

Addressing the Impact of Climate Change on LGBTQIA+ Patients at Health Centers

Leo Goldsmith
Dr. Bhargavi Chekuri

8/13/24



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Our Roots

Fenway Health

- Independent 501(c)(3) FQHC
- Founded 1971
- Mission: To enhance the wellbeing of the LGBTQIA+ community as well as people in our neighborhoods and beyond through access to the highest quality health care, education, research, and advocacy
- Integrated primary care model, including HIV and transgender health services

The Fenway Institute

- Research, Education, Policy



The National LGBTQIA+ Health Education Center

- Training and Technical Assistance
- Grand Rounds
- Online Learning
 - CE and HEI Credit
- Environmental Influences On Child Health Outcomes (ECHO) Programs
- Publications and Resources



Learning Module



Publication



Toolkit



Video



Webinar



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www.lgbtqiahealtheducation.org

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- Alternatively, e-mail us at education@fenwayhealth.org for less urgent questions.



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- Dial the phone number and access code



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Physicians	AAFP Prescribed credit is accepted by the American Medical Association as equivalent to AMA PRA Category 1 Credit™ toward the AMA Physician's Recognition Award. When applying for the AMA PRA, Prescribed credit earned must be reported as Prescribed, not as Category 1.
Nurse Practitioners, Physician Assistants, Nurses, Medical Assistants	AAFP Prescribed credit is accepted by the following organizations. Please contact them directly about how participants should report the credit they earned. <ul style="list-style-type: none">• American Academy of Physician Assistants (AAPA)• National Commission on Certification of Physician Assistants (NCCPA)• American Nurses Credentialing Center (ANCC)• American Association of Nurse Practitioners (AANP)• American Academy of Nurse Practitioners Certification Program (AANPCP)• American Association of Medical Assistants (AAMA)
Other Health Professionals	Confirm equivalency of credits with relevant licensing body.

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Leo Goldsmith

 Michelle L. Bell's Research Group

Yale SCHOOL OF
THE ENVIRONMENT



Dr. Bhargavi Chekuri



Climate and Health Program

SCHOOL OF MEDICINE

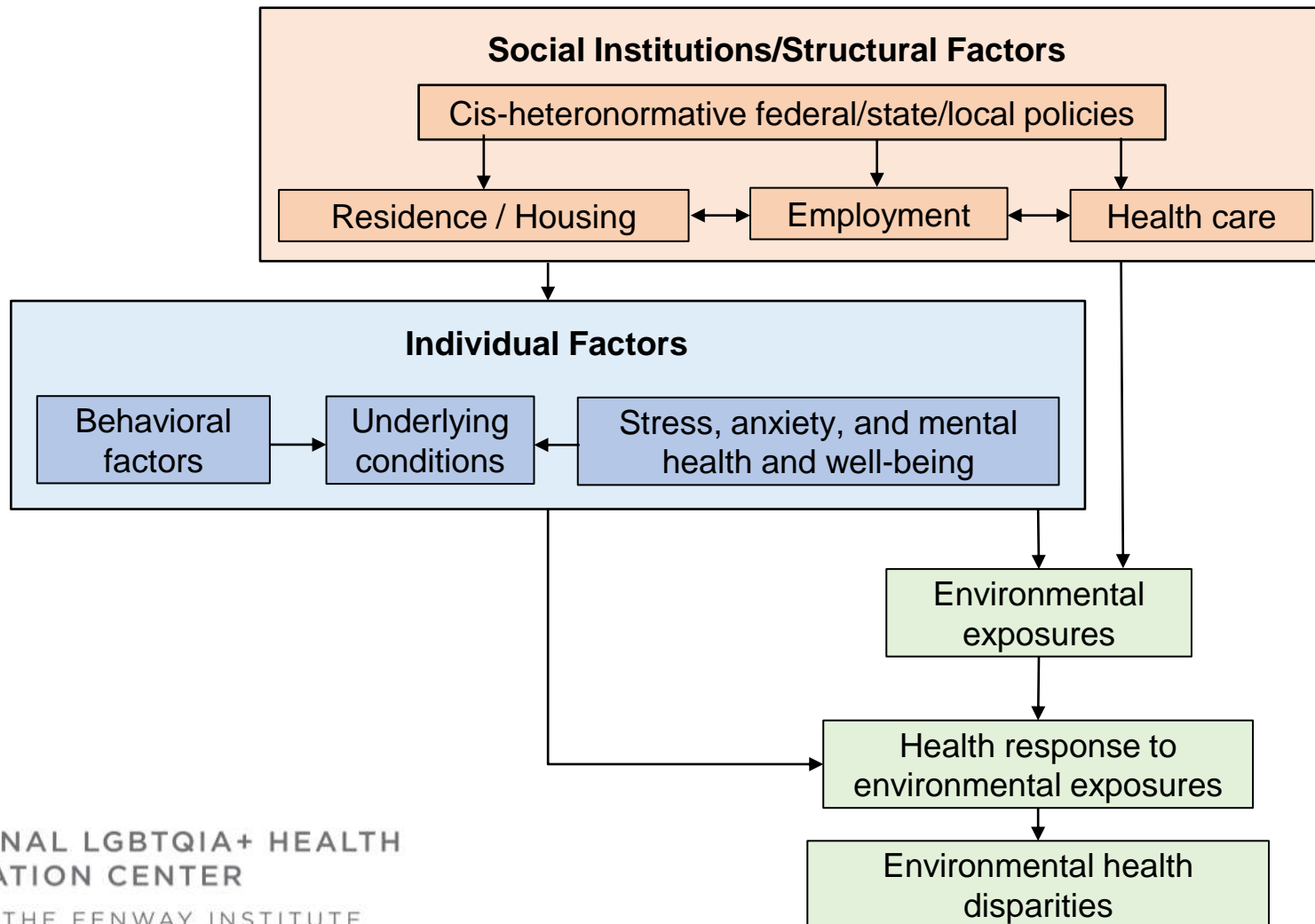
UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS



