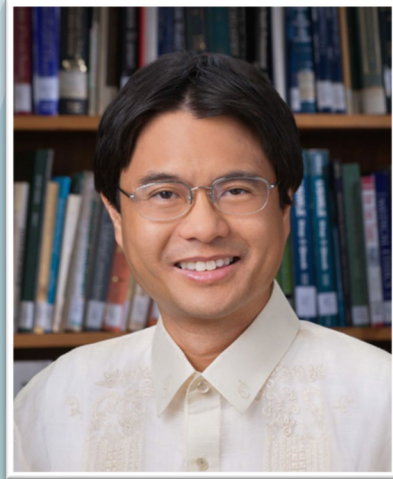


Climate Change and Mental Health



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Overview: Climate Change and Mental Health

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Objectives

By the end of this presentation, participants will be able to:

1. Identify at least three mental health impacts of climate change.
2. Describe how climate change links with other significant threats to health and mental health, including pandemics, inequalities/injustices
3. Describe at least two concrete actions that mental health and other professionals can take to address climate change and its impacts.

- 
- ▶ Regional urgency
 - ▶ The future is now
 - ▶ Disclosures: none; no discussion of off-label medication use

Major references

- ▶ Coverdale J, Balon R, Beresin EV, Brenner AM, Guerrero APS, Louie AK, Roberts LW. Climate Change: A Call to Action for the Psychiatric Profession. *Acad Psychiatry*. 2018 Jun;42(3):317-323. doi: 10.1007/s40596-018-0885-7. Epub 2018 Feb 16. PMID: 29453644.
- ▶ Pinsky E, Guerrero APS, Livingston R. Our House Is on Fire: Child and Adolescent Psychiatrists in the Era of the Climate Crisis. *J Am Acad Child Adolesc Psychiatry*. 2020 May;59(5):580-582. doi: 10.1016/j.jaac.2020.01.016. PMID: 32340687.
- ▶ Guerrero APS, Fung D, Suaalii-Sauni T, Wiguna T. An update to "Care for the seafarers: A review of mental health in Austronesia," with specific recommendation to address climate change. *Asia Pac Psychiatry*. 2020 Jun;12(2):e12375. doi: 10.1111/appy.12375. Epub 2019 Nov 17. PMID: 31736235.

Psychiatry's call to action

- ▶ American Psychiatric Association (APA) position statement (2017):
climate change “poses a threat to public health including mental health. Those with mental health disorders are disproportionately impacted by the consequences of climate change.”
- ▶ The American Association of Community Psychiatrists has similarly recognized the disproportionate burden of climate change on vulnerable populations including those with mental illness
- ▶ *Academic Psychiatry* editorial

The reality of climate change

- ▶ Per the Intergovernmental Panel on Climate Change (IPCC): leading meteorologists and climate scientists from 195 countries
- ▶ 95% certainty that human activity is the main cause of climate change mediated by increased levels of greenhouse gases (e.g., CO₂, methane, nitrous oxide)
- ▶ Fossil fuel combustion and industrial processes are the major contributors to rising greenhouse gas emissions and are driven by population and economic growth



HALFWAY THROUGH PHILIPPIANS 2,
REVEREND PAUL MATTHEWS REALIZED
HE WAS PREACHING TO THE CHOIR.

