

Towards an Understanding of **Trauma-informed Design**: An (Over)view from the Field

J. Davis Harte, PhD, WELL AP
Director, Design for Human Health,
Masters of Design Studies
The Boston Architectural College

Co-Founder, Global Birth Environment Design
Network and Trauma-Informed Design Society



The Center for Health Design

Virtual Workshop
Behavioral & Mental
Health Design
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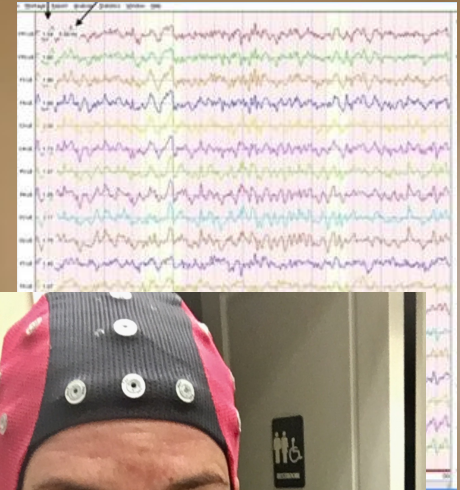
Biographical note*

2016 PhD, Health
(Design focus),
University of
Technology Sydney
Australia

*Director, Design for
Human Health
MDS, The Boston
Architectural
College*

2010 MS, Design &
Human Environment
(Interior Design),
Minors Human
Development & Family
Sciences / Free-choice
Learning Oregon State
University

1994 BA, Early
Childhood Education
and Child in Society
(psychology/
sociology/
anthropology) Boston
College



* J. Davis Harte

Trauma – what is it?

Trauma is an outcome of “an event, series of events, or circumstances that an individual experiences as physically or emotionally harmful or life threatening, and that has lasting effects on the individual’s functioning and mental, physical, social, emotional, or spiritual well-being”.

Toxic stress response




STRESS IN CHILDHOOD



Stress is mental, physical or biochemical response to a perceived threat or demand.

STRESS IS A NATURAL AND INEVITABLE PART OF CHILDHOOD, BUT THE TYPE OF STRESS CAN MAKE A DIFFERENCE IN THE IMPACT OF A CHILD'S BRAIN AND BODY.



POSITIVE STRESS


MILD STRESS IN THE CONTEXT OF GOOD ATTACHMENT

- TEMPORARY, MILD ELEVATION IN STRESS HORMONES, BRIEF INCREASE IN HEART RATE

• NO BUFFERING SUPPORT NECESSARY

- INCREASED RESILIENCE AND CONFIDENCE - DEVELOPMENT OF COPING SKILLS

Laura Corbeth



TOLERABLE STRESS

SERIOUS, TEMPORARY STRESS, BUFFERED BY SUPPORTIVE RELATIONSHIPS

- MORE SEVERE, CONTINUING AND HORMONAL RESPONSE.

• PRESENCE OF A PARENT, CARING PARENT, BUFFERING.

- ADAPTION AND RECOVERY WITH SOME POSSIBILITY OF PHYSICAL AND EMOTIONAL DAMAGE



TOXIC STRESS

PROLONGED ACTIVATION OF STRESS RESPONSE SYSTEM WITHOUT PROTECTION.

- PROLONGED ACTIVATION OF STRESS RESPONSE SYSTEM + DISRUPTED DEVELOPMENT OF BRAIN AND IMMUNE SYSTEM.

