Bree Collaborative | Health Impacts of Extreme Heat
April 10th, 2024| 3-4:30PM
Hybrid

MEMBERS PRESENT VIRTUALLY

Yonit Yogev, MRC
LuAnn Chen, CHPW
Brad Kramer, PHSKC
Kelly Naismith, DOH
Kumara Raj Sundar, KP
Stefan Wheat, UW CHanGE
Brian Henning, Gonzaga Institute
June Spector, L&I
Seth Doyle, NWRPCA
Jessica Symank, WSHA

STAFF AND MEMBERS OF THE PUBLIC

Beth Bojkov, MPH, RN, Bree Collaborative
Emily Nudelman, DNP, RN, Bree Collaborative
Karie Nicholas, MA, GC, Bree Collaborative
Charline
Tessa Cheung
Cora Espina, NP, CDES

WELCOME

Beth Bojkov, Bree Collaborative, welcomed everyone to the Bree Collaborative Members who were unable to attend last month introduced themselves to the group.

Motion to approve March meeting minutes: motion approved.

Beth then provided an update on potential speakers for the group:

- McKenna Parnes, PhD, offered to join the workgroup on May 8th and provide resources on climate change and mental health, mostly focusing on youth. Dr. Wheat recommended Jennifer Atkinson as an additional speaker who has researched the impact on adults.
    - LuAnn: is this related to severe weather events and school closures?
        - Beth: Don't believe so, that might be a factor in it.
- David Hondula from City of Phoenix – potentially come speak about their heat action plan for the city.
- Mary Jo Ybarra-Vega – Quincy Community Health Center:
    - Seth: "Mary Jo Ybarra Vega is awesome and glad to know you've reached out to her! I also recommend Julie Postma at WSU. She's done a lot of work/research with farmworkers and was named one of NIH's Climate and Health Scholars for 2024."

FOCUS AREA: DATA AND MEASUREMENT

Beth reviewed the final focus area Data & Measurement, including looking at using data to identify individuals that are vulnerable to extreme weather, data sharing strategies between delivery systems and public health systems, and defining and solving new data needs: underdiagnosis, misclassification of heat and/or wildfire smoke related illness. The subcommittee will mostly be taking on talking about these topics and presenting material back to the workgroup.

- Brad: When is the subcommittee meeting?

- Karie: meet before this meeting each month until September, can send invitation and you may pass it along to whoever you would like.

EVIDENCE REVIEW: CLINICIANS

Beth began walking through evidence and resources for clinicians. She then presented how she identified resources, including relying heavily on articles or resources that already have compiled actions for clinicians.

- Karie: if this group is able to prioritize some of the low-hanging fruit that would have the most impact and have a way to measure that impact, that would be the most implementable guideline to produce from this group.

Sokas R. K., Preventing Heat-related illness among outdoor workers – opportunities for clinicians and policymakers.

- This article reviews risk factors for heat-related illness among outdoor workers and outlined where clinicians can intervene.
- PCP can identify people whose work may expose them to heat, review history for risk factors and how they can respond to exhaustion. For clinicians that work more closely with outdoor workers, the migrant clinician's network has more information.
- Stafan - EM management: "Rublee C, Dresser C, Giudice C, Lemery J, Sorensen C. Evidence-Based Heatstroke Management in the Emergency Department. West J Emerg Med. 2021 Feb 26;22(2):186-195. doi: 10.5811/westjem.2020.11.49007. PMID: 33856299; PMCID: PMC7972371."
    - Really important to have pre-hospital healthcare identify and start initial management of these patients, because the earlier treatment is started the better the outcomes.
- Stefan – EM management: "Monseau AJ, Hurlburt GA, Balcik BJ, Oppenlander KE, Chill NM, Martin PS. Status of US Emergency Medical Service Protocols Regarding Pre-Transfer Cooling for Exertional Heat Stroke. Cureus. 2021 Nov 12;13(11):e19505. doi: 10.7759/cureus.19505. PMID: 34912642; PMCID: PMC8666133."