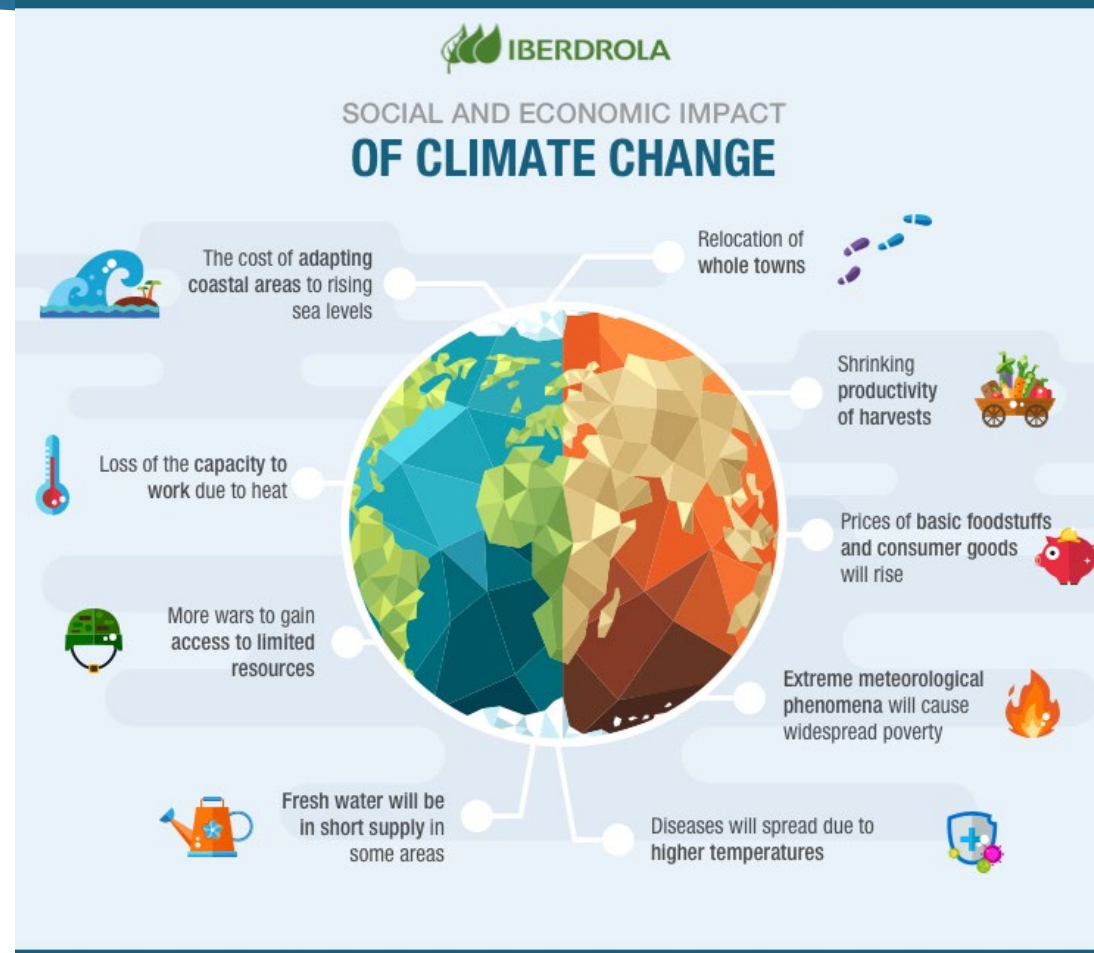
Human and health impacts of climate change

- ▶ Per the World Health Organization: between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year from malnutrition, malaria, diarrhea, and heat stress
- ▶ The planet is currently in the midst of a mass extinction episode due to climate disruption, habitat loss, overexploitation, pollution, and other factors; the decimation of vertebrates and the biological annihilation of nature will have serious consequences

Human and health impacts of climate change

- ▶ Floods → acute drowning or trauma; injuries, fecal-oral diseases, and vector and rodent-borne diseases
- ▶ Drought → nutrition-related effects, water-related diseases, airborne and dust-related diseases, and vector-borne diseases, deaths associated with heat waves and wild fires
- ▶ Other impacts on child health: heat stress, decreased air quality, altered disease patterns of some climate-sensitive infections, physical consequences of weather disasters, and food, water, and nutrient insecurity

Difficult to imagine any part of life NOT affected by climate change



Mental health impacts

- ▶ Global warming → damage to the infrastructure, migration, conflict and violence, and stress on healthcare systems.
- ▶ Physical environment impacts → increased smoke or dust, plant disease and infestations → mental health impacts
- ▶ Climate change → Anxiety, fear and distress, and even existential angst

Examples of specific mental health impact pathways

- ▶ Floods → PTSD, anxiety, and depressive disorders; bereavement; substance use; family disruption; homelessness; loss of social support and protection; looting and violence.
- ▶ Drought → displacement and victimization; suicide risk.
- ▶ Hotter temperatures → increased rate of death in patients with psychosis, dementia, and substance use.

