the students will be mentored in implementing new skills in their individual projects.

[IPF 16-1987] (Ramaswamy) 01/15/2017-04/14/2017
1.2 calendar months \$10,000

Robert Wood Johnson Foundation (bridge award)

Formative evaluation of the SCALE initiative

Role: Evaluation Co-lead

Conducting formative evaluation of selected communities participating in a health improvement initiative. The formative evaluation occurs during each community's implementation of their improvement efforts and assesses the extent to which the tools are being used, how the community members interact with their coaches and mentors, and how this interaction affects progress for their projects. The evaluator information will be fed back to the individual communities to help them enhance their progress. It will also be disseminated more broadly as guidelines for proactive community health improvement practice.

[IPF 16-1987] (Ramaswamy) 01/15/2015-01/14/2017
1.2 calendar months

Robert Wood Johnson Foundation

Formative evaluation of the SCALE initiative

Role: UNC Evaluation Lead

Formative evaluation of communities participating in a health improvement initiative.

[A12-1088-006](Stringer) 02/01/2012–06/30/2015

Doris Duke Foundation

Clinical Mentoring and Community Engagement to Improve Millennium Development Goals Health Outcomes in Lusaka Province of Zambia

Role: Co-Investigator

Quality improvement methods to enhance primary care quality.

[A12-1311-001](Bartram) 07/01/2012-06/30/2015

Conrad N. Hilton Foundation

Monitoring and Evaluation of the Conrad N. Hilton Foundation Water, Sanitation and Hygiene Initiative

Role: Continuous Quality Improvement Lead

Development of indicators, surveys, research design and learning feedback loops for grantees of the Hilton Foundation.

[A13-0942-001](Ramaswamy)

02/01/2012-02/01/2014

Pfizer Health Foundation

Tobacco Prevention and Control Collaborative

Role: Principal Investigator

Implementation science methodology used to design and evaluate a tobacco cessation program at the Alcohol and Drug Treatment Center (ADATC) in North Carolina.

[No Number] (Ramaswamy)

02/01/2009-07/31/2012

Gillings School of Global Public Health Research and Innovations Solutions

Global Learning Program

Role: Principal Investigator

Developed an online program to build the skills of field-based public health practitioners worldwide.

EDITORIAL ACTIVITIES

Associate Editor

BMC Public Health

2010 to present

Peer Reviewer

- BMC Health Services Research
- International Journal for Quality in Healthcare
- BMJ Quality and Safety
- Implementation Science
- Health Policy and Planning
- AIDS
- PLoS One
- International Journal of Health Policy and Management