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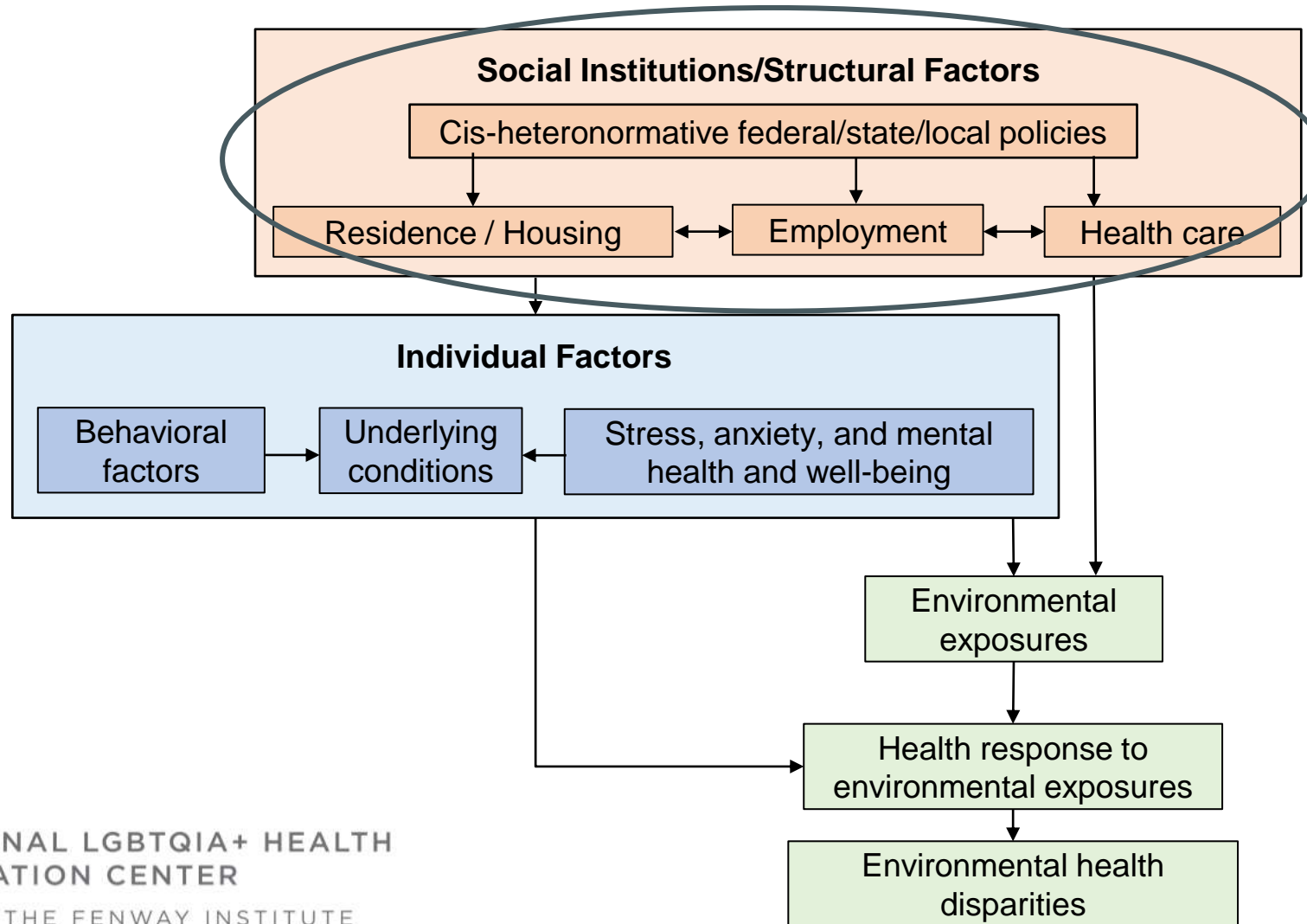
CONCEPTUAL FRAMEWORK FOR ENVIRONMENTAL HEALTH DISPARITIES FOR THE LGBTQ+ POPULATION (GOLDSMITH AND BELL 2021)



CONCEPTUAL FRAMEWORK FOR ENVIRONMENTAL HEALTH DISPARITIES FOR THE LGBTQ+ POPULATION (GOLDSMITH AND BELL 2021)

Racism

Colonialism



Sexism

Ableism

STRUCTURAL INEQUITIES



- Access to Affirming Health Care
- Discrimination

Transgender individuals (37%) and LGBTQI+ people of color (27%) postponed medical care due to previous discrimination by medical professionals



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Costs and discrimination pose significant barriers to accessing health care for LGBTQI+ adults

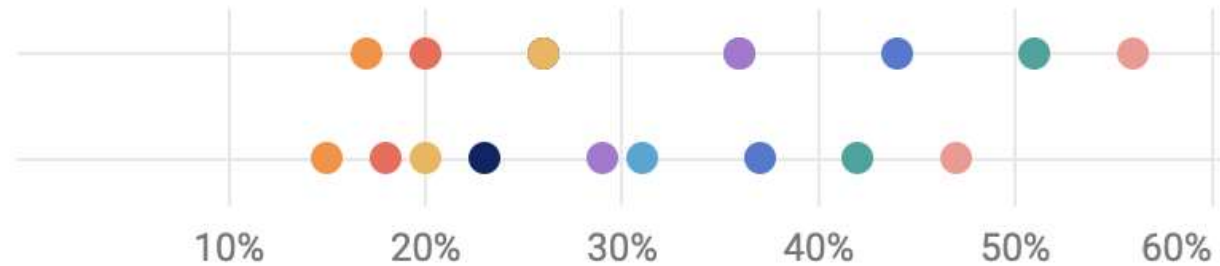
Percentage of respondents who postponed or did not try to get necessary medical care or preventive screenings in the past year, by demographic group

● LGBTQI+ ● Non-LGBTQI+ ● LGBTQI+ people of color** ● Non-LGBTQI+ people of color** ● LGBTQI+ people with disabilities ● Non-LGBTQI+ people with disabilities ● Transgender* ● Cisgender ● Intersex