Sorenson et al – Defining Roles and Responsibilities of the Health Workforce to Respond to the Climate Crisis

- Article provided by Jeff Duchin – breaking out core responsibilities by primary, secondary and tertiary prevention
- Primary – climate mitigation: efforts to slow, stabilize, or reverse climate change by reducing greenhouse gas emissions
- Secondary prevention: climate adaptation - changes in processes, practices, and structures to moderate potential damages to human health
- Tertiary prevention: climate adaptation - reducing cascading health burdens once both short- and long-term climate impacts have occurred.
- Stefan added resources regarding public health strategies for climate change:
    - "Hess JJ, Errett NA, McGregor G, Busch Isaksen T, Wettstein ZS, Wheat SK, Ebi KL. Public Health Preparedness for Extreme Heat Events. Annu Rev Public Health. 2023 Apr 3;44:301-321. doi: 10.1146/annurev-publhealth-071421-025508. Epub 2023 Jan 6. PMID: 36608344."
    - "Errett NA, Hartwell C, Randazza JM, Nori-Sarma A, Weinberger KR, Spangler KR, Sun Y, Adams QH, Wellenius GA, Hess JJ. Survey of extreme heat public health preparedness plans and response activities in the most populous jurisdictions in the United States. BMC Public Health. 2023 May 3;23(1):811. doi: 10.1186/s12889-023-15757-x. PMID: 37138325; PMCID: PMC10154751."

- Karie: does this article refer to statewide or local public health?
    - Beth: read it as the responsibilities apply to both local and state.
    - Brad: agree
- Beth asked if the group would like to adopt this framework, and how to frame what clinician and public health responsibilities are through our work.
    - Kelly and Stefan agree with the general framework but need to review the full list of individual guidelines to come with a clear understanding of whether to adopt them fully.
    - June: "I do think this is helpful given our prior conversations in this group to clarify the the workgroup's scope w/r/t healthcare but acknowledging the interface with public health activities"
    - Brad: do think this article resonates with me, think this kind of approach is beneficial.
        - Companion articles: https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2816682
        - https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2816690
    - Brad: good general reference to add: Kearl Z, Vogel J. Urban extreme heat, climate change, and saving lives: Lessons from Washington state. Urban Clim. 2023;47:101392. doi:10.1016/J.UCLIM.2022.101392
- Action: send the article to the full group to identify whether they would like to adopt this framework and the idea of adopting the individual guidelines

Beth also reviewed the list of agents/substances that might increase risk of heat-related illness, and Beth asked the clinicians on the call to comment if there are some missing.

- LuAnn: for people on diuretics, heat increases risk of electrolyte disturbances.
- Raj: suspect this will be incomplete, there are so many medications and so many coming out. I don't see NSAIDS on here, so anything that can worsen secondary causes of illness just to call that out. But I think generally categories would be helpful.
- Stefan: think this is a good starting point – this Yale group has a good list of medications that don't just worsen heat-related illness but that will be limiting effectiveness.
- Raj: there are some meds that are higher risk than others, such as diuretics. There are lots of meds that could interact.
- Stefan: don't want to give recommendations that any medication be halted in a heat wave, but that if you are at risk and on these medications that individuals should have conversations with their providers and know the signs of heat-related illness so they can be more aware and make a change as needed.
- Raj: even a categorization of high, med and low risk medications might be useful. Definitely thing part of this group could be prioritizing medications to reduce.
- Brad: a tiered system would be super helpful for public health when trying to identify people that are on medications that might be at higher risk
- LuAnn: they left out prescription opioids on the list of medications.
- June: "Maybe different approaches depending on the audience: 1) for healthcare providers, encouraging a process of thinking through meds with respect to mechanisms that could dehydrate, inhibit cooling, generate metabolic heat, etc., rather than specific meds (I don't think there's a lot of evidence for every specific med); 2) for patients/communities, perhaps guidance to talk with healthcare provider if possible for a risk assessment + a triaged list by categories of potential severity as discussed could be helpful."
- Stefan: in my experience, some ERs don't always have the right systems in place to respond effectively to severe heat-related illness, like heat alert pathways and cold water immersion.

    - For heat exhaustion and mild heat stroke, the most useful intervention we have is evaporative cooling and infection prevention prevents having fans in the ED, we would have to have single use fans and throw them out afterwards, and that ends up being cost prohibitive and wasteful.
- Beth: this article broke out different strategies for groups at risk, including athletes and

Philipsborn et al. Pediatrician's guide to climate change-informed primary care. Current problems in pediatric and adolescent health care.

