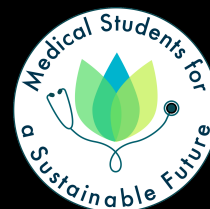




Planetary Health Report Card

Allison Long, Jay Devineni, Sarabjit Kaur, Taylor La Valle, Destri Eichman, Varun Jeevan, Lauren Nowakowski, Sabrina Duong, Kameron Haake, Jenna Ludwig, and Zayd Al Rawi



MS4SF Sustainability Initiatives

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Methods

Curriculum

Faculty who oversee curriculum were contacted individually, and many provided excellent insight into how planetary health metrics could be incorporated in the future.

Interdisciplinary Research

Contacting liaisons of research department at MU was very helpful. The MU research collaborators' tool was detailed, but disorganized.

Community Outreach and Advocacy

Most information came from MS4SF-led projects and the MU healthcare website. The CME office was difficult to contact.

Support for Student-Led Initiatives

MU's undergraduate sustainability group was instrumental in determining support.

Campus Sustainability

The Office of Sustainability for MU had most of the information and directed other inquiries to Campus Facilities.

Planetary Health Report Card

Overall	D+
Curriculum	F
Interdisciplinary Research	D+
Community Outreach and Advocacy	D
Support for Student-Led Initiatives	A-
Campus Sustainability	C+



Mizzou MS4SF President, Allison Long, and VP, Jay Devineni, speaking at the group's inaugural meeting.

Conclusions

Our findings demonstrate significant gaps in planetary health education and initiatives at our school. One major obstacle was contacting individuals for the metrics. However, several areas of improvement have been identified to enhance education and awareness of planetary health as an integral component of medicine. We eagerly anticipate these implementations and appreciate the enthusiasm of the faculty and administrators collaborating with us.

Summary of Findings

Curriculum

Only one lecture includes planetary health throughout the curriculum.

Interdisciplinary Research

The School of Medicine is largely disconnected from interdisciplinary planetary health research initiatives created for the university as a whole.

Community Outreach and Advocacy

There are no community-facing events or educational materials on planetary health for education of patients or CME credits.

Support for Student-Led Initiatives

There are research opportunities related to planetary health, but there is no funding for any sustainability initiatives.

Campus Sustainability

The medical education building has Platinum LEED certification, used locally sourced materials in its construction, and has goals for climate neutrality listed in a Climate Action Plan.

Next Steps

- **M1 Orientation Week:** Introduction to how climate change and its resulting health impacts will be addressed throughout the years.
- **Curriculum:** Implement the aforementioned curriculum changes and track the impact on medical student environmental education.
- **Paperless:** Continue the shift toward a paperless curriculum as shown to be supported by the **79.9%** of students who no longer print, and **80.5%** of students who are satisfied or very satisfied with the changes.
- **Elective:** Create an educational elective on the intersection of climate change and health to be offered to medical students interested in expanding their planetary health knowledge.

Planetary Health Curriculum

The Mizzou MS4SF chapter presented comprehensive recommendations for the incorporation of planetary health into the medical school curriculum. As a result of these efforts, the following additions to the curriculum are being developed:

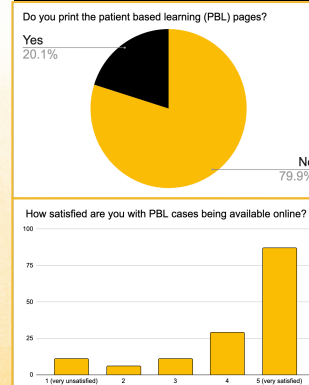
- A lecture on environmental health from a local expert
- Multiple learning objectives covering the effects of anthropogenic climate change on human disease
- A learning objective covering the connection between deforestation and infectious disease emergence
- A learning objective on the connection between climate change and cancer
- Lecture material on the connection between intensive farming practices and antibiotic resistance patterns
- Lecture material on the connection between environmental endocrine disruptors and reduced fertility
- Lecture material on the connection between heat stress & kidney injury

Political Activities

The Mizzou MS4SF chapter has been involved in the following forms of political engagement and activism:

- Hosted the mayor of Columbia, MO to discuss the city's sustainability initiatives
- Lobbied in the state capitol on issues related to mining protections and hazardous waste reporting
- Participated in a protest that encouraged the University of Missouri to divest from fossil fuel companies
- Hosted a former state representative to discuss political avenues for sustainability
- Educated students on how to contact their legislators and testify on state-level legislation

Survey Results



Mizzou MS4SF Legislative Committee Chair, Taylor LaValle, speaking at a protest to encourage University of Missouri leaders to divest from fossil fuel companies.

Other Past and Future Events

- Authored our first Planetary Health Report Card in 2023, which will be updated in 2024
- Adopted a trail section where we perform regular trail cleanups
- Organized a plant sale that raised over \$200 to support our initiatives
- Plan to work with MU Health to encourage them to sign the Health Sector Climate Pledge

Paperless Learning

The Mizzou MS4SF chapter distributed a petition to the medical student body asking students to support a transition to a paperless curriculum. Within one day, the petition received >100 signatures, prompting the administration to pilot test a paperless curriculum over a two-month period, with the following results:

- There were 144 total respondents to the post-test survey
- Among the respondents, 21.1% still chose to print pages for patient-based learning sessions, while 79.9% went paperless
- Based on these results, an estimated 15,000 pages were saved
- Among the respondents, 80.5% were "satisfied" or "very satisfied" with the paperless system
- Among the 19.5% of respondents who were "neutral," "dissatisfied," or "very dissatisfied," common complaints included difficulty taking notes and concerns that other students were reading ahead

Journal Clubs

The Mizzou MS4SF chapter hosts quarterly journal clubs, where members present and discuss the latest news and research related to planetary health. Past journal club topics have included:

- The projected environmental impact of the Inflation Reduction Act
- The impact of climate change and fossil fuel pollution on maternal, fetal, and child health
- The effect of climate change on pollen seasons, allergic rhinitis, asthma, and respiratory health
- Strategies for reducing single-use plastics in health care while maintaining optimal infection control
- Strategies for discussing environmental issues with patients

Curriculum Proposals

Based on the PHRC, our chapter presented specific curriculum changes to improve planetary health education:

- Include strategies for taking an **environmental history**
- Provide information on the impact of **extreme heat** on cardiovascular disease
- Discuss the **disproportionate impact** of climate change on marginalized populations
- Understand the impact of climate change on **infectious disease** spread
- Provide regional information on **environmental exposures** and health
- Educate on the respiratory health effects of climate change and **air pollution**