Measures taken due to cost

Postponed or did not try to get needed medical care

Postponed or did not try to get preventive screenings



Measures taken due to discrimination or disrespect by providers

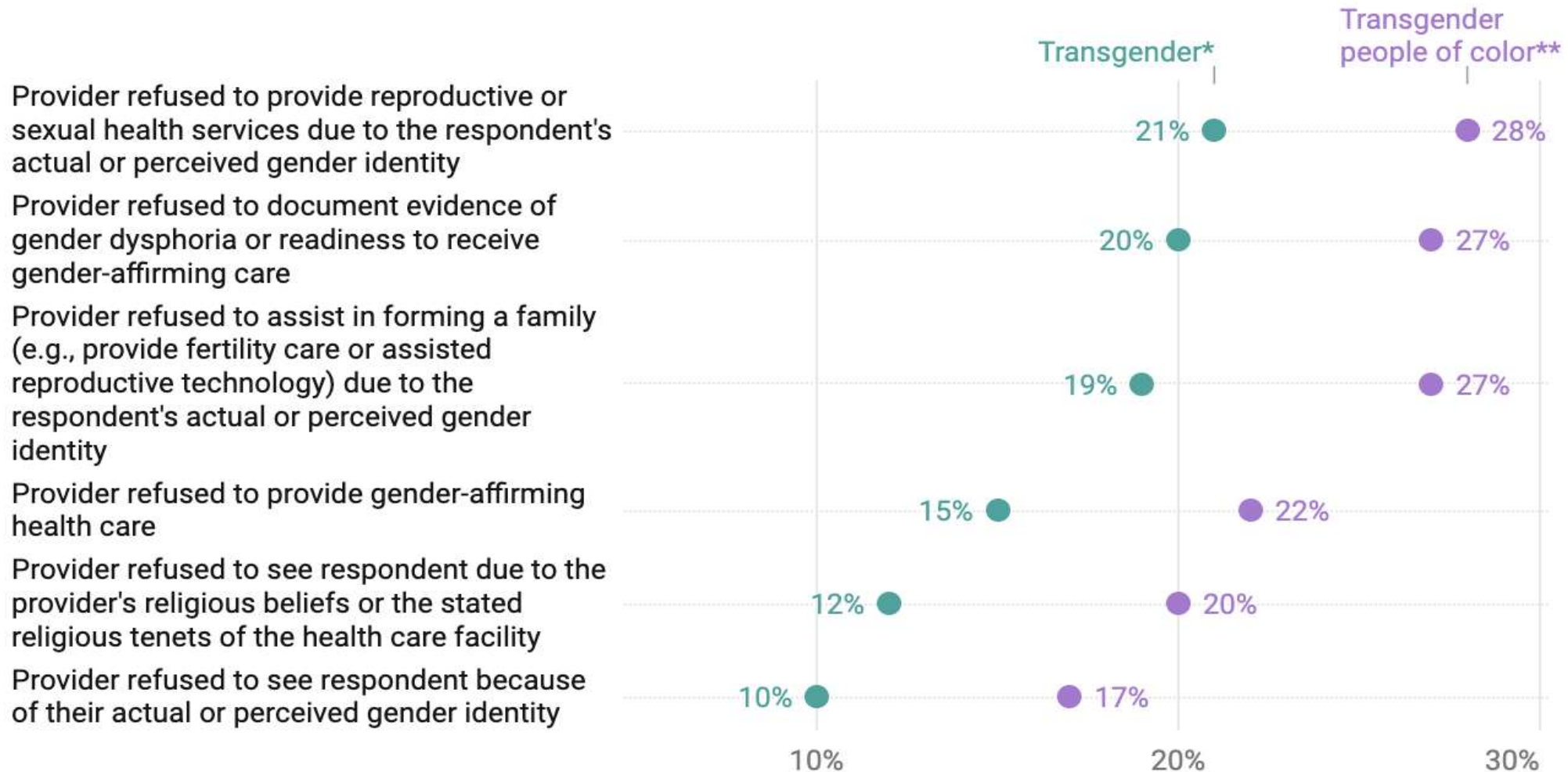
Postponed or did not try to get needed medical care

Postponed or did not try to get preventive screenings



Nearly 1 in 3 transgender respondents encountered some form of health care refusal by a provider in the past year

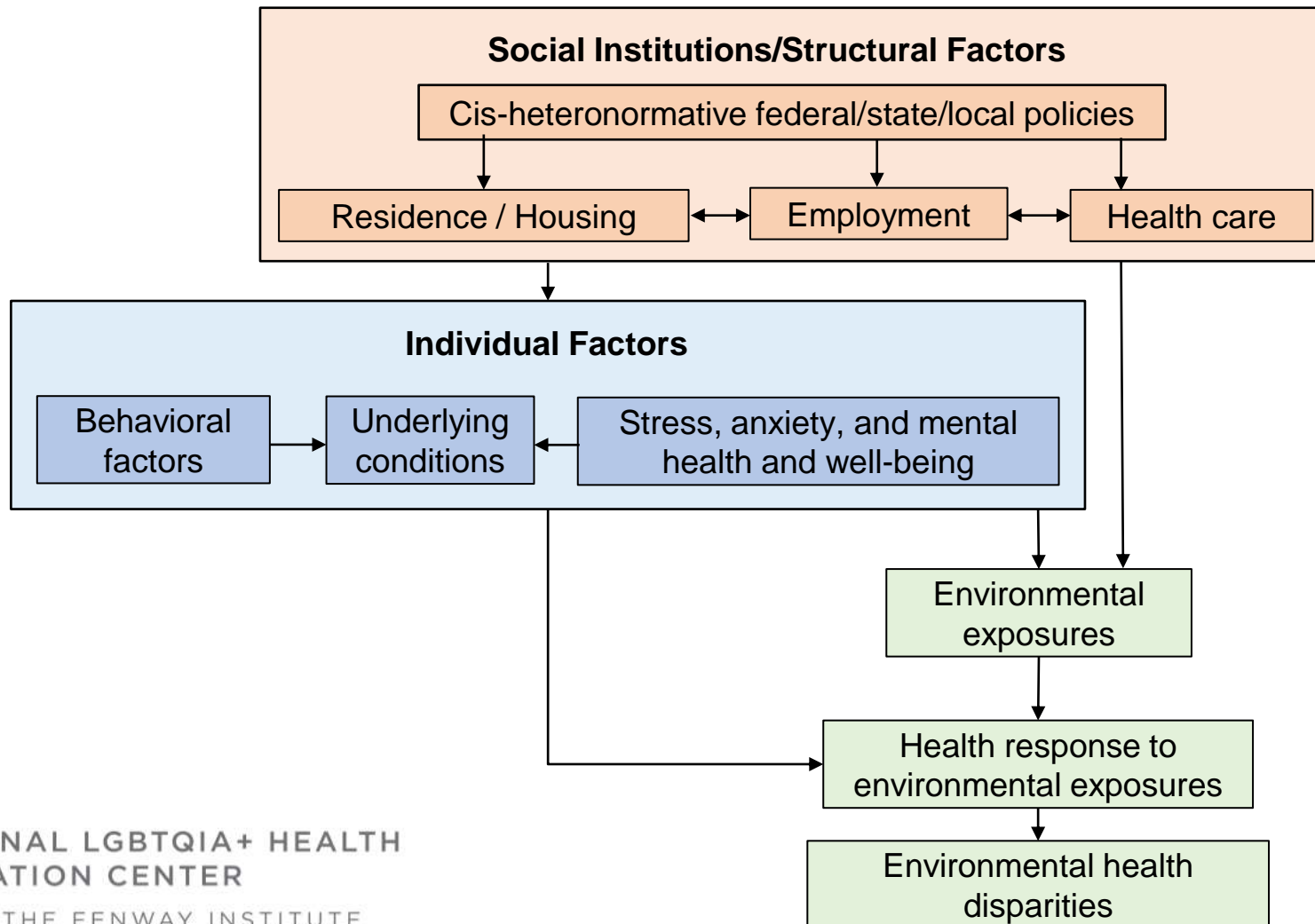
Share of transgender respondents who reported refusals by health care providers in the past year