Worsening of disparities

- ▶ Worse impacts for the homeless, the mentally ill, children, and the elderly
- ▶ Loss of systems of care, particularly those that provide mental health.

Permanent loss of land can contribute to cultural trauma.

Saltwater Intrusion Destroys Crops

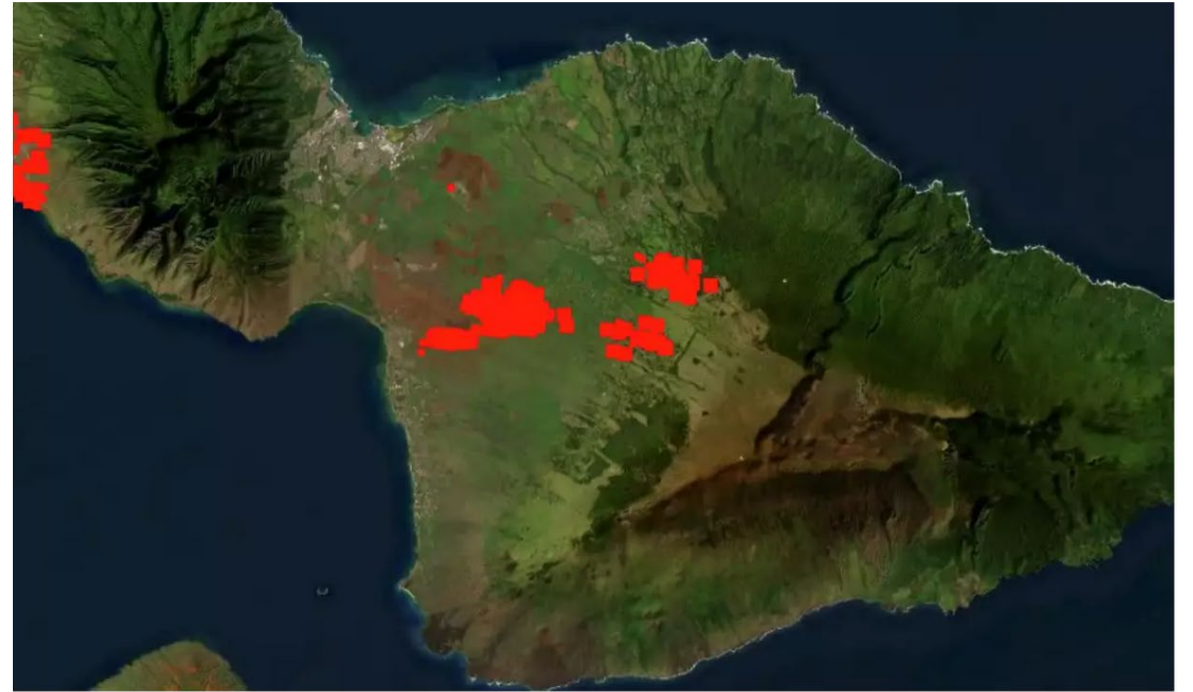


Regional urgency

- ▶ Small Pacific Island countries urgently face multiple health impacts of elevated temperature, altered rainfall, and more severe extreme weather events (e.g., tropical storms), ocean acidification, and rising sea levels
- ▶ Climate-related health adversities are not just limited to islands, as heavily populated mainland Southeast Asia is also vulnerable to extreme weather events, undernutrition, infectious diseases, and premature death



In solemn remembrance: Lāhainā, Maui wildfire, August 8, 2023



A map from NASA shows the locations of the Maui wildfires on Aug. 9, 2023.
NASA via screenshot



