



Childhood Cancer & the Environment

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A project to educate and activate health professionals to address environmental influences on childhood cancer



1 Background

The PEHSU Network, led by the Western States PEHSU (WSPEHSU), and in collaboration with the American Academy of Pediatrics (AAP), conducted a groundbreaking education and training project "Childhood Cancer & the Environment" in 2022-2023.

The project was designed to increase environmental health literacy among two groups:

- ▶ Regional PEHSU staff to develop "champions" on this issue;
- ▶ Pediatric oncology fellows and nurse practitioners, most of whom have had little training in environmental health and children's cancers.

2 The Need

There is a growing body of literature that has implicated the role of several environmental hazards in childhood leukemia (the most common childhood cancers), including exposures to solvents, traffic air pollution, pesticides, and tobacco smoke. There are emerging connections to other cancers as well, including childhood brain cancer.

Despite the strength of these findings, clinician knowledge about this is limited.

- ▶ Though 88% of pediatric oncology providers reported getting questions from families about environmental exposures, few were comfortable discussing these.
- ▶ Over 90% said that more information on this topic would be helpful in addressing these issues with patients.



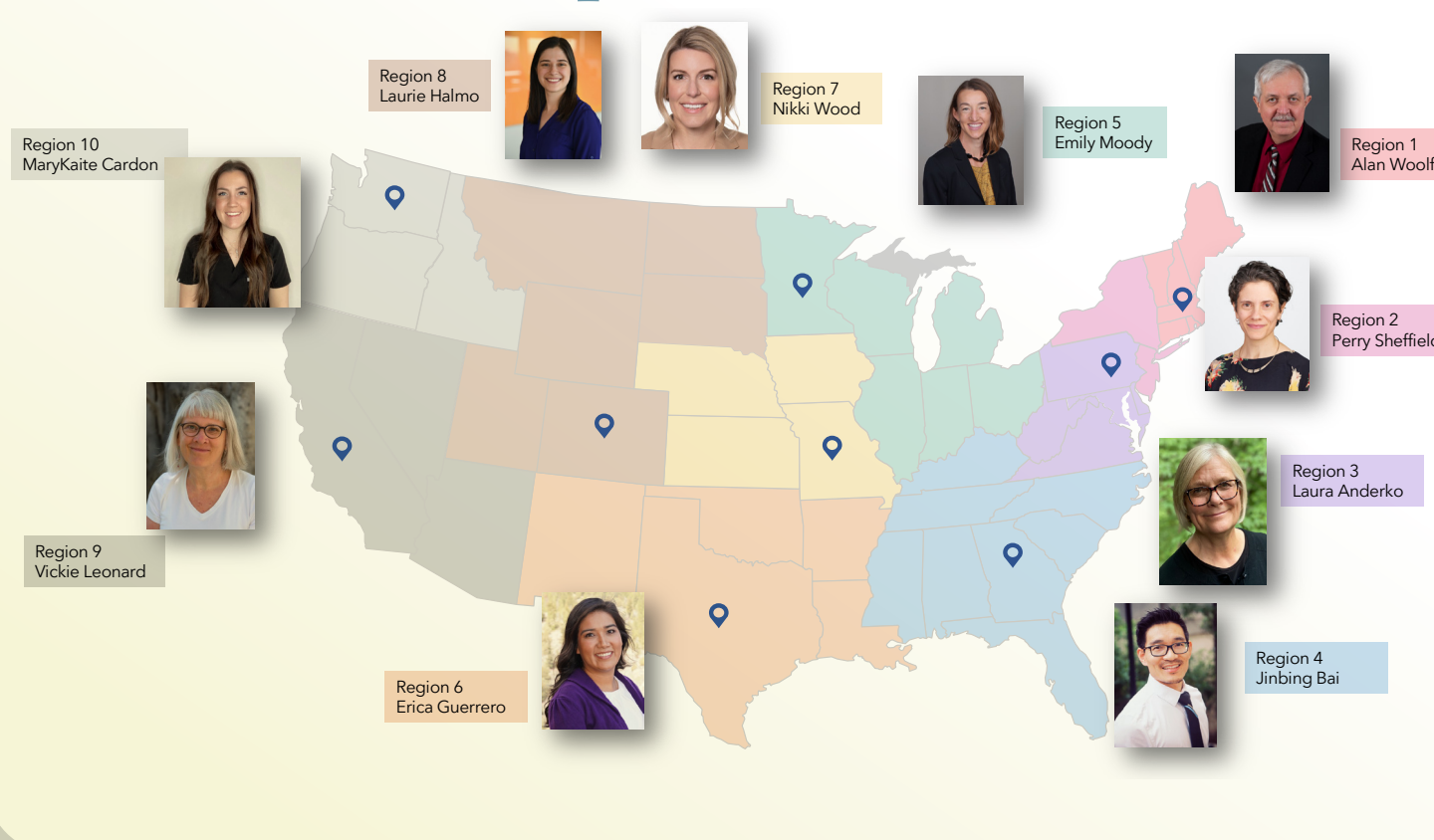
3 Methods

Five virtual trainings for champions led by experts were conducted.