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Racism

Colonialism

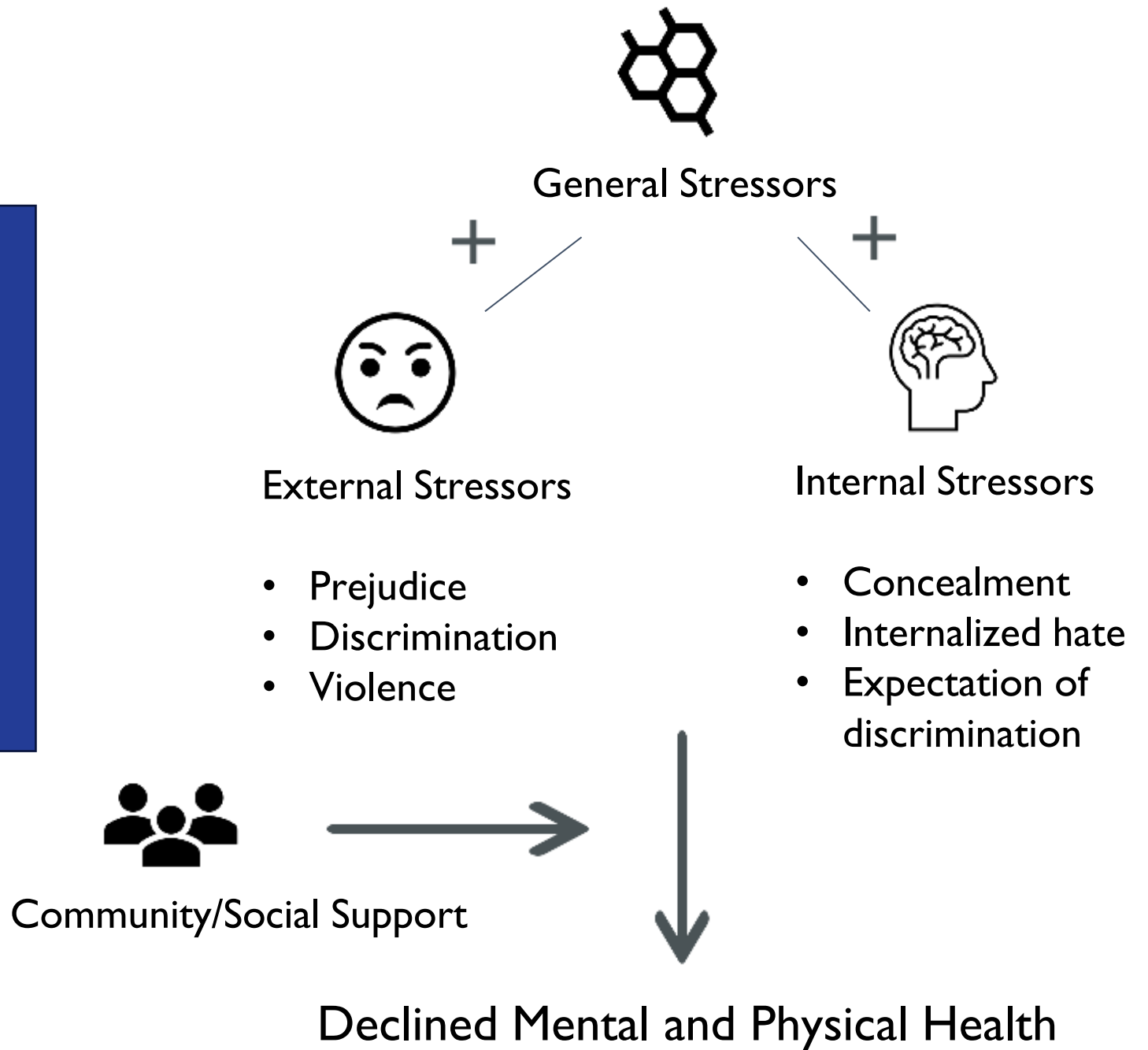


Sexism

Ableism

MINORITY STRESS

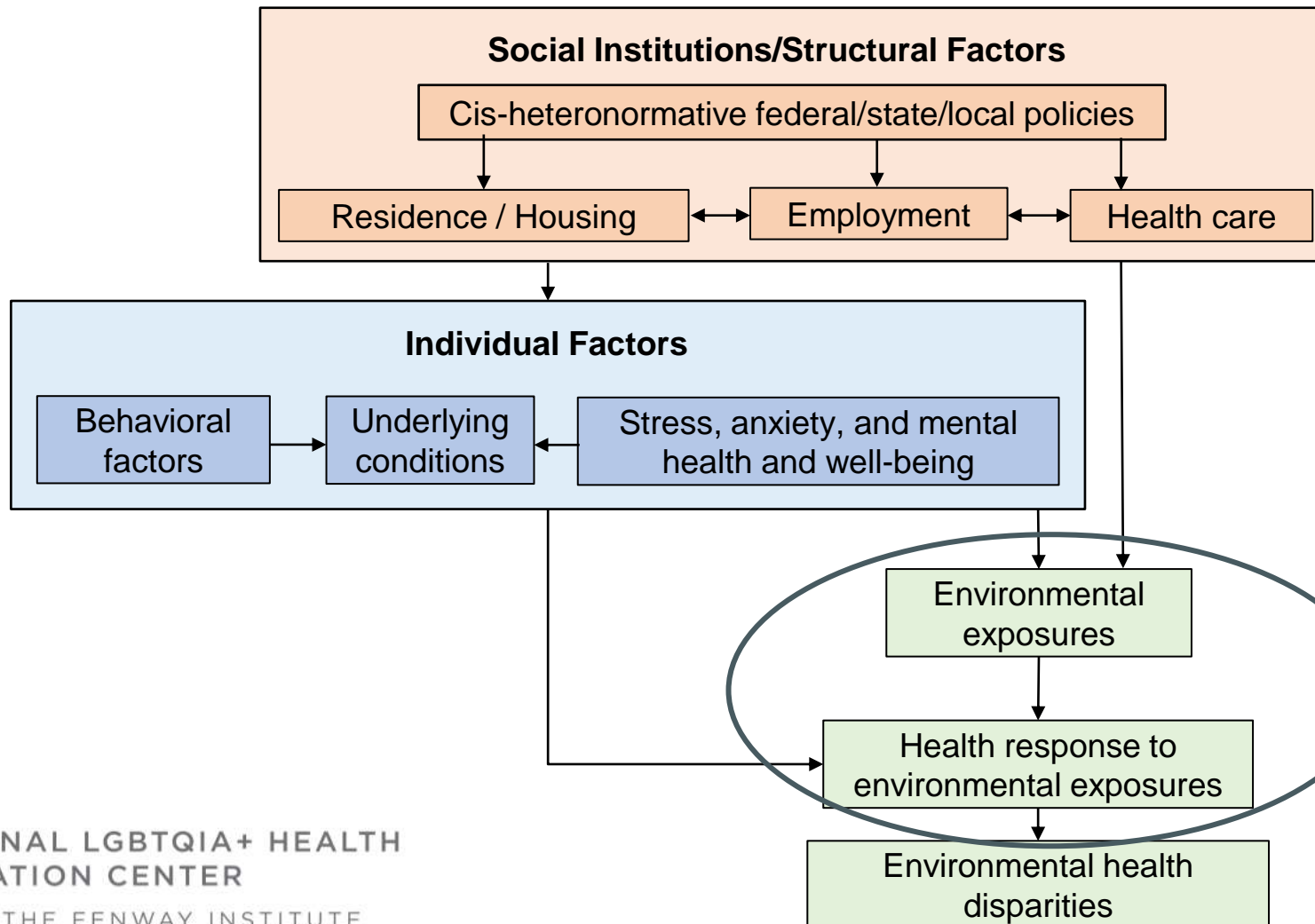
(Meyer 2003)



CONCEPTUAL FRAMEWORK FOR ENVIRONMENTAL HEALTH DISPARITIES FOR THE LGBTQ+ POPULATION (GOLDSMITH AND BELL 2021)

Racism

Colonialism



Sexism

Ableism

DISASTERS – FRONTLINE COMMUNITIES

- Black, Indigenous, and People of Color
 - Compounding oppression
 - Two-Spirit individuals also have to navigate colonization and loss of land
 - LGBTQ+ Asian individuals are most impacted by disaster displacement
- People with Disabilities
 - Medications may affect body temperature
 - Electronic medical devices

DISASTERS – HURRICANE HARVEY

- Destruction of already limited physical spaces, social networks, and support services
- Discrimination and violence within temporary emergency shelters
- Denied access to disaster relief services such as emergency housing, healthcare, and/or enrollment in food-for-work programs

DISASTERS – WILDFIRES (SABERI ET AL. 2023)

- Individuals with HIV/AIDS have been impacted.
 - Access to health care
 - Mental and physical health
 - Social and economic well-being
 - Nutrition and exercise



DISASTERS – WILDFIRES (ROMERO 2022)