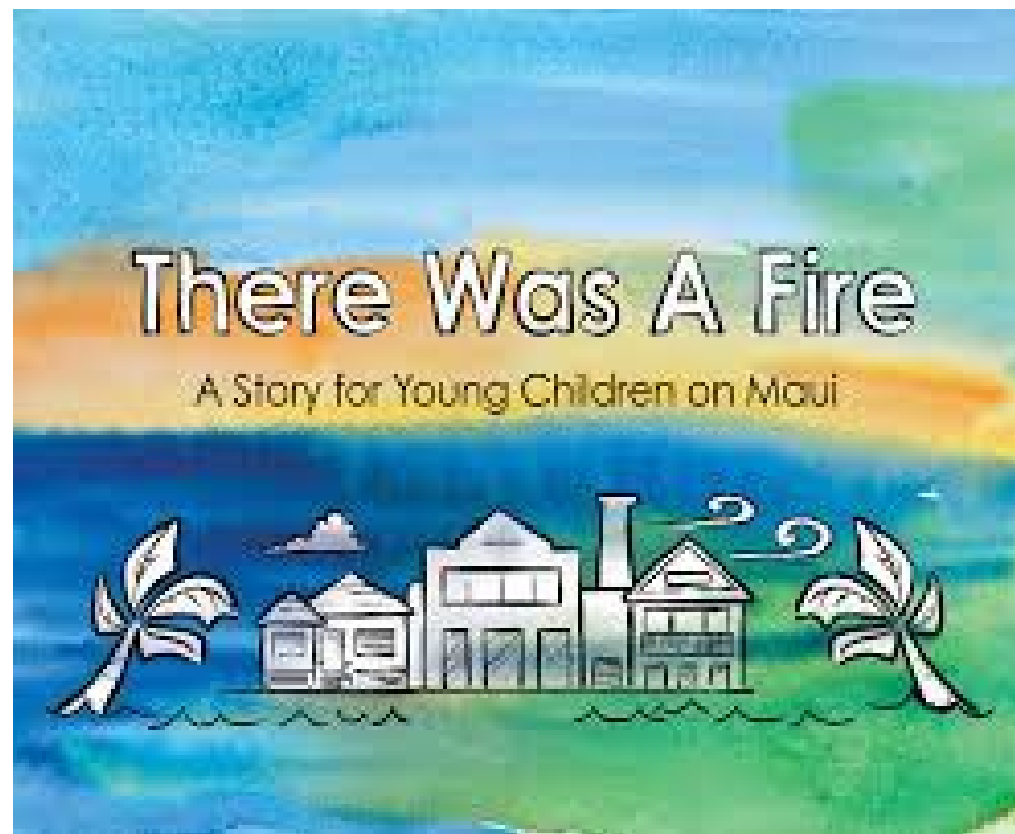
Taparra K, Purdy M, Raphael KL. From Ashes to Action - Indigenous Health Perspectives on the Lāhainā Fires. N Engl J Med. 2023 Oct 26;389(17):1543-1546. doi: 10.1056/NEJMp2309966. Epub 2023 Sep 20. PMID: 37733295.

- ▶ Lāhainā: “cruel sun”
- ▶ Western capitalistic farming practices diverted water from Lāhainā and Native Hawaiian communities to plantation-controlled lands and luxury estates
- ▶ As economy shifted from farming to tourism, plantation lands were overgrown by invasive, unkept, and highly flammable grasses
- ▶ Need restoration of stewardship of land and water resources
- ▶ “*a‘ole e ‘ōlelo mai ana ke ahi ua ana ia*”: “fire will never say that it has had enough.”

Caring for the planet...



Listening to children...



Hawai'i Workforce Data (Withy et al, 2023)

https://www.ahec.hawaii.edu/wp-content/uploads/sites/16/2021/12/act18-sslh2009_2024_physician-workforce_annual-report-2.pdf

Specialty (Other)	Demand	Supply	Difference	W/o overage	% Shortage
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Hawaii County

Adult Psychiatry**	37.7	10	27.7	27.7	73%
Child/Adolescent Psychiatry**	5.7	1.7	4	4	70%

Honolulu County

Adult Psychiatry**	152	109.5	42.5	42.5	28%
Child/Adolescent Psychiatry**	51.4	32.2	19.2	19.2	37%

Kaua'i County

Adult Psychiatry**	13.2	3.5	9.7	9.7	73%
Child/Adolescent Psychiatry**	2.1	1.9	0.2	0.2	10%

