

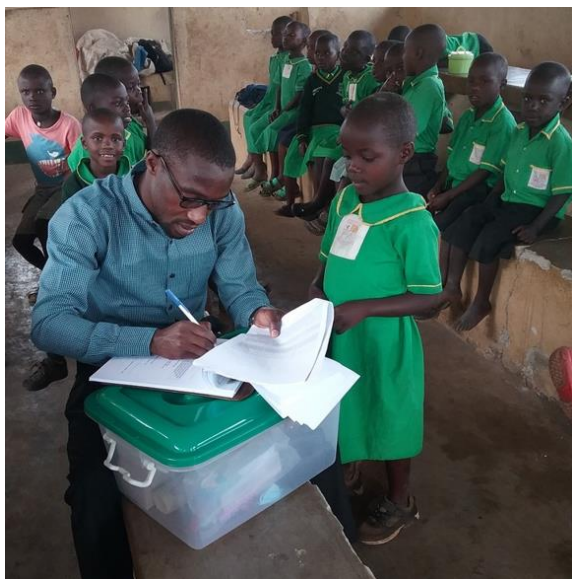
Combatting entrenched norms of “socialization for scarcity” and “parachute science” in global health and primatology: One Health is a moral framework, too

Taylor Weary, PhD

2021 Dr. Gregory D. Bossart Memorial One Health Scholarship winner

For my dissertation research, I conducted an epidemiological investigation of reverse zoonotic (i.e., from people to animals) transmission of pediatric “common cold” respiratory pathogens to wild chimpanzees living in Kibale National Park, Uganda, an existential threat that has caused lethal outbreaks over decades of observation not only among Kibale’s chimpanzees but also great apes across sub-Saharan Africa. In a longitudinal cohort study of children, adult forest workers, and the chimpanzees before, during, and after COVID-19 lockdown coordinated by a team of U.S. and Ugandan researchers, we found that respiratory disease is highly prevalent among preschool-aged children in these communities and that lockdown was associated with a precipitous decline in respiratory disease cases of any cause (1–3). Notably, the chimpanzee population displayed no clinical signs of respiratory disease during the most stringent period of lockdown and in fact did not have another outbreak until a year after lockdown ended (3). The results were striking—by improving pediatric respiratory health outcomes in communities near a great ape habitat, we observed a positive effect on these endangered animals, too.

Because lockdown in Uganda, as elsewhere, was also associated with lost learning (4), economic challenges (5), and myriad other deleterious social impacts (6), it is neither a feasible nor desirable long-term solution. Instead, interventions to protect chimpanzees from human “common cold” viruses should involve sustained efforts to improve pediatric respiratory hygiene in schools where such pathogens circulate readily, because our research shows that reductions in everyday preschool sniffles do have positive externalities for local ape conservation.



We have therefore launched the “Healthy Children, Healthy Chimps” program (7) as a One Health partnership between the Kibale EcoHealth Project, The Kasiisi Project, and the Kibale Chimpanzee Project, three nonprofit organizations with U.S. and Ugandan personnel and several decades of combined work in the Kibale area. Initiatives already underway include a handwashing campaign in local primary schools using mobile Tippy Tap units (8) and dialogues with forest workers to collaboratively generate best practices in biosecurity for working in ape habitats.

The goals of “Healthy Children, Healthy Chimps” shine a necessary spotlight on which diseases and public health concerns are deemed worthy of effort, funding, and time in resource-poor settings. The late medical anthropologist and physician Dr. Paul Farmer coined the term “socialization for scarcity” to describe the assumption at the nexus of health and social justice that due to finite health resources and increased disease burden and political disorder where the world’s non-white, rural, and poor populations live, there is no way their healthcare can ever equal that of the white, urban, and wealthy (9). This all too often translates to normalizing limited health resources and a lower standard of care for the already socioeconomically disadvantaged. What if we decided that pediatric respiratory disease is not “normal,” wherever you happen to live?

“Common cold” viruses, while indeed relatively benign in most immunocompetent people, can cause serious disease in the immunocompromised and can initiate and then exacerbate future asthma attacks in children (10). These effects are intensified in the socially marginalized due to highly prevalent comorbidities such as diarrheal disease (11), chronic stress (12), and increased exposure to environmental respiratory irritants, especially early in life (13). We know from our data (1–3) that children in communities near Kibale do experience respiratory illnesses often. These symptoms can be quite severe and persist for days or even weeks. Respiratory disease burden can affect school attendance, educational outcomes, and overall quality-of-life for these children. Saving risk communication and intervention efforts exclusively for headline-grabbing diseases such as Ebola virus disease and COVID-19 simply because public health resources are finite in rural Uganda does not acknowledge the fact that infections and morbidity from these ordinary “cold” pathogens are much more pervasive, particularly in young children under the age of five years (14). In a country where children make up the majority of the population (median age=16.7 years (15)), we must address highly prevalent pediatric diseases. Given the critical conservation bonus of improving wild chimpanzee health, too, the “Healthy Children, Healthy Chimps” initiative is well worth the time, effort, and resources.

To improve the sustainability of such initiatives, we have instituted meaningful collaborations with Ugandan stakeholders to foster local buy-in and thus more effectively strengthen pediatric respiratory health in the future. These collaborations are also a moral imperative. A primary goal of “Healthy Children, Healthy Chimps” is to combat “parachute science”, a term used to describe when affluent Western researchers perform their research in low-income countries, due to centuries of differential access and funding, and then leave with the samples and data (16). They may take all the credit for published work without acknowledging local research support or facilitating empowerment of local research institutions. This is unfortunately very common in biological fieldwork and particularly in primatology, given that nearly all wild primates have home ranges in the Global South (17). We can acknowledge and address “parachute science” performed in and around Kibale National Park over the years by supporting a productive One Health research-practice partnership that serves to protect some of the most vulnerable populations globally—of both humans and chimpanzees.



Humans and nonhuman primates had lived alongside each other for millennia before human-wildlife conflict became more urgent in recent years (18). Therefore, primate research and conservation will always be seen by local communities as an indulgent activity for outsiders if the needs of indigenous people are not addressed (19). These economic interests are often at odds with wildlife and environmental conservation goals. Indeed, some Ugandan forest reserve land has been excised in recent years for agricultural expansion, and political leaders have argued that Uganda “cannot afford the luxury of protecting nature’s ecological processes” (20). However, conservation setbacks are too often unfairly blamed on poor local environmental stewardship, rather than global issues caused for the most part by wealthy countries, such as climate change and political instability (17). Finding ways to address these conflicting values is where disease mitigation and wildlife conservation become “wicked problems”, or societal issues that have no single clear solution, but rather necessitate trade-offs between these competing interests (21). For example, asking forest workers to stay home when they test positive for a “common cold” virus or preventing ecotourists from entering the forest during peak viral transmission seasons, despite ecotourism being a significant source of national revenue (22), could severely hamper individual families’ economic security as well as Uganda’s development goals in the 21st century.

However, if we can employ sincere public engagement complete with bidirectional dialogue with local communities to create effective messaging and intervention strategies, we can foster a mutually beneficial “win-win” situation for both people and wild apes. Foreign researchers, particularly those from affluent Western countries, should be open to different approaches and priorities that arise from such community engagement exercises. Listening to what people have to say can help overcome the understandable wariness of what may seem like exploitative neocolonial endeavors masquerading as academic research. In this way, the “Healthy Children, Healthy Chimps” program’s legacy can be threefold: improving pediatric respiratory health, protecting endangered chimpanzees, and supporting research-practice partnerships with communities living near Kibale National Park that are sustainable and rooted in respect. Employing a One Health lens to examine and engage with complex human and animal health issues such as reverse zoonotic respiratory disease, simultaneously utilizes resources most efficiently while also treating good health as a right for all, whatever it takes.



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