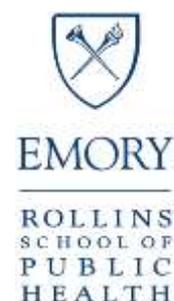




## **Renewing a Long-Term Strategic Partnership:**

Lessons learned from 20 years of collaboration in global health and development between CARE and Emory University

# Report



## OVERVIEW

### CARE and Emory have a long history of fruitful collaboration

Over more than 20 years, CARE USA (CARE) and Emory University (EU) – principally within the Rollins School of Public Health (RSPH) – have collaborated across global health and development sectors, including water and sanitation (WASH), maternal and child nutrition, food security, HIV/AIDS, and women’s empowerment. This collaboration has included joint research projects, training for CARE field staff, student employment and training, guest lectures by CARE staff at Emory, and employment opportunities at CARE for former Emory students following graduation.

Several high-profile joint research projects have included [SWASH+ \(Kenya: 2006-2019\)](#) and the [Tipping Point Project \(Nepal: 2019-pres\)](#). School Water, Sanitation and Hygiene plus Community Impact (SWASH+) was a 13-year project that is an exemplar of the impact of CARE and Emory collaborations. It has resulted in over 20 publications from both institutions, including policy papers that have contributed significantly to increasing the scale, impact, and sustainability of school WASH interventions in Kenya. The Tipping Point project aims to empower adolescent girls and their communities to delay marriage and to promote girls’ rights in Nepal and Bangladesh. RSPH researchers commenced a four-year partnership with CARE to strengthen the rigor and visibility of the impacts of this program. These projects have resulted in co-funded grants, peer-reviewed manuscripts, and conference presentations (see **Appendix A** for a complete list).

Student engagement and learning opportunities have supported research and program implementation, enhanced CARE’s workforce, provided Emory students with meaningful experiences, and made peer-reviewed contributions to science. In the past five years, CARE has employed over 100 Master of Public Health (MPH) students through the [Rollins Earn and Learn program](#) (REAL program), the Rollins Global Field Experience program, the Master on Development Practice (MDP) program, and collaborated on dozens of summer field projects. There have also been over 40 former Emory students employed by CARE since 2016. CARE also is able to further the education of their staff by nominating those who meet the eligibility requirements for the [Foegen Fellowship](#) at Emory, a program in which mid-career public health professionals from developing nations can pursue a degree at RSPH and receive full tuition and fees for the duration of their enrollment.

In 2020, we expanded bilateral capacity strengthening by holding sessions for CARE staff to discuss their work on nutrition with Emory students. From June to August, Emory faculty delivered a series of capacity strengthening modules for CARE staff in ethics, qualitative research, process evaluation, and research methods.

### Renewing our collaboration moving forward

**Our vision** for this collaboration moving forward is to jointly produce high-impact, policy- and programmatically-relevant applied research and learning to address global challenges to human development for transformative impact at scale. The **foundation** of this ‘renewed’ collaboration will be a framework structured around six functional domains<sup>1</sup> and reflective of CARE’s key program areas and Emory’s world-class methodological and technical research expertise. Our **aim** is that this framework will increase the breadth and depth of collaboration between Emory researchers and CARE programs beyond existing relationships and generate grant funding,

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<sup>1</sup> Impact measurement and analysis, research & inquiry, scaling impact, program quality & learning, knowledge management & communication, organizational learning, performance & accountability—which align with the six domains of the Impact, Learning, Knowledge, and Accountability team at CARE USA.

produce impactful research and learning, and inform global policymakers. To those ends, we will promote existing and prior collaboration to highlight shared value, to support learning exchanges that link CARE staff and programs with Emory researchers, and to identify areas to apply jointly for funding.

To inform that ‘renewed’ collaboration, in 2020, we conducted a learning exercise among key stakeholders at RSPH and MDP at Emory and CARE—to generate insights into what has worked and what has not worked—in terms of the impact of the collaboration on research quality, capacity, and use—and recommendations for the collaboration moving forward. We will apply those insights to improve the collaboration between Emory University and CARE. The scope of this improved, more formalized collaboration will be focused on joint work between CARE and RSPH. However, it will provide a useful model for formalized collaboration with other Emory schools and programs, specifically, the Masters in Development Practice Program; Schools of Nursing, Medicine, and Theology; departments in Emory College (Anthropology, Political Science, Sociology); and existing global networks (e.g., [Institute of Developing Nations](#), [Halle Institute for Global Research](#), [Global Health Initiative](#)).

## WHO DID WE ASK?

Perspectives from key informants on successes and challenges are summarized in three major domains of collaboration (joint research projects, student engagement, and capacity strengthening) as well as their vision for the partnership moving forward. Data were derived from interviews with 17 key informants completed between December 2019 and February 2020 (Table 1). Interviews were conducted remotely via Zoom and lasted between 15 and 45 minutes. (See **Appendix B** for methods and **Appendix C** for the interview guide.)