• NO... ADULT BUFFERS

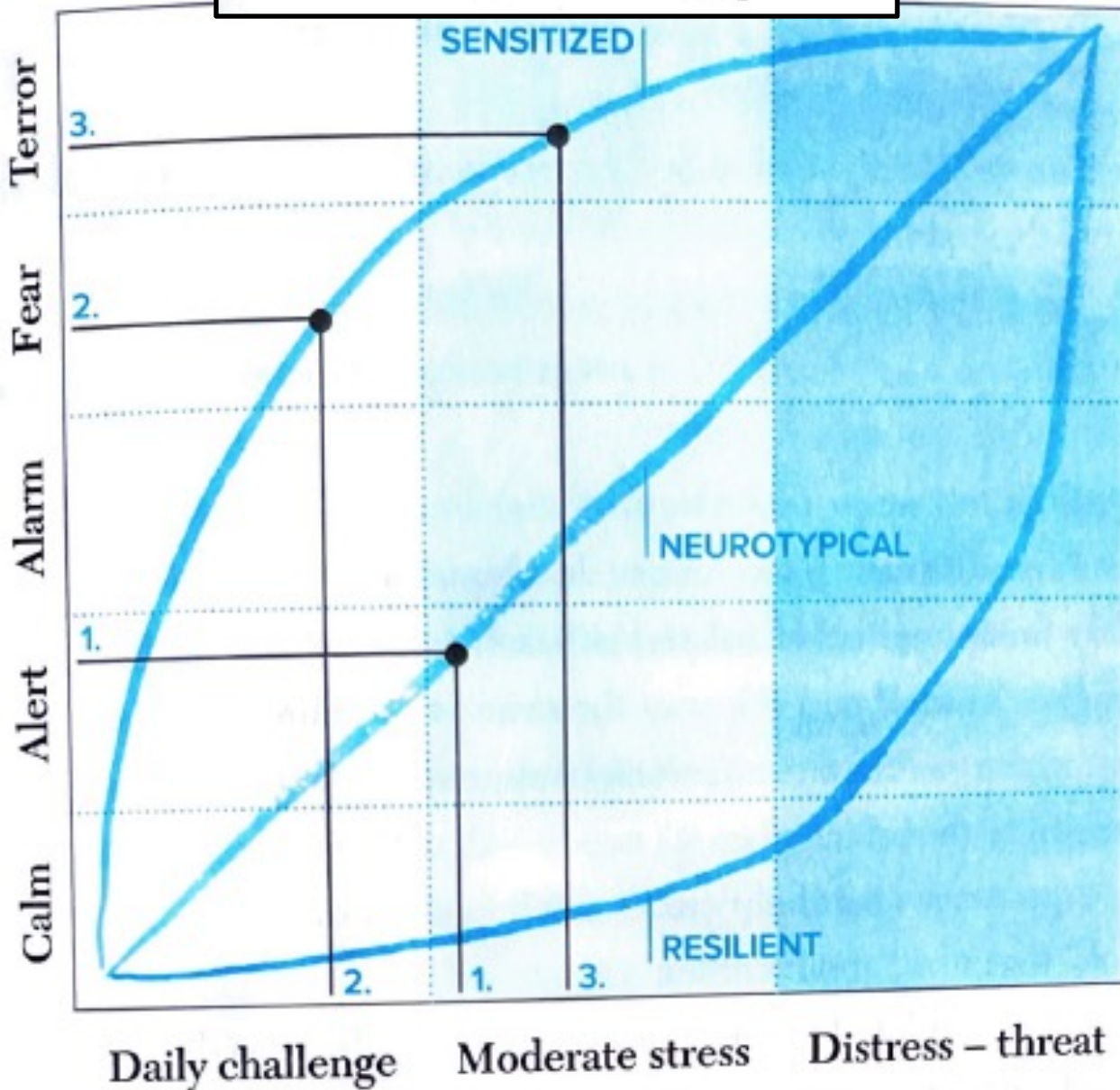
- LIFELONG CONSEQUENCES: CANCER | HEART DISEASE | ALCOHOLISM | MEMORY AND LEARNING PROBLEMS | ANXIETY + DEPRESSION

Toxic stress has lifelong consequences

Adapted from @7030Campaign

Figure 5

STATE-REACTIVITY CURVE



3 Realms of ACEs

Adverse childhood and community experiences (ACEs) can occur in the household, the community, or in the environment and cause toxic stress. Left unaddressed, toxic stress from ACEs harms children and families, organizations, systems and communities, and reduces the ability of individuals and entities to respond to stressful events with resiliency. Research has shown that there are many ways to reduce and heal from toxic stress and build healthy, caring communities.



PACEs Connection thanks **Building Community Resilience Collaborative and