- This resource is a broader primary care related resource that focuses on pediatricians but can be more broadly applicable to any providers. The highlight some roles of primary care as:
    - Screening protocols including structural determinants of health and climate risks (food security, water source, housing security and safety, energy security, depression and anxiety)
    - Health promotion including health and planetary benefits.
    - Care for all children considering and anticipating climate risks (e.g., children with complex medical conditions and disasters, those participating in sports and extreme heat, children with asthma and allergies and poor air quality and pollen)
    - Anticipatory guidance informed by climate change (e.g., never leave children unattended in vehicles, heat and sun safety, street safety, accessing public health alerts, prevention of vector borne diseases and emerging harms)
    - Community resource network and referral plans are in place and center patient concerns.
- They also had practical recommendations for integrating climate change into the flow of pediatric primary care visits.
    - Stefan: Giving clinicians a concrete idea of where these kinds of recommendations could be in the clinical visit would be useful.
    - Stefan: climate communication guide published from George Mason University, evidence based strategies for clinicians: https://www.climatechangecommunication.org/all/toolkit-for-health-professionals-on-communicating-about-climate-change-and-health/#:~:text=The%20toolkit%20provides%20comprehensive%20resources,engage%20with%20various%20stakeholders%20effectively.
- Dr. Sundar – resource to educate people on the impact of humidity and interaction with heat-related illness : https://www.aafp.org/pubs/afp/issues/2019/0415/p482.html
- Brad: heat risk tool just created by NWS, and it is now being used by KC health department. That tool is more responsive to appropriate conditions, like heat that is out of the ordinary for a
    - KC has been collaborating with Vancouver department of health on webinar series on the impact of the heat dome, so it might be useful to invite them to speak if the group is interested.
    - Americares has collaborated with Harvan Chan SPH to put together toolkits for providers, including a heat action plan template.
- June: "Re federal/US tools -- it may be useful as well to think about regional weather (generally not as humid in WA as other regions of the US) as well as populations from which models were developed/validated (e.g., NOAA HeatRisk developed for general population but may not be as applicable to outdoor workers) when developing/articulating recommendations."
    - Guidelines are Washington state specific, so want to make sure the things we are proposing are well adapted to Washington state.
    - Brad: that's where it might be helpful to have NWS, there is some local context – getting some more understanding of that would be useful

- Jessi: think this tool can be useful and easy to understand for the general public as well as clinicians.
- Brad: To make the report sustainable, we might want to just say refer to local public health agencies or state agencies for activation around heat risk, so this is probably a conversation we come back to.

DRAFT GUIDELINES: CLINICIANS

Beth reviewed some draft guidelines for clinicians for the group's reaction. The guidelines were as follows:

- *Identify patients that are vulnerable to extreme heat and/or wildfire smoke*
- *Counsel patients and families on their increased risk related to heat and/or smoke*
  - *Ensure culturally sensitive and linguistically inclusive messaging*
- *Provide anticipatory guidance to patients on how to prepare for extreme weather and how to prepare for extreme weather and how to prevent negative health impacts of heat and wildfire smoke. Create a heat and wildfire smoke action plan with patients and families.*
- *Document risk factors, counseling and heat/wildfire smoke action plan in the medical record.*

Comments:

- Brian: Dean of research at WSU is interested using MyChart system to send customized guidance to those at-risk sending guidance to be useful - curious if people have thoughts on that path as a way to provide info to patients.
- Stefan: I'm involved with a group of researchers internationally interested in using language models and AI to collate meteorologic data and SDOH data to say on any given day that there is an extreme weather event coming that EMRs could prompt clinicians to discuss increased risk with patients, and/or could include a message to patients in their EMR. Think this topic might be outside of scope of this group but could be something to explore later.
- Raj: those most easy to reach through MyChart or EMRs are more privileged - you are not always reaching the groups that are most disadvantaged like elderly or people who cannot speak English. I think we should prioritize that the healthcare system be ready to give counseling at point of contact, like when prescribing a medication, or coming for a visit in the same month as receiving a medication that increases risk. Cold phone calls usually end up going to spam.
- Seth: Asking Mary Jo to address the role of CHWs in counseling for heat and wildfire smoke risk would be critical, as clinicians have limited time. It's important to bring in other workforce that are able to have deeper conversations with patients, as clinician time is limited.
- Raj: When KP first started social needs screening, the organization found out that lots of healthcare staff experience social needs as well. Systems should also pay attention to the needs of their staff.
- Stefan: Any kind of intervention around climate change needs to take interdisciplinary approach - maybe the clinician can identify the patient is at risk but the medication counseling comes from a pharmacist, or counseling on and connection to local resources comes from a social worker or case manager. We don't want this to just fall on the clinician.

PUBLIC COMMENT AND GOOD OF THE ORDER

Beth invited final comments or public comments, then thanked all for attending. At the next workgroup meeting, the group will continue to discuss the role of different audiences in our report including their use of data. Beth will follow up asynchronously with clinician workgroup members to develop the list of

medications that are deemed higher risk to potentially The workgroup's next meeting will be on Wednesday, May 8th from 3-4:30PM.