**Table 1. Summary of interviewees by institution and position.**

Institution	Emory University	CARE USA
<b>Total number of respondents</b>	<b>10</b>	<b>7</b>
Faculty	5	--
Staff	1	7
Students	4	--

## WHAT DID WE LEARN?

### Previous collaborative projects (SWASH+ and Tipping Point)

#### Successes

- **High impact evidence** – in the SWASH+ partnership, CARE staff said they were able to use the research results to support program improvement and for policy recommendations.
- **Extensive publication record** – the SWASH+ collaboration generated over 20 peer-reviewed publications, including primary research and policy papers. The Tipping Point project has the potential

to result in several research and policy publications, as well. (See Appendix A.)

- **Improved credibility and rigor** – CARE staff mentioned as a success of the Tipping Point project that the Emory investigators brought their reputation and academic networks to the study along with capacity to apply rigorous methodological approaches to research. CARE staff reflected that this combined to improve the credibility and rigor of the research results.

## Challenges

- **Different, sometimes limited, funding streams for research collaboration** – an Emory professor stated that differences in funding streams for academic institutions and non-governmental organizations (like CARE) constrains research collaboration in development. Most public health research funding for American universities comes from the National Institutes of Health. Whereas a combination of governmental and private donors fund research for non-governmental organizations (NGOs); donors like the United States Agency for International Development and the Bill & Melinda Gates Foundation (BMGF). Nonetheless, many of CARE’s donors do not fund (or are not currently funding) research; when they do, they often do not fund it adequately, including for staff time, which for academic institutions can be cost-prohibitive. However, staff and faculty reflected that a well-established collaboration—like the SWASH+ Collaboration—can be an effective platform for fundraising.

**“Most funding is through the National Institutes of Health. For development, most of the funding is from US Agency for International Development or other foundations. What makes that important is that the actual mechanisms for getting those grants is different. The expectations are different, and the timelines are different. There is some overlap: foundations such as BMGF mostly fund research while Hilton mostly funds implementation. But ...there is not much funding for operational research that allows for that collaboration. I think donors would fund learning, but one challenge is that it is more expensive than donors realize. Donors don’t like to pay for salaries... There are all sorts of different funding and contractual models.” - Emory faculty**

- **Misaligned expectations and priorities** – in previous collaborations, both CARE and Emory reflected on challenges relating to incentives, priorities, and timelines. Academics generally conduct research and publish results in peer-reviewed journals to expand general knowledge and advance scientific thinking. Typically, academic practitioners are less adept at policy engagement, and [translational research](#) is a newer field. In comparison, NGO staff develop evidence to drive program and policy development and to rationalize continuing donor investment. In this context, what is often needed is rapidly generated evidence that may not be appropriate for peer-reviewed publication. Additionally, program implementation often requires ongoing monitoring and adaptation. One CARE staff member provided an example of a CARE researcher in the field who was inclined to correct poor SWASH practices when they saw them, whereas the academic researchers were more likely to just observe and report on those practices. While both approaches are beneficial, a lack of focus on the mutual interests could result in miscommunication and missed opportunities to incorporate both institution’s needs and priorities.

- **Developing a common language for collaboration** – A common language for communication is critical for effective collaboration, and both Emory and CARE staff have technical language that may not be common between the two organizations. Therefore, without attention to differences in communication from the start of the collaboration, shared understanding might be challenging or time-consuming to develop.
- **Differing contract processes and requirements** – delays in engagement and collaboration can occur because of contractual processes for both CARE and Emory. These delays may impact the outcomes and timelines of the work. For example, a protracted contract negotiation for the Tipping Point contract resulted in a ten-week delay in implementation, ultimately costing CARE significant additional expense.
- **Staff turnover at CARE** – Emory staff and faculty reflected on the impact of staff turnover at CARE (both staff moving roles and projects and staff leaving CARE). First, relationships between Emory and new CARE staff had to be developed, which takes time and energy. Second, it was not always clear who the new contact within CARE was. Third, activities were stalled, stopped or were not of expected quality. Finally, CARE staff mentioned knock-on effects created by staff turnover at headquarters, because collaborations often involve a local research partner and staff from CARE’s country offices, in addition to staff and faculty at Emory.
- **Balancing commitments** – both CARE and Emory noted that the many, varied commitments on both sides was a challenge, and that successful collaboration requires collaborators to prioritize project tasks according to a co-created timeline and workplan. In addition, it essential that all parties to a collaboration understand and appreciate the capacities and constraints of constituent individuals and organizations.

## Student engagement – CARE and Emory perspective

### Benefits

- **Cost-benefit** – There are many programs available to both Rollins and MDP students that fund their work with CARE. For example, through the REAL program, half of the salary is paid for, and therefore, it costs half as much for CARE to hire an Emory intern. This cost savings is a benefit to CARE, incentivizing hiring interns.
- **Talented and qualified students** – CARE values highly the talent and qualifications of Emory students from both RSPH and the MDP program. CARE staff reflected that the expertise that graduate students bring to their internships has been essential to moving research and program work forward, which is particularly valuable given that staff are often over-stretched. CARE staff also noted that students can apply insights from their learning and work independently, thus making meaningful contributions to CARE’s projects.

