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PROFESSOR: So having established the importance of airborne transmission in the spreading of COVID-19 specifically, and more generally in the spreading of respiratory pathogens, let's proceed to analyze airborne transmission in a well-mixed room.

So we're thinking of a situation where a certain number of people are sharing an indoor space.

And the air in that room is well-mixed enough that as pathogen-containing droplets are released from the breath of one person, it's quickly spread throughout the whole room.

And by the time someone else breathes it, they're essentially exposed to the average concentration of pathogen in the air after accounting for such effects as the settling, the evaporation, the ventilation, filtration, and other effects, but still at the level of a well-mixed space.