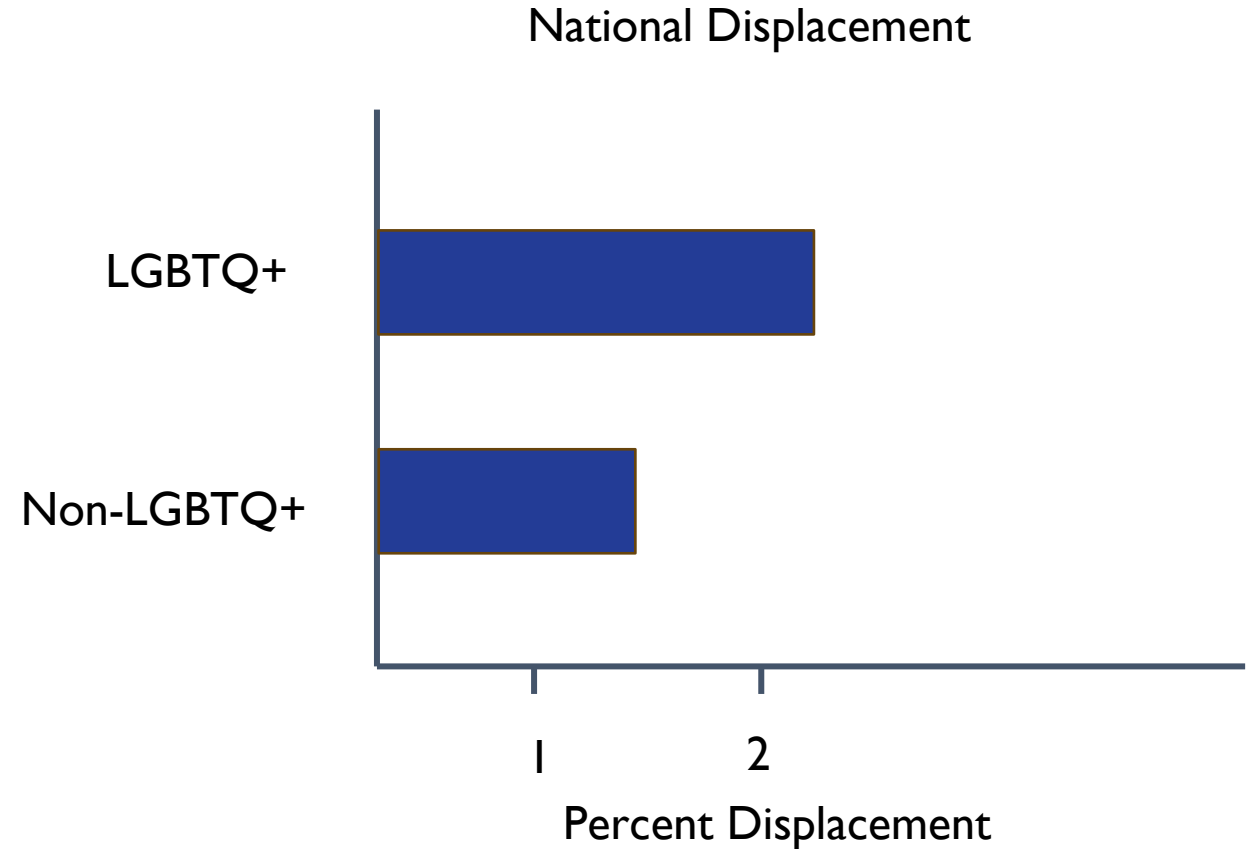
Mental Health Impacts

“But after four years of constant wildfire threat, the lingering pandemic, and discrimination as a queer person, Reyes says the thought of another fire is daunting. “I don't think I'm mentally prepared for another fire,” she said. “Neither my colleagues nor my trans group is prepared for another fire of the magnitude of the one that happened in 2017.” (Romero 2022)



DISASTER DISPLACEMENT (GEIGER ET AL. 2023)

- Nationally, LGBTQ+ individuals are more likely to be displaced due to disasters
- LGBTQ+ people of color and older adults are more likely to be displaced
- LGBTQ+ individuals are more likely to be impacted by tornadoes and wildfire compared to non-LGBTQ+ individuals
- Experience disproportionate impacts of water insecurity, unsanitary conditions, fear of crime, and social isolation one month after a disaster



DISASTERS – EXTREME HEAT

- Disproportionate homelessness in 2SLGBTQIA+ communities
- Fear of discrimination in shelters
 - Violence and discrimination
- Policing places these communities at higher risk for impact of extreme heat

*Transgender women are at disproportionate risk



DISASTERS – FLASH FLOODING

(GOLDSMITH AND BELL 2021;GOLDSMITH ET AL. 2022)

- Disproportionately impacts people experiencing homelessness, those with housing insecurity or basement housing, older adults, and those who are immunocompromised
- People living with HIV/AIDS are susceptible to opportunistic infections
 - Mold
 - Unclean water
- Older LGBTQ+ adults are more likely to experience social isolation
- Mental health impacts



Case

Tim is a 16-year-old transgender male presenting to the health center for worsening depression. He is accompanied by his pregnant 36-year-old mother. Tim has been on an antidepressant medication for a few years and is also in counseling. He reports worsening depression for several reasons, but mainly stress at school.

Tim wonders if adjusting the dose of his antidepressant medication would help. He reports excessive sweating as his only bothersome side-effect from the medication. He is also worried he will be unable to continue counseling due to barriers in access to transportation to the health center.

Tim and his mother live in an apartment building a few blocks off the highway in Denver, Colorado. They do not have an air-conditioning unit in their apartment. Tim works as a server at a local restaurant with outdoor dining.



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Case

1. What are Tim's underlying health and socio-economic risk factors?
2. What is Tim's experience interacting with healthcare and public health systems?
3. How can Tim experience worsening health impacts during extreme climate events like heat waves?

Case

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Climate Resilient Healthcare



Make a Heat Action Plan with Your Doctor