### Challenges (or missed opportunities)

- **Few long-term internship opportunities, especially for PhD students** – Both Emory and CARE informants discussed that there were few opportunities for students lasting longer than one semester. One Emory faculty member mentioned that PhD students need more complex projects and assurance that their projects will last for the duration of their PhD program, so that they can really get the depth of experience that they need to complete a dissertation. More in-depth experience and involvement is also needed for master’s students wanting to complete thesis projects based on work with CARE.
- **Limited networking among CARE interns and with the broader CARE organization** – One CARE staff responsible for intern recruitment and onboarding mentioned the difficulty of coordinating the schedules of student interns. It is challenging to coordinate student intern’s schedules so that they can meet. As a result, interns report not feeling connected to each other or CARE as an organization. This challenge was echoed by Emory students who previously interned at CARE, as well as CARE internship supervisors.
- **Multiple hiring processes at Emory** – CARE and Emory staff alike mentioned the structure of the hiring process for student interns as being a challenge. There are multiple routes by which student interns can be hired at CARE due to different hiring processes based on internship opportunities (e.g., REAL or Global Field Experience) and different schools (e.g., RSPH and MDP), which leads to confusion on the CARE team.
- **Lack of guaranteed re-employment after completing a Foege Fellowship** - When it came to the Foege Fellowship specifically, it was mentioned that CARE’s large network of employees and CARE offices made it hard to keep track of who the point person for the Foege Fellowship, as that role was constantly changing. Furthermore, there are no re-employment rights for CARE employees who are nominated for and accept the Foege fellowship. If they decide they would like to return to CARE once their fellowship is complete, they do not get automatically re-employed; if they want to return to CARE, they must re-apply.

## Student engagement – students’ perspective

### Successes

- **Opportunities to publish work and present at conferences** – Student interns are encouraged by CARE to publish their work and present at conferences, which is an important development opportunity. With CARE often paying for student travel expenses and conference fees, one student informant stated that this allowed them to delve in deeply for two years with research and practical programmatic implementation. Another student mentioned that presenting their work at a conference at the end of their internship experience was a great culmination of learning through their academic program.
- **Field experience** – during student engagement opportunities, students gain invaluable field experience, specific skills training, and the chance to contribute meaningfully to CARE programs. Emory staff mentioned that students find these field experiences to be beneficial in learning marketable skills as they enter the job market, particularly since most students are looking to go into public health practice after graduating. Being embedded with the field teams, students can work in specific settings that interest them and observe government processes in other countries firsthand.

One student noted that conducting education sessions and doing qualitative research in communities allowed them to come up with recommendations for that country's Ministry of Health.

- **Access to CARE data** – students who intern at CARE also get the chance to complete their integrative learning experience, such as a thesis or capstone, using CARE data. One student mentioned using CARE data for a thesis and gained useful experience in data analysis, writing up findings, and creating recommendations to shape the program going forward. One CARE staff member mentioned that she chaired a thesis committee for a student who used data from the Tipping Point project, allowing them to continue collaborating even after the student's practicum experience was over.
- **Building professional networks** – Emory students who intern at CARE can network and make professional connections with individuals who work in the field and do program implementation through internships at CARE. Some of the personal connections made during students' time at CARE are still relevant in their current career.
- **Translating theory to practice** – one student stated that academic institutions tend to focus on theory and the ideal research scenario, which is not necessarily the case when students go to low resource areas for field work. In practice, researchers and implementers [must weigh the trade-offs and trade-offs](#) in determining the final research questions, methods, sample, etc., as it may not be possible to test or explore a question or line of inquiry in practice as planned in theory. While this can be perceived as a challenge by students, this is one of the values of interning with CARE, which is to learn how theory translates to practice in the real-world.

## Challenges

- **Timelines** – The timeline for recruiting students and engaging in CARE projects is not always well aligned with student calendars. Emory encourages students to find summer internships between November and January, and CARE supervisors usually determine summer programs' specific needs between February and April. The timeline for getting feedback on student deliverables also does not necessarily align with the internship terms. Sometimes, the student's internship is completed before feedback for their project deliverable is available. Some projects last beyond the initial intern working on it, so it may take multiple interns to get a deliverable finished and approved across the organization. Designing internships that last longer than a summer or a semester might provide needed continuity and a better experience for interns.
- **Misaligned expectations** – balancing student needs with programmatic needs has been a challenge. Sometimes what the student wants to get out of the research project is not the same as what the program actually needs at the time, so there is a mismatch of expectations of what CARE can provide and what the student can accomplish. A CARE staff member noted that when interns arrived before the manager was prepared for them with a robust project list, the students felt like they did not have a great experience.
- **Need for self-direction to be successful** – when interning at CARE, students need to be self-led, comfortable with ambiguity, proactive, and able to pull from their coursework and connections at Emory to get things done. Those who need more guidance during the process may not be as successful. CARE staff mentioned that it depends on the student and how closely they are monitored,

and whether they can complete their deliverables before they leave the country, or if they are able to continue working on projects after the summer. Sometimes it is difficult to determine which students have these qualities, and therefore, some students are not well-matched with programs.

- **Challenge of understanding and navigating CARE's organizational structure** – Emory students expressed confusion about the links between headquarters and country offices, and frustration at the lack of communication across the CARE organizational structure.