Goals for the regional PEHSUs were to:

- ▶ Increase capacity to provide support to pediatricians and the public on environmental influences on childhood cancer and provide risk reduction guidance.
- ▶ Understand the approaches taken to identify cancer clusters and respond thoughtfully to community concerns about a potential cluster.

PEHSU Champions (by Region)



Two workshops for 40 pediatric oncology fellows and nurse practitioners were held at a retreat center where they received 1½ days of training by experts on environmental risk factors for childhood cancer, methods for exposure reduction, and environmental risk communication.

Goals for the pediatric oncology providers were to:

- ▶ Create a vanguard group of pediatric oncology providers with an improved awareness about environmental health contributors to children's cancer.
- ▶ Increase efficacy amongst providers to provide information to families about environmental concerns, to respond adequately to their questions, and have a ready set of identified resources to aid them in this process.



4 Results

PEHSU Champion Trainings: 100% positive response

- ▶ 100% of the ten attending said the quality was good to excellent
- ▶ 90% agreed the trainings improved their skills to provide support to pediatricians and the public on environmental influences on childhood cancer and provide risk reduction guidance to families, a major goal of the project.
- ▶ Champions have already given presentations at major clinical conferences expanding the project reach.

"My experience in the trainings has made me feel far more prepared to answer consults related to childhood cancer... I also gained really valuable information about all of the organizations doing related work that I can tap into in future work."
- PEHSU Champion



Resources Developed

- ▶ Illustrated fact sheet
- ▶ Presentation with speaker notes
- ▶ Annotated bibliography



Three months post-workshop surveys revealed:

- ▶ 80% of attendees said that they made changes to their clinical practice and had shared workshop information with colleagues.
- ▶ 55% shared information with patients.
- ▶ Over 80% said their approach to answering family's questions had changed.

PEHSU trained staff have gone on to create programs to continue educational outreach and working with residents and fellows.

In answer to the question:

"Have your perceptions regarding environmental risks and childhood cancer changed because of the workshop?"
86% said YES.

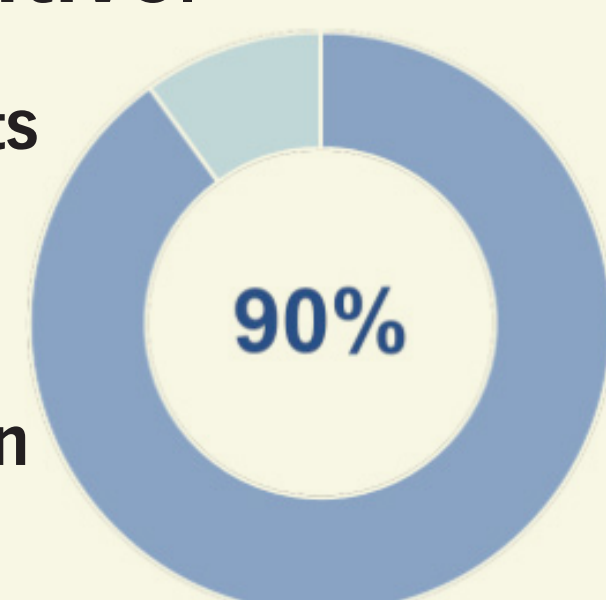
"In my initial conversations at the time of diagnosis of cancer, I spent time talking about what is known about environmental exposures to explain the rising incidence of cancer. I even shared some helpful handouts that were shared at the workshop."
- Workshop participant

Pediatric Oncology Workshops:

Evaluations from 40 participants from 14 states were extremely positive.

"I will start taking better environmental histories of families when they come in for consult and begin discussing environmental exposure risk with families and ways that they can mitigate future risk."
- Workshop participant

- ▶ Over 90% of in-person workshop participants of pediatric oncology clinicians reported they were valuable to them in a number of ways.
- ▶ Over 70% said they will use the information they learned to counsel patients and their families.
- ▶ Over 60% said this information should be included in training for medical professionals/continuing education



5 Conclusions

Due to the success of this first year of the project:

- ▶ A second year is underway to include wider and tailored outreach including through community health workers
- ▶ Baylor Medical Center, a major pediatric cancer center, hosted our in-depth training in February and has committed to develop a childhood cancer and the environment consulting service with PEHSU support
- ▶ We are also creating educational videos for clinicians based on our training series.

For more information, scan the code to visit the WSPEHSU web site on Childhood Cancer.



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