1 Stay Cool



Stay in the shade



Use a fan



Use an air conditioner



Check the CDC HeatRisk Dashboard for more information.

2 Stay Hydrated



3 Know the Symptoms

Unusually heavy sweating



Shortness of breath



Dizziness



Other signs can include headache, tiredness, weakness, and nausea.

4 Check Air Quality

Clear Day

High Pollution



5 Have a Medication Plan



Make a plan



Store in a cool place



Prepare for power outages

Medications that may interact with heat

ANTIDEPRESSANTS

SSRIs: Citalopram (Celexa), Escitalopram (Lexapro), Fluoxetine (Prozac), Paroxetine (Paxil, Pexeva), Sertraline (Zoloft)

SNRIs: Desvenlafaxine (Pristiq), Duloxetine (Cymbalta), Levomilnacipran (Fetzima), Venlafaxine (Effexor XR)

TCAs: Amitriptyline

ANTICHOLINERGICS

Benztropine mesylate (Cogentin)

Oxybutynin (Ditropan XL)

Diphenhydramine (Benadryl)

Benzotropine (Cogentin)

CENTRAL NERVOUS SYSTEM STIMULANTS

Armodafinil (Nuvigil)

Atomoxetine (Strattera)

Dextroamphetamine (Adderall, Dexedrine)

Amphetamine (Adderall)

Lisdexamfetamine (Vyvanse)

Methamphetamine (Desoxyn)

HEART MEDICATIONS

Diuretics: Furosemide (Lasix)

ACE inhibitors: Lisinopril, Captopril, Enalapril

ARBs: Candesartan (Atacand), Irbesartan (Avapro), Losartan (Cozaar), Olmesartan (Benicar), Telmisartan (Micardis), Valsartan (Diovan)

Beta Blockers, Calcium Channel Blockers

ANTI-PSYCHOTICS

Risperidone

Olanzapine

Quetiapine

Haloperidol

INSULIN

Heat can damage insulin, making it less effective.

Don't store in a hot place like a car or direct sunlight.

COMMONLY ABUSED SUBSTANCES

Alcohol

Cocaine

OSHA's Proposed Indoor and Outdoor Accommodations



Initial Heat Trigger (Heat Index of 80-89 Degrees)

Clubs would be required to provide:

- Cool Drinking Water
- Break Areas with Cooling Measures
- Indoor Work Area Controls
- Acclimatization Protocols for New and Returning Employees
- Paid Rest Breaks (if needed) to Prevent Overheating
- Regular and Effective Two-Way Communication

Hot Heat Trigger (Heat Index of 90+ Degrees)

Additionally, clubs would be required to provide:

- Mandatory Rest Breaks of 15 Minutes at Least Every Two Hours (Can count unpaid meal break as a rest break)
- Observation for Signs and Symptoms of Heat-Related Illness
- A Hazard Alert Reminder to Employees about Club's Heat Emergency Response Plan
- Visible Warning Signs in Indoor Work Areas with Temperatures that Regularly Exceed 120 Degrees



**MEDICAL NECESSITY
FORM**



Heat Alert Plan Guidance and Checklist Administrators

The purpose of this document is to identify actions our clinic will take to maintain situational awareness and maintain clinic operations during extreme heat events. The U.S. Environmental Protection Agency defines extreme heat events as periods of weather that are substantially hotter and/or more humid than typical for a given location at that time of year.