## Opportunities

- **CARE fellowship** – both Emory and CARE stakeholders are interested in awarding a CARE fellowship for Emory students. CARE and Emory would award the fellowship at the start of the students' academic program, and these fellows would engage in a two-year learning experience on longer-term projects. Another proposal was to create a track for students to go into after graduating, like the Pathways for Empowerment Program or the Multiplying Impact Program CARE had previously. Emory stakeholders are interested in piloting this program with CARE and, if successful, Emory could potentially expand and adapt the program with other REAL collaborators.

**The professional connections students make during their internships continue to pay dividends even after their experience is over. One previous student intern has current coworkers who worked on the same project they worked on as an intern at CARE. Another previous student intern is part of a consulting group they formed with former Rollins classmates, one of whom also interned at CARE. Additionally, they were able to get their dream job because of the work they were able to do during their internship with CARE. -Former Emory student / CARE intern**

- **Foege Fellowship** – to ease employment reintegration for Foege fellows who previously worked for CARE, Emory and CARE stakeholders have discussed the possibility of a one-year accelerated MPH program, or an online program for fellows.

## Capacity strengthening

### Past capacity strengthening activities

- **Project-based training in research methods** – In the field, Emory has shared skills in research methods with CARE staff. This type of sharing has been ad hoc and at the discretion of the Emory researchers when time permits. Faculty at Emory could provide a lot of expertise to CARE, both in the field and in the head office.
- **Conferences and talks** – in the past, CARE staff have given seminars and short skill modules outside of full courses, as well as taught semester-long courses at Emory. Both CARE and Emory stakeholders expressed interest in continuing this kind of knowledge and skills exchange in the future. Once per semester, CARE also hosts a training for interns where staff discuss their work to provide connection across different sectors within the CARE organizational structure.
- **CARE Academy courses** – CARE provides online training modules for interns when they first start

working at CARE to get them familiar with certain topics that CARE covers, such as addressing poverty and social injustice. Although these courses are a requirement for new interns, this is sometimes not clearly communicated to the students.

- **CARE speaker series** – the RSPH-hosted CARE speaker series started in February 2020. The goal of the speaker series is to increase student awareness of what working at CARE entails, and highlights CARE value-add both as a collaborator (for staff and faculty) and potential employer (for students looking for internships while in school and employment after graduation).

## Challenges

- **Balancing other commitments** – it is difficult for CARE staff to give seminars or teach courses at Emory as they work full-time. It is a significant ask for staff to commit their free time after hours or on the weekends. Additionally, CARE staff are interested in Emory faculty serving as advisors or consultants for CARE programs, but Emory faculty have competing priorities as well. Both CARE and Emory staff and faculty will need to negotiate their different commitments to determine availability and prioritization of activities.

## Opportunities

- **Teaching technical and non-technical writing** – writing for a non-technical audience is a critical skill for Masters and PhD students, requiring an understanding of and capacity to distill complex ideas—often packaged in highly technical language—into bite-sized pieces for relevant audiences (policy, advocacy, communications, practitioners, etc.) at CARE and beyond. CARE staff would be well-equipped to provide this kind of training to Emory students. Emory faculty could also teach CARE staff how to write for an academic or similar audience.
- **Experience sharing between CARE staff and Emory students and faculty** – Key informants expressed interest in having experienced practitioners mentor Emory students or Emory staff and faculty mentor young professional staff at CARE. One CARE staff member mentioned the implementation science conference as a great example of this and even allowed experienced researchers and practitioners to think of new, creative ways to address the problems in the field.
- **Capacity strengthening for research methods, implementation and utilization** – although Emory importantly contributes research experience and expertise to collaborations with CARE, there should be greater investment in applying that expertise and experience more broadly to capacity strengthening for CARE staff on research and evaluation practice. CARE staff are interested in courses or training in research design and methodologies, principles behind sampling, and basics in data management.
- **Building technical vocabulary** – CARE stakeholders are interested in building a shared vocabulary between researchers and practitioners. Researchers come with their own vocabulary founded in an academic space that country project teams are unfamiliar with. Consequently, CARE staff reflected that their feedback and opinion were dismissed or not taken as seriously by Emory staff. Developing a shared vocabulary would ensure that everyone can fully participate in collaborative activities.

## RECOMMENDATIONS

### Centralize and standardize channels and methods for collaboration

- **Develop an institutional framework for collaboration** – Developing a memorandum of understanding (MOU) and value proposition would clarify expectations and channels through which people can collaborate. This framework should set clear and common goals for the partnership, metrics to track progress over time, and specify strategies for communications, timelines, and research designs. While such a framework has been drafted, it should be revised, expanded, and formalized based on the recommendations and insights generated from this learning exercise.
- **Provide structure to co-developed proposals** – Additionally, project-specific MOUs should be developed during the development phase of proposals. The MOU should lay out 1) a communication plan detailing agreed-on project objectives; 2) the timeline, including built-in contingency time; 3) roles and responsibilities of team positions (outline of general roles are recommended as opposed to specific persons to account for staff turnover); and, 4) expectations for report and manuscript writing. Developing a MOU in the early stages of proposal development could lead to more streamlined and effective engagement and collaborations that generate more impact, in terms of publications, policy change, and even capacity strengthening.
- **Create standard language across contracts** – Many of the challenges in previous collaborative projects centered around procurement and negotiating contracts at the beginning of the partnership. This was partially due to the different standard language that academic institutions and NGOs are required to use. CARE staff emphasized the importance of establishing a common language between groups from the beginning to avoid running into time delays due to negotiating contracts. Developing stock materials, such as a checklist of questions, list of expectations and priorities, or even a glossary of common terms, is something that can be used at the start of any collaborative project.