Maui County

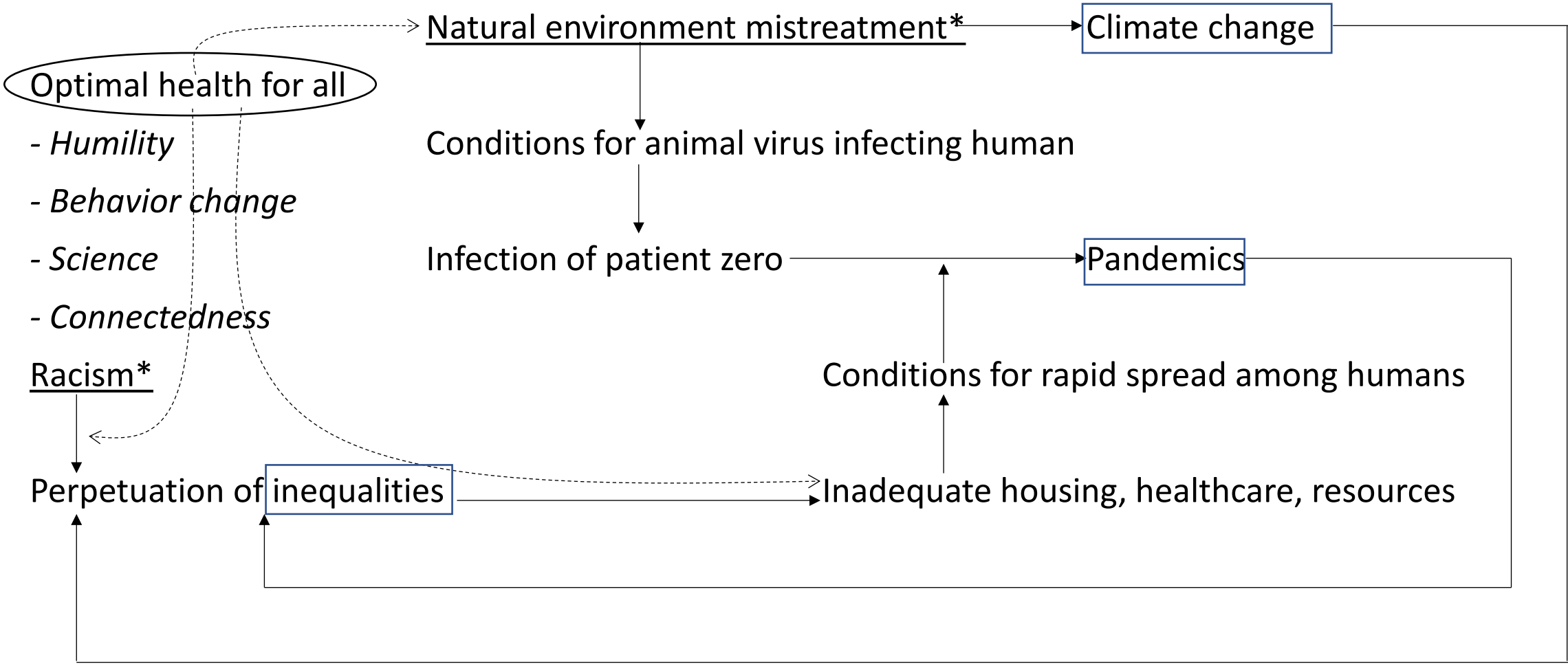
Adult Psychiatry**	25.5	10.4	15.1	15.1	59%
Child/Adolescent Psychiatry**	10.2	2.3	7.9	7.9	77%

Statewide

Adult Psychiatry**	228.4	133.4	95	95	42%
Child/Adolescent Psychiatry**	69.4	38.1	31.3	31.3	45%



Addressing climate change is the pathway towards addressing other major concerns for our future



Support of professional societies

- ▶ American Medical Association
- ▶ American Psychiatric Association
- ▶ American Psychological Association
- ▶ Royal College of Psychiatrists
- ▶ The Canadian Medical Association has fully divested from fossil fuels

Mechanisms of support

- ▶ legislative policies, sustained multicomponent media and educational campaigns, routine primary care education and counseling, and governmental and nonprofit advocacy
- ▶ CARE model: clinical, administrative, research, and educational

CARE model

- ▶ Clinical
 - ▶ Consider carbon footprint of various treatments
 - ▶ Foresight and planning for vulnerable populations and vulnerable localities
- ▶ Administrative
 - ▶ Turn off electronic devices at the end of each day, reset thermostats, and replace old incandescent light bulbs with energy efficient bulbs
 - ▶ Reduce and recycle waste, seek out renewable energy solutions
 - ▶ Communicate with patients digitally, minimize/optimize the airplane and motor vehicle travel required to deliver clinical services

IMPORTANT FOOTNOTE: many of these recommendations were published pre-COVID-19

Important fact

- ▶ The health care sector is responsible for almost 10% of the total greenhouse gas emissions in the United States.