This Heat Alert Plan (HAP) should be implemented whenever the local weather forecast is above the average temperature for the time of year or an extreme heat event has been declared by the local weather forecasting agencies.

1. The Heat Alert Officer or designee is responsible for leading heat-planning and preparedness tasks.

The Heat Alert Officer can be a healthcare provider, qualified safety and health professional, or a manager. Assigning Primary and Alternate Heat Officer provides for continuity in case of staff absence.

The **Primary Heat Alert Officer** for our clinic is: _____

The **Secondary Heat Alert Officer** for our clinic is: _____

- a. The Heat Alert Officer will sign up for local wireless emergency alerts via local government notification system or other weather alert program (e.g., weatherUSA) and learn how to distinguish between the types/levels of heat alerts.

Heat Outlook: issued 3-7 days in advance of an anticipated excessive heat event to give advance notice of the possibility of excessively hot conditions.

Heat Watch: issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. The risk of a heat wave has increased but its occurrence and timing are still uncertain. Be prepared to activate emergency operations Heat Alert Plan.

Heat Warning: issued within 12 hours of the onset of extreme heat conditions.


ACTIVATE THE HEAT ALERT PLAN.

These criteria vary across the country, especially for areas not used to extreme heat conditions.

Consider using the OSHA/NIOSH Heat Safety Tool app to obtain the heat index for your zip code and an assessment of heat risk.

- b. Heat planning activities for the Heat Alert Officer also include assessing the facility.
 - i. Open vents early in the morning and early evening (when temperatures are generally cooler) for greatest ventilation at places with high foot traffic. Open windows and blinds if the temperature outside is cooler than the temperature inside the building.
 - ii. Ensure thermostats are working properly and accurately measuring temperature inside the clinic. If no thermostats in the clinic measure air temperature, have at least one mobile thermometer to assess air temperature.

2. Heat Alert Plan procedures are to be followed when an extreme heat event is declared by the local forecast agency.



Done	Task	Assigned to
✓	Inform the site manager of the extreme heat event declaration (i.e., Heat Warning).	Heat Alert Officer
✓	Use communications procedures identified in the EOP or other clinic communications plan to notify staff that an emergency alert was received. Methods of communication may include text messages to staff mobile phones or dissemination of an email.	Heat Alert Officer
✓	Check the local government sites (department of health) for information on activated cooling centers in the area, to know where to direct patients who need a cool location to go to. Consider posting a map of cooling centers for patients online or in the facility.	Heat Alert Officer
✓	Turn on fans/air conditioning units.	Front Desk Staff
✓	Turn off nonessential lights and electrical equipment (e.g., TV screens, printers, etc.) not in use, that generate heat.	Front Desk Staff
✓	Postpone non-essential tasks that involve high activity or heat exposure.	Clinic Supervisor
✓	Notify patients as needed if appointments need to be rescheduled. Work with clinicians to decide who may be too high risk to come to the clinic.	Front Desk Staff
✓	Consider telehealth for high-risk patients	Clinicians
✓	Consider working with local services to bring in high-risk patients who lack transportation.	Heat Alert Officer
✓	Check the condition of any medication or equipment that may be affected by extreme heat and relocate them as necessary.	Heat Alert Officer
✓	Provide instructions or heat informational resources to patients.	Clinicians Front Desk Staff
✓	In case of a power outage, refer to the Power Outage Guidance resource	Heat Alert Officer Facilities Manager
✓	Review power outage contingency plan for clinic. In the event power fails, plan to check air temperature in the clinic every 1-2 hours. Temperature should not exceed 86°F.	Heat Alert Officer Facilities Manager

1. *Climate Change and Extreme Heat Events, Centers for Disease Control and Prevention; <https://www.cdc.gov/climateandhealth/pubs/climatechangeandextremeheatevents.pdf>*