### Designate a point person from each institution to steward collaboration and streamline communication

- Both Emory and CARE faculty and staff expressed a need for point-persons from each institution committed to the partnership and willing to drive it forward. This role could oversee the entire partnership and ensure that both institutions commit resources, time, and effort into the larger collaborative aspects that are sometimes overlooked. Committing organizational resources and budget to delegate persons responsible for maintaining and fostering this partnership will help formalize the mechanism for how both parties share information and engage in opportunities for collaboration.

### Expand capacity strengthening opportunities bilaterally

- Both CARE and Emory staff and faculty bring invaluable skills and experience to the table, which can benefit greatly both organizations. There are myriad ways in which we can provide support cross-organizationally for capacity strengthening. As part of the strengthened collaboration, CARE and Emory should plan for routine capacity strengthening activities, that are broadly available to staff

across CARE (for those run by Emory) or faculty and staff at Emory (for those run by CARE). The potential benefit of having capacity strengthening activities available to a broader constituency of staff and faculty extends beyond capacity strengthening. These sessions bring together staff from both organizations and can spark conversations that lead to additional collaborations. As such, they provide an effective space for convening and building deeper and more expanded collaboration.

## Strengthen student engagement processes and develop long-term student engagement opportunities

- **Strengthen student hiring approaches** – Emory faculty and staff expressed a desire to improve approaches to hiring students, including through long-term internships (e.g., more than one semester) and longer-term planning. The current approach being need-driven and *ad hoc* and generally limited to semester-long internships. Further, a centralized process at Emory for students seeking CARE internships might also streamline hiring, matching the best students to the best opportunities at CARE. That said, over the past several years CARE has consistently provided internship opportunities to both Rollins and MDP students and the value of this engagement should not be diminished or go unappreciated.
- **Develop and formalize graduate and post-graduate fellowship and training opportunities for Emory students at CARE** – a two-year CARE fellowship during students’ academic program would provide a long-term engagement opportunity for growth and professional development for students and for investments on the part of CARE in training and acculturation to pay off in terms of intern productivity and contribution. As part of the recruitment of fellows, a formal and transparent process would ensure a good match for both students and managers; having a faculty mentor would also create opportunities to deepen the collaboration between CARE and Emory. An Emory staff member recommended that students could benefit from having a post-graduation fellowship or placement program with CARE, citing examples from other departments or schools at Emory that have formal relationships with outside public health organizations.
- **Improve intern experiences through setting clear goals and mutual expectations** – A successful internship requires clear and mutual expectations, goals, timelines, and achievements. Interns should end an internship with a sense of accomplishment and with additional skills. Managers should have work completed with a quality product. Several practices can strengthen intern experiences, which rely not only on organizational process and managerial know-how and commitment, but also student engagement and commitment. One key to success may be to develop a goals/expectations worksheet that the manager and intern discuss at the beginning/middle/end of the internship.
- **Connect past and present CARE interns** – CARE staff members suggested an event where CARE staff and past and present interns can network. While CARE and Emory have a database of past interns, it would be beneficial to improve access to and awareness of that database among students (RSPH and MDP). This database is a great tool for improving networking and exchange among current students and interns and past interns. Through improved networking and exchange, it might be easier for students to find their own engagement opportunities and learn more about CARE and its programs.

## CONCLUSION

Through several collaborative projects, CARE and Emory have developed key policy recommendations for water, sanitation, and hygiene in schools, and provided high-impact evidence for program implementation. CARE staff have invaluable field experience, giving them an in-depth knowledge of the challenges of program implementation. Emory researchers provide rigorous research methodologies that help CARE create high-impact evidence needed to make important policy recommendations. By working together, Emory and CARE researchers have been able to pull from their complementary strengths to create more impactful policies and programs.

In the past five years, more than 100 graduate students from Emory have interned at CARE, contributing their unique capabilities to CARE projects. Emory students value the opportunity to gain applied field experience by interning at CARE prior to entering the workforce after graduation. They have been able to build professional networks, use CARE data for theses or dissertations, and present their work at conferences through these internship opportunities.

Lessons learned from examining past collaborations between Emory and CARE are like those brought forth in a previous paper examining collaboration between Cornell University and CARE (Sriram, 2017; available on request). Recommendations based on challenges that arose from previous collaborative efforts provide an opportunity to learn from the past and a solid foundation upon which to continue building this invaluable, strategic partnership.

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## APPENDIX A. Emory-CARE Publications and Student Projects/Theses

### Publications (\*indicates student project. <sup>§</sup>Indicates CARE staff)

Below are selected publications derived from collaborations between Emory and CARE. The list is incomplete as there has not been tracking for these collaborative publications, especially for student publications.

