

The mitigated carbon emissions of transitioning to virtual medical school and residency interviews: A national, survey-based study

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BACKGROUND

Climate change has devastating consequences for patients, health systems, and ecosystems. The transportation sector, which encompasses academic and business travel, is responsible for the largest proportion of greenhouse gas emissions in the U.S. Research quantifying interview-associated greenhouse gas emissions for the thousands of annual medical school and residency applicants is limited.

METHODS

1. Distributed website-based survey to collect info on applicant schedule and future interview preference
2. Calculated theoretical emissions for all interviews requiring air travel
3. Performed content analysis of interview preference explanations

RESULTS

- Medical school and residency applicants had mean theoretical emissions of 2.19 and 4.31 tons of CO₂eq, respectively.
- 90% of medical school applicants and 91% of residency applicants expressed a preference for hybrid or virtual interviews going forward.

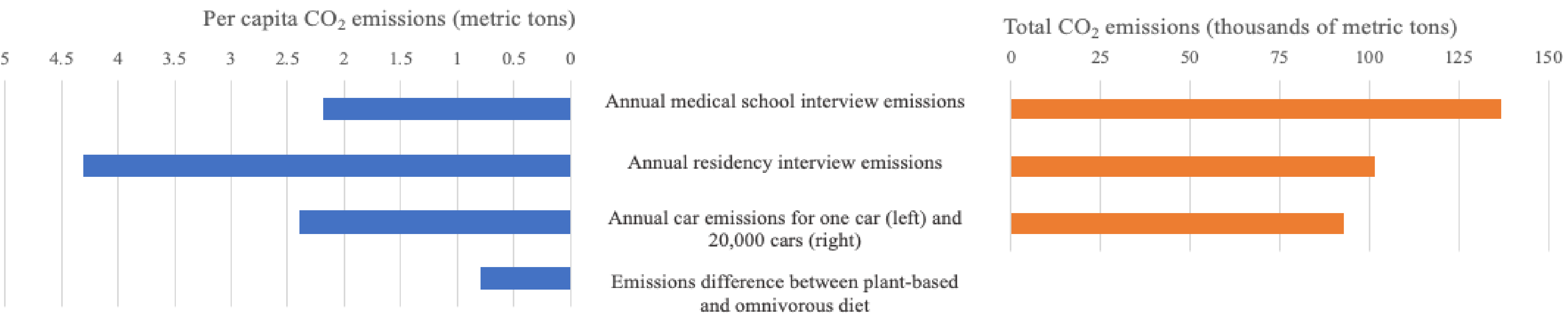
DISCUSSION

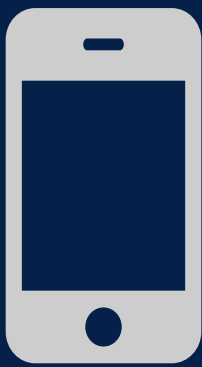
A permanent shift to virtual or hybrid interviews would mitigate the majority of emissions and is favored by applicants for cost, equity, efficiency, and environmental reasons.

ACKNOWLEDGEMENTS

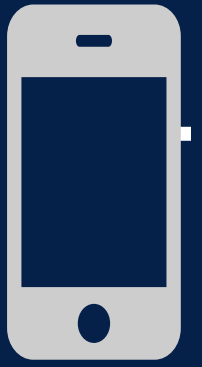
Supported in part by grants from the Yearlong Inquiry Program, Health Care without Harm Emerging Physician Leader Award, and the UC Center for Climate, Health and Equity.

In-person medical training interviews have significant greenhouse gas emissions and are not preferred by the vast majority of applicants.