2. *<https://www.cdc.gov/niosh/topics/heatstress/heatapp.html>*

Climate Smart Healthcare

US Healthcare Emissions

8.5% of total US greenhouse gas emissions

If the US healthcare sector was a country, we would be the 13th worst offender

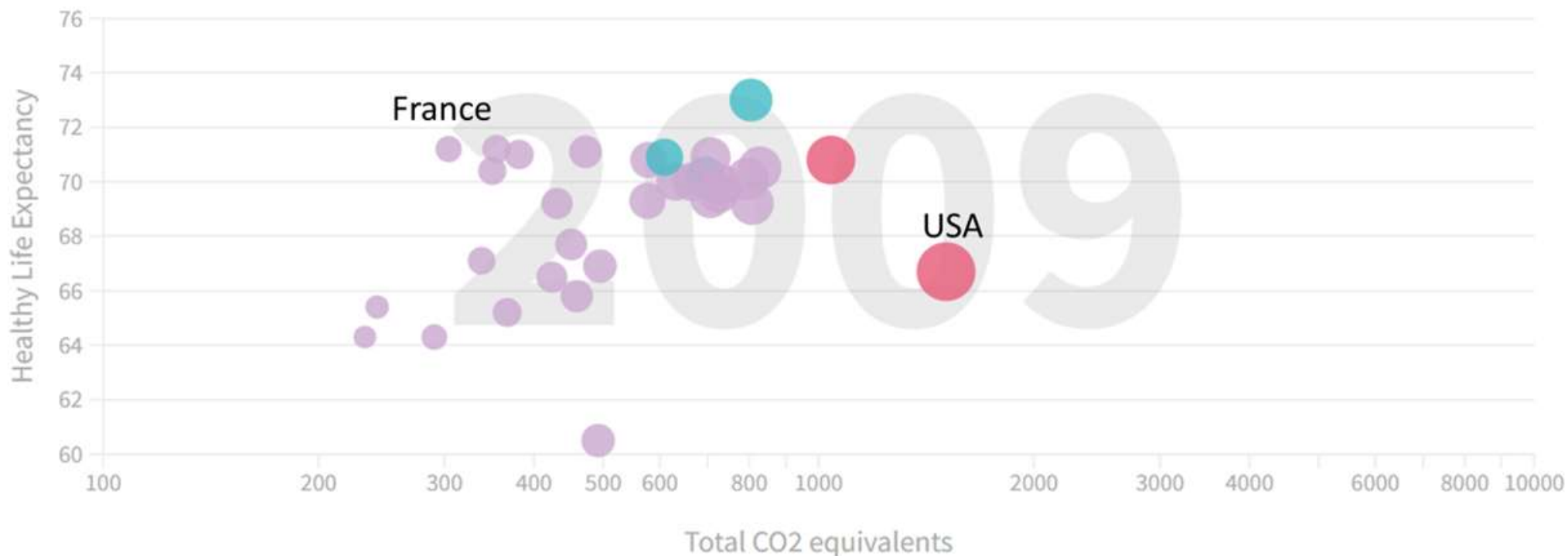


Healthcare Sector Greenhouse Gas Emissions

Per capita carbon footprint, in CO₂ equivalents (Kg CO₂ eq), of different health systems around the world, as compared to their Healthy Life Expectancy at birth

HDI Group: **Very High** 2009

WHO Region: ● South-East Asia ● Americas ● Western Pacific ● Europe



Please reference the 2022 Report of the Lancet Countdown if using this data •

For a full description of the indicator, see the 2022 report of the Lancet Countdown at lancetcountdown.org



What's the harm?

- GHGs and other air and water pollutants impact public health.
- In the US, estimated at nearly 400k disability-adjusted life-years.
- **Similar in scale to damages from preventable medical errors.**



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NHS: Carbon Hotspots by Healthcare Sector

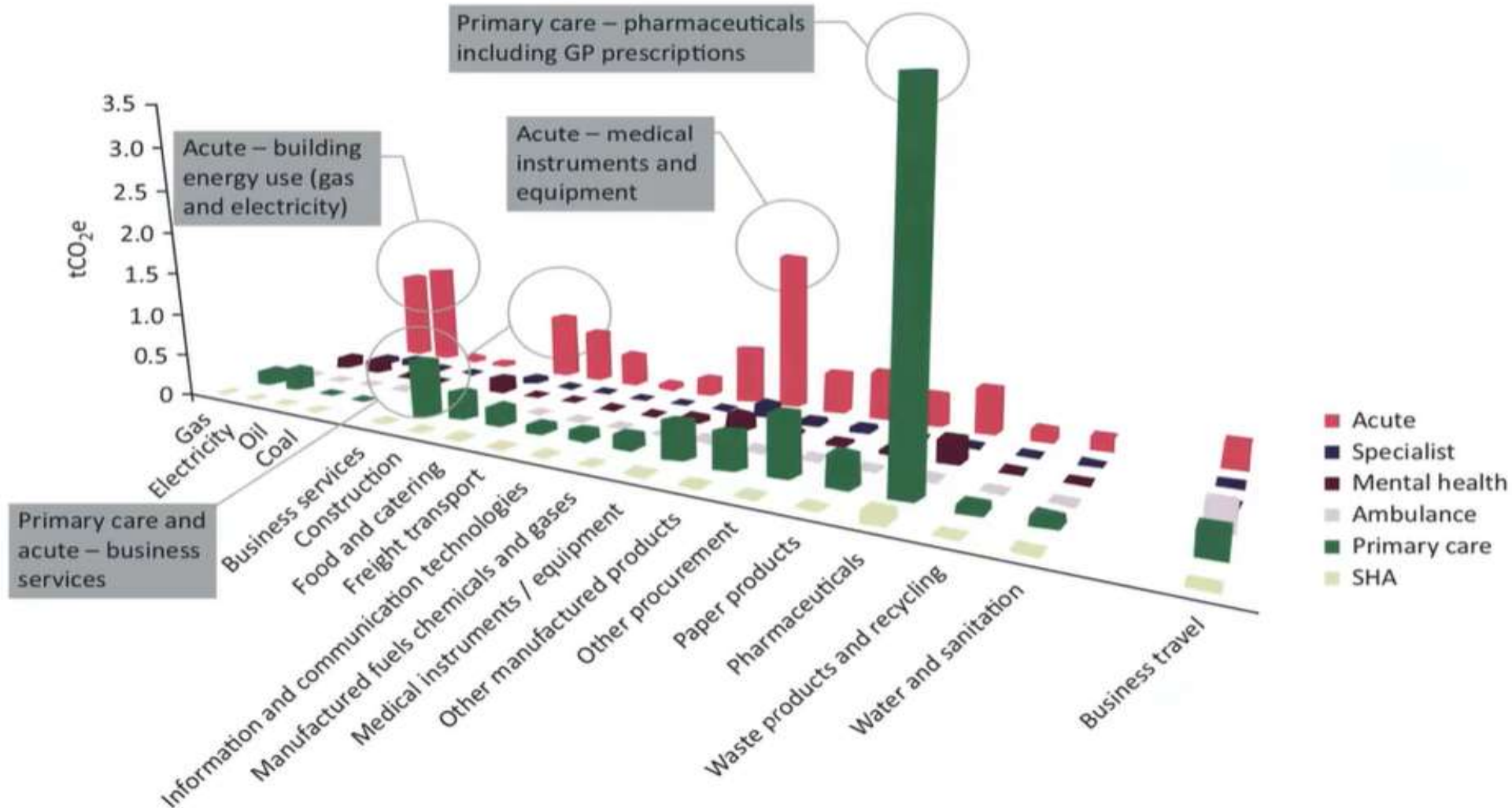


Fig 4. Goods and services carbon hotspots by healthcare sector. Source: Goods and services carbon hotspots. NHS Sustainable Development Unit, 2012.¹⁰

Re: 10:10 d with permission. SHA = strategic health authority

2021 Ranking of Air Pollution Relative to Other Leading Risk Factors for Global Mortality

Global Risk Factors for Death		
Rank	Total Global Population	Children Under 5 Years
1	High Blood Pressure	Malnutrition
2	Air Pollution	Air Pollution
3	Tobacco	Water, Sanitation and Hygiene (WaSH)
4	Diet	High or Low Temperature
5	High Fasting Plasma Glucose	Tobacco

Reference: Institute for Health Metrics and Evaluation (IHME). Global Burden of Disease 2021: Findings from the GBD 2021 Study. Seattle, WA: IHME, 2024.

Choosing Wisely & Climate Action

Reducing unnecessary tests, treatments and procedures is an opportunity to benefit both patients and the planet.



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