1. Alexander K.<sup>§</sup>, Dreibelbis R., Freeman M.C., Ojeny B.<sup>§</sup>, Rheingans R. Improving service delivery of water, sanitation, and hygiene in primary schools: A cluster-randomized trial in Western Kenya. *Journal of Water and Health*. 2013 Sep;11(3): 507-19. doi:10.2166/wh.2013.213 PMID: [23981878](#).
2. Alexander K.T.<sup>§</sup>, Mwaki A.<sup>§</sup>, Adhiambo D.<sup>§</sup>, Cheney-Coker M.<sup>§</sup>, Muga R., Freeman MC. The life-cycle costs of school water, sanitation and hygiene access in Kenyan primary schools. *International Journal of Environmental Research and Public Health*. 2016 Jun 27;13(7). doi:10.3390/ijerph13070637. PMID: [27355962](#); PMCID: PMC4962178.
3. Bohnert K.\*, Chard A.N.\*, Mwaki A.<sup>§</sup>, Kirby A.E., Muga R., Nagel C.L., Thomas E.A., Freeman M.C. Comparing sanitation delivery modalities in urban informal settlement schools: A randomized trial in Nairobi, Kenya. *International Journal of Environmental Research and Public Health*. 2016 Nov 30;13(12). doi:10.3390/ijerph13121189. PMID: [27916914](#); PMCID: PMC5201330.
4. Caruso B.A.\*, Freeman M.C., Garn J.V., Dreibelbis R., Saboori S., Muga R., Rheingans R. Assessing the impact of a school-based latrine cleaning and handwashing program on pupil absence in Nyanza Province, Kenya: A cluster-randomized trial. *Tropical Medicine and International Health*. 2014 Oct;19(10): 1185-97. doi: 10.1111/tmi.12360 PMID: [25055716](#). PMCID: PMC4876949.
5. Caruso B.A.\*, Freeman M.C., Garn J.V., Dreibelbis R., Saboori S., Muga R., Rheingans R. Assessing the impact of a school-based latrine cleaning and handwashing program on pupil absence in Nyanza Province, Kenya: A cluster-randomized trial. *Tropical Medicine and International Health*. 2014 Oct;19(10): 1185-97. doi: 10.1111/tmi.12360 PMID: [25055716](#). PMCID: PMC4876949.
6. Caruso, B.A., Dreibelbis R., Ogutu E.A., Rheingans R. If you build it will they come? Factors influencing rural primary pupils' urination and defecation practices at school in western Kenya. *Journal of Water, Sanitation and Hygiene for Development*. 1 December 2014; 4 (4): 642–653. doi:<https://doi.org/10.2166/washdev.2014.028>.
7. Chard A.\*, Trinies V., Edmonds C.J., Sogore A., Freeman M.C. The impact of water consumption on hydration and cognition among schoolchildren: Methods and results from a crossover trial in Mali. *PLoS ONE*. 2019;14(1) e0210568. doi:10.1371/journal.pone.0210568. PMID: [30653554](#); PMCID: PMC6336322.
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## Student Projects and Theses

There have been over 100 Emory student projects and thesis conducted in collaboration with CARE since the SWASH+ collaboration started, both with RSPH and the MDP program. A selection of RSPH projects and thesis are below.

*\*Finalist for RSPH outstanding practicum*

1. Alexandra Anderson "Exploring and Addressing Complementary Feeding Practices in Barriah, West Champarn." 2012
2. Alexandra Marie Piasecki "Maternal nutrition practices and perceptions in Bihar, India." 2013
3. Alexandra Piaskecki "Formative research in Maternal Nutrition in Patna, Bihar." 2012
4. Amanda Wendt "Improving Iron and Folic Acid Supplementation during Pregnancy in Bihar, India." 2014
5. Andrea Martinsen "Predictability of rural hand pumps in Northern Mozambique." 2014
6. Anita Panjawani "Breastfeeding and Complementary feeding in Bihar: Methods for assessment, FLW training and post-training evaluation." 2011
7. April Davies "Exploratory Spatial Analysis of Factors Affecting Household Drinking Water Source Selection in Rural Kenya." 2008
8. Ben Natkin "Conditions, behaviors, and fecal contamination of nursery schools in four low and medium income neighborhoods of Accra, Ghana." 2015
9. Candace Girod "Menstrual Hygiene Management in Schools: Evaluating Sanergy Education Outreach and Toilet Design." 2016
10. Deborah Kortso Collison "Innovative Feeding Bowl and Spoon Project." 2013
11. Erica Lee "Determinants of child and household dietary diversity." 2016
12. Erica Lee "Use of photo voice to document and characterize complementary feeding practices and use of MMP within a program context." 2015
13. Grace Morrow "Comparing adolescent boys' and girls' perspectives on social norms surrounding child marriage in Nepal."
14. Gunjan Batra. "Use of photo voice to document and characterize complementary feeding practices and use of MMP within a program context." 2015
15. Gunjan Batra. "Use of photo voice to document and characterize complementary feeding practices and use of MMP within a program context." 2016
16. Joseph Davies "Self Help Groups a Community Mobilization Approach to Improving Nutrition of Pregnant Women and Children under 3 years." 2011
17. Kaleb Price (2014, GIEpi): Prevalence of dehydration among school-aged children in Eastern Province, Zambia with a comparison of field hydration measures
18. Katie Catevenis "Survey development and data analysis: Nutrition assessment Patna, Bihar." 2011
19. Katrina Colbourne "In-depth analysis of the perceptions, understanding and utilization of complementary feeding content of IFHI trainings and job aids across different program levels in Bihar, India." 2013
20. Katrina Colbourne "FLW knowledge of infant and young child feeding content and use of job aids and household knowledge and Practice in Bihar, India." 2015
21. Kelly Alexander "Assessing school water, sanitation and hygiene activities and the enabling environment for sustainability in Gaza Province, Mozambique." 2010
22. Lauren Thesis, "Exploring Presence and Access to Nutrition Entitlements, Services, and Benefits for Women in Bihar." 2014
23. Leila Larson "Child development and nutrition in Bihar, India" 2017.