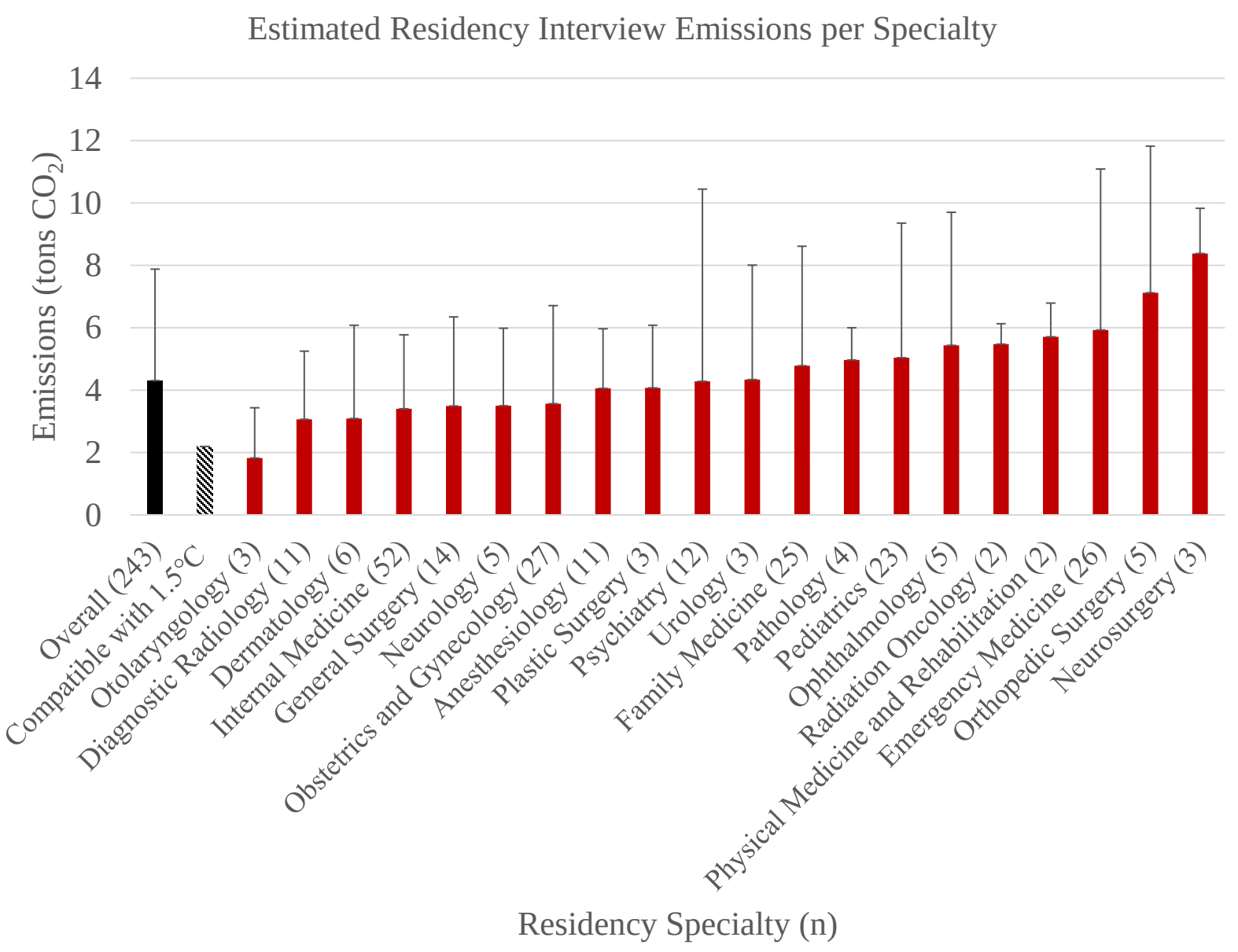
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Reason	Frequency (% of applicants)	Sample quote
Financial cost	161 (52.6%)	“There is a significant cost associated with in-person interviews, both economic and environmental. As a student of lower SES, virtual interviews took away a significant barrier to applying to medical schools.” (medical school applicant)
Environmental impact	80 (26.1%)	“Climate change is real and undeniable. If medical professionals are to take health harms of climate change seriously, we have to be willing to act.” (medical school applicant)
Convenience and accessibility	51 (16.7%)	“I have a baby so not having to travel saved me a lot of money on childcare and need to transport breastmilk.” (residency applicant, family medicine)
Equity	41 (13.4%)	“Virtual interviews equal the playing field for people who are not as financially stable as others. It allows folks to apply to as many programs as they see fit, and nobody will have to turn down an interview because it is too expensive to get to.” (medical school applicant)
Stress	31 (10.1%)	“I felt less anxious interviewing in a space that I was familiar with, instead of worrying about traffic, hotel rooms, or finding directions and being late.” (medical school applicant)
Scheduling	16 (5.2%)	“More accessible in terms of money AND scheduling. Especially with interview slots being grabbed an hour after they open, having to plan interviews with travel in mind would be a nightmare!” (residency applicant, internal medicine)
Opportunity cost	13 (4.2%)	“Made it possible for me to continue engaging in research at my home institution, I was less exhausted, I had more time with family.” (residency applicant, neurology) “Still able to do clerkships while interviewing because didn’t have to take multiple days off for one interview” (residency applicant, internal medicine)