CARE model

- ▶ Research
 - ▶ Mental health impacts, public health interventions, psychosocial treatments
- ▶ Educational
 - ▶ Behavioral change theory
 - ▶ Curricular hardwiring, disaster-based curriculum for both residents and faculty; inclusive of identifying and preventing risk; supporting caregivers
 - ▶ Optimized use of distance-learning activities, including meetings and collaborations

We need to be prepared

- ▶ To address climate-related mental health impacts
- ▶ To care for a growing population of climate migrants, in the face of homelessness or displacement (temporary or permanent).

Standard history taking

- ▶ Current living situation
- ▶ Recent or anticipated moves and reasons for relocation
- ▶ How food, water, and other life essentials are obtained
- ▶ Family traditions impacted by the changing environment.

Care for eco-anxiety, despair, or grief

- ▶ Cannot rely on cognitive restructuring around catastrophic thinking, as the threat is real, and approaching climate-related anxiety as pathological risks alienating patients
- ▶ The approach may be analogous to the approach to a serious illness, with realistic fear of pain, of uncertainty, of new disability, and of death.
- ▶ As the providers share the same vulnerabilities, helping our patients means that we must control our own anxiety, reject defeatism, confront our contribution to the problem, and alter our own behaviors

Remember

- ▶ “Despair about climate change is as dangerous as denial about climate change: both lead to inaction”
- ▶ “We owe our patients the courage to reject both denial and despair and to contribute to solutions”

Other resources

- ▶ Climate Psychiatry Alliance www.climatepsychiatry.org Information on and advocacy related to mental health
- ▶ My Green Doctor www.mygreendoctor.org Free practice management tool for medical offices working toward sustainability

Thank you!



MIKE LUCKOVICH 
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Climate Change & Mental Health

TROY FREITAS

BRANCH CHIEF, OAHU COMMUNITY MENTAL HEALTH CENTER BRANCH
DEPARTMENT OF HEALTH

What's important to remember?

- Successful engagement requires good listening skills.
- Power of purpose , connection and culture.
- Acknowledge the “Knowledge-action gap.”
- Be present, be consistent, compassionate & mostly – be authentic.
- Embody what you teach – teach what you embody.
- Self care, be useful/serve others, resilience, bravery, courage, good boundaries.
- Love/Aloha/Ohana – “You’re not alone.”



Culture

Cultural intelligence?

Cultural humility?

Cultural Awareness?

Others?

Which one do I learn?



Stage of Change?

Listen to understand.

Be curious, not judgmental.



What, who,
where do you
value?

Do you value doing things outside?



Values

Children



Values

Friends?



Values

Fresh food?



Values

Picnics at the beach?



Values

Family?



Values/Purpose

Family



Connection

Colleagues



Connection

How we get through prolonged grief is through connection.

It's through meaning and it's through choosing to say my grief will not define me.



Knowledge- Action Gap

What do you want to do?

Where do you want to do it?

How often do you want to do it?

When do you want to do it?

Who do you want to do it with?

Things to consider:

Nobody changes as a result of being made to feel bad about doing something.

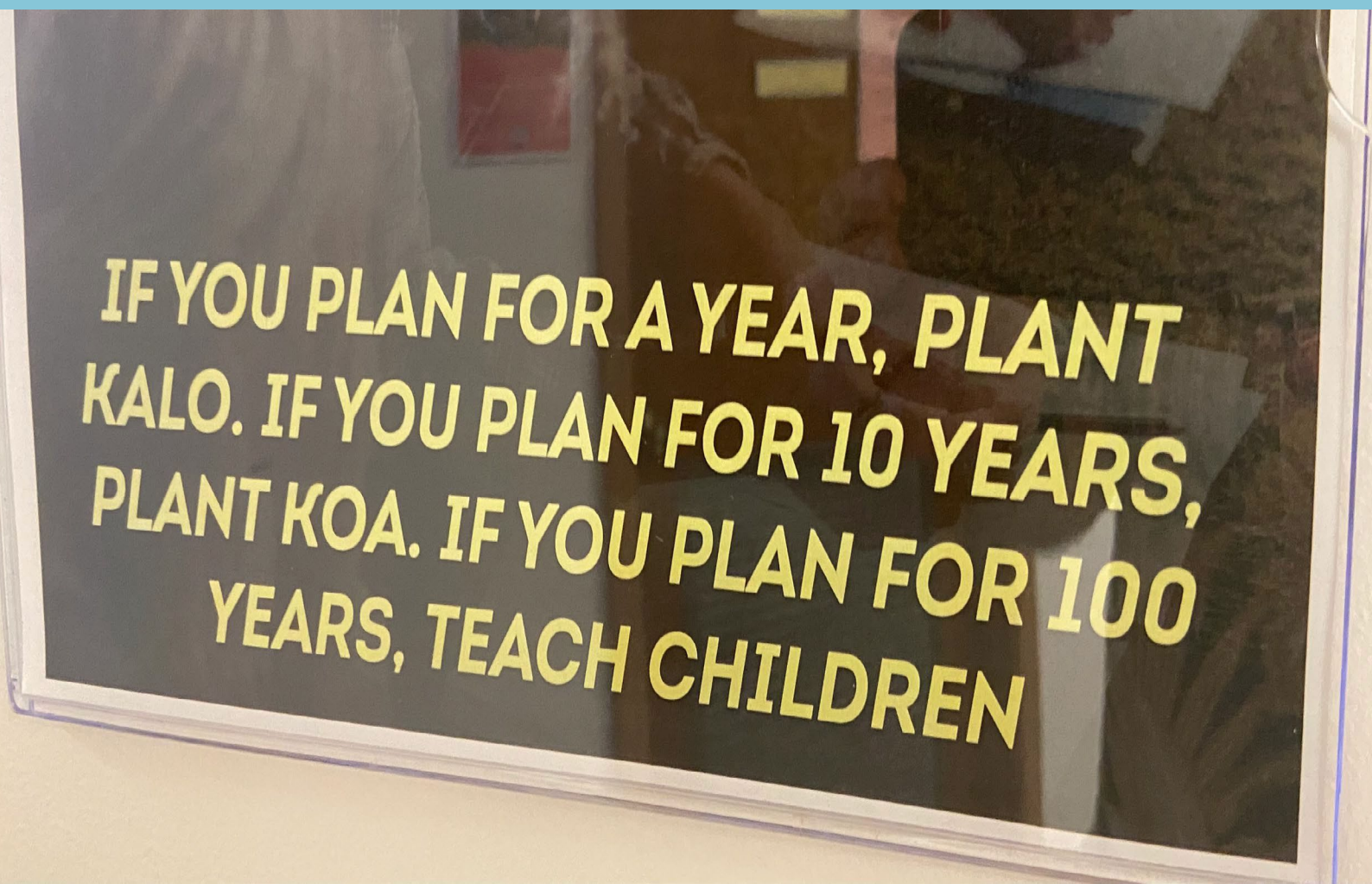
Acknowledge the Knowledge-Action Gap.

Consider learning Motivational Interviewing techniques.

Learn psychological first aid (PFA) and Skills for Psychological Recovery (PSR).

The effect
you have on
others is the
most
valuable
currency
there is.

More things to
remember....

A photograph of a sign mounted on a wall. The sign has a black background with yellow text. The text is in all caps and reads: "IF YOU PLAN FOR A YEAR, PLANT KALO. IF YOU PLAN FOR 10 YEARS, PLANT KOA. IF YOU PLAN FOR 100 YEARS, TEACH CHILDREN". The sign is slightly tilted to the right. The background of the photo shows a person's arm and a door.

**IF YOU PLAN FOR A YEAR, PLANT
KALO. IF YOU PLAN FOR 10 YEARS,
PLANT KOA. IF YOU PLAN FOR 100
YEARS, TEACH CHILDREN**

Mahalo!

Ho‘omākaukau!

What are you going to do?