24. Lisa Dickman “Through the Eyes of Children: Primary Students’ Perceptions and Use of School Latrines in Nyanza Province, Kenya.” 2008
25. Lucas Gosdin. “Co-occurrence and determinants of stunting and anemia in Bihar, India.” 2017
26. Madhu Govindu. “Contextualization and validation of water, sanitation, and hygiene tools for Bihar, India.” 2018
27. Maryam Khalid “Exploring and Addressing Complementary Feeding Practices in Barriah, West Champarn.” 2012
28. Megan Cohen “Finding Alternative Delivery Platforms for Micronutrient Powders in Bihar.” 2013
29. Nicky Meyyazhagan. “Infant & Young Child Feeding Practices in Bihar, India.” 2016
30. Niharika Bhattarai “Monitoring and Evaluation: Development of CARE Strategy.” 2011
31. Pamela Deleon “Understanding of Dietary Intake, Cost, and Availability of Nutrient-rich Food Sources for Women and Children in Bihar, India.” 2014
32. Priya Gupta “Understanding of Dietary Intake, Cost, and Availability of Nutrient-rich Food Sources for Women and Children in Bihar, India.” 2014
33. Priya Kekre “Breastfeeding and Complementary feeding in Bihar: Methods for assessment, FLW training and post-training evaluation.” 2011
34. Reshma Roshania “Role of migration on child nutrition in Bihar, India” in progress.
35. Rony Jose “Finding Alternative Delivery Platforms for Micronutrient Powders in Bihar.” 2013
36. Saiza Jivani “Gaps, Barriers and Opportunities for Infant and Young Child feeding content across CARE staff and Midwives in Bihar India.” 2014
37. Saiza Jivani “In-depth analysis of the perceptions, understanding and utilization of complementary feeding content of IFHI trainings and job aids across different program levels in Bihar, India.” 2013
38. Sarah Divya, Exploring Presence and Access to Nutrition Entitlements, Services, and Benefits for Women in Bihar.” 2014
39. Sarah Porter “Comfort and reported use of latrines due to improved school sanitation and hygiene conditions.” 2010
40. Shadi Saboori “Handwashing and fecal exposure.” 2012
41. Sherry Chen “Anganwadi worker interactions with beneficiaries during counseling sessions and home visits on complementary feeding.” 2011
42. Victoria Cuellar “School level risk factors for helminth infection: Exploring the bowels of Nyanza Province, Kenya.” 2008
43. Wendy Worthington “School-Based Point-of-Use Treatment for Turbid Drinking Water: Is There a Clear Solution?” 2008
44. Yu Wang “Influence of women’s empowerment on child nutritional status in Bihar, India.” 2013
45. Zimo Banta “Behaviors, conditions, and hand contamination among children and caregivers in urban households in Accra, Ghana.” 2015

## APPENDIX B. Methods

### Study Design

The purpose of this study was to determine the challenges, best practices, and lessons learned for successful collaboration between Emory University – primarily with RSPH and the MDP program – and CARE USA. Both organizations are working together to identify ways to improve the formal mechanisms for collaboration between Emory and CARE as a way to improve student engagement and applied research and training. Key stakeholders from Emory University and CARE USA were interviewed about their experiences with and opinions about four major domains: previous collaborations, student engagement, capacity strengthening, and their vision for future partnership. In order to get a deeper understanding of participants' personal experiences with previous and current collaborations, semi-structured, in-depth interviews were conducted.

### Sampling and Recruitment

A combination of purposive sampling and snowball sampling were used to recruit participants who had collaborated with CARE USA and Emory University previously to interview for this paper.

### Data Collection

Semi-structured, in-depth interviews were conducted in various locations or by Zoom, a video-conferencing application. Interviews lasted 15 to 45 minutes. Participants were informed of the purpose and asked for their consent to participate and to be recorded. Once verbal consent for participation and recording were obtained, the interview was completed.

An interview guide was developed to explore participants' experiences collaborating on different projects, as well as to determine best practices, challenges, and lessons learned from previous collaborative efforts. Development of the interview guide was informed by reviewing relevant literature and feedback from qualitative research methods experts. The guide consisted of 10 open-ended questions with probes and sub-questions designed to elicit more detailed responses pertaining to participants' experiences with these collaborative projects and adjusted iteratively. The final research guide was approved by Matthew Freeman, PhD, Katie Micek, MPH, and Korinne Chiu, PhD. The complete interview guide can be found in Appendix C.

### Analysis

Data were analyzed according to the principles of grounded theory. All detailed notes were taken during all 17 of the interviews, with participant information anonymized. Coding was completed by hand. Each interview was coded chronologically initially, but once the initial coding was complete it followed a more iterative process. Codes were developed first using an inductive approach then a deductive approach to develop more detailed subcodes.

### Confidentiality

The interviews were conducted by Mujaahida Shakur, who is a Black, female, CITI-certified graduate student at Rollins School of Public Health at Emory University. This learning paper did not require IRB approval, but procedures were consistent with IRB protocols concerning socio-behavioral research with human subjects. Original audio recordings were stored on a password and biometrically protected device. Interview notes were kept on a password-protected laptop. Participants' data was anonymized to protect their confidentiality. Audio recordings were deleted after completion of the project.

## APPENDIX C. Interview Guides

### Emory Student Interview Guide

#### Previous Collaboration

1. Can you tell me a little bit about your current relationship with CARE?
2. Please describe your current job.
  - a. Probe: is it related to the work you did on your project with CARE?
3. Can you provide more details about the project you worked on with CARE?
  - a. Probe: How did it begin? What is/was the nature of the collaboration(s)?
4. What benefits did you perceive from this collaboration?
  - a. Probe: tangible vs. intangible
5. What challenges did you encounter while collaborating with CARE on this project?
  - a. Probe: Different contexts based on region and policy?
  - b. Probe: Power imbalances?
  - c. Probe: Communication?
  - d. Probe: Shared objectives?
6. How was having a relationship with CARE helpful or not in resolving those challenges?
  - a. Probe: How could the partnership have been leveraged to address those issues?
  - b. Probe: What were the main barriers or incentives to collaborate?
7. Are there other model institutional connections that could guide our efforts as we build this collaboration?

#### Student Engagement

8. How were you connected with the project originally?
  - a. Probe: formal mechanism such as practicum or personal connection?
  - b. Probe: What steps were taken? How were these steps successful?
  - c. Probe: What were some of the challenges with getting this project started/completed?  
Financial and logistic aspects?
9. Are there areas of focus/topics of interest where it would be useful to have more student involvement?
  - a. Probe: What kind of projects do you think would be beneficial to students?

#### Capacity Strengthening

10. What capacity strengthening activities took place while you were working on this project?
  - a. Probe: In which areas do you think capacity strengthening should take place? What would you have liked to learn from CARE while working with them?
  - b. Probe: What are the opportunities and barriers to capacity strengthening in these areas?

#### Vision and Action Plan

11. What do you think the benefits of formalizing the institutional collaboration between Emory and CARE would be?
  - a. Probe: What are the challenges to creating a more strategic partnership?
  - b. Probe: How do you think improving this collaboration would help students specifically?
  - c. Probe: How do you think success should be measured?
12. What potential challenges do you foresee in the process of building this partnership?
  - a. Probe: Resources or tools needed to meet those challenges?
13. Is there anything else you would want to share?

## Emory-CARE Faculty/Staff Interview Guide

### Previous Collaboration

1. Can you tell me a little bit about your current position at Emory?
2. Please describe your most recent collaboration with CARE.
  - a. Probe: How did it begin?
  - b. Probe: What is/was the nature of the collaboration(s)?
3. What benefits do you perceive from this collaboration, particularly in helping your institution meet its goals?
  - a. Probe: tangible vs. intangible
4. What challenges have you encountered in the collaboration?
  - a. Probe: Different contexts based on region and policy?
  - b. Probe: Power imbalances?
  - c. Probe: Communication?
  - d. Probe: Shared objectives?
5. How has the institutional partnership been helpful or not in resolving those challenges?
  - a. Probe: How could the partnership have been leveraged to address those issues?
  - b. Probe: What were the main barriers or incentives to collaborate?
6. Are there other model institutional connections that could guide our efforts as we build this collaboration?

### Student Engagement

7. How have you engaged students in previous collaborative efforts?
  - a. Probe: What steps were taken? How were these steps successful?
  - b. Probe: What were some of the challenges? Financial and logistic aspects?
8. Are there areas of focus/topics of interest where it would be useful to have more student involvement?
  - a. Probe: What kind of projects do you think would be beneficial to students?

### Capacity Strengthening

9. What capacity strengthening activities have taken place?
  - a. Probe: In which areas do you think capacity strengthening should take place? For Emory? For CARE?
  - b. Probe: What are the opportunities and barriers to capacity strengthening in these areas?

### Vision and Action Plan

10. What do you perceive as the benefits of strengthening the institutional collaborations between Emory and CARE?
  - a. Probe: What are the challenges?
  - b. Probe: How do you think improving this collaboration would help your work specifically? How would you like to contribute to it?
  - c. Probe: How should success be measured?
11. What potential challenges do you foresee and how might the partnership help to resolve those?
  - a. Probe: Resources or tools needed to meet those challenges?
12. Is there anything else you would want to share?
  - a. Probe: Anyone else we should talk to?