Pathogen transmission in aerosols is receiving new attention during the covid-19 pandemic as a poorly understood phenomenon, but the idea pre-dates the germ theory of disease and was described early on as “miasma”. Though miasmatic transmission of diseases like cholera was discredited in the mid 19th century, evidence since that time from disparate fields has suggested that important human pathogens – including gut pathogens – can and do sometimes take flight and may lead to exposure in certain scenarios. This presentation describes a series of studies reporting detection, quantitative estimation, and interesting – if indirect – evidence of microbial viability of enteric pathogens in aerosols near open sewers in densely populated, low-income cities of La Paz, Bolivia and Kanpur, India. At these sites, a wide range of gut pathogens were detected, some not previously reported in outdoor urban aerosols. These include enterotoxigenic *E. coli*, *C. jejuni*, *Shigella* spp., *Salmonella* spp., norovirus, and *Cryptosporidium* spp., with increased frequency of detection and higher densities near open sewers. The exposure and public health implications of airborne enteric pathogens in such settings are not well understood, but current and future work on this topic promises to reveal new insights into pathogen movement through the environment. Warning: this presentation may raise uncomfortable questions about the use of public restrooms, whether flatulence can spread disease, and whether you should hold your breath as you drive past the wastewater treatment plant.

Learning objectives. Following this presentation, attendees should:

- Be able to describe current evidence for the transmission of enteric pathogens in high-risk settings
- Understand how molecular and culture-based assays targeting bioaerosols can be used to inform exposure risks
- Be able to identify remaining gaps in evidence and the kinds of studies that may help advance our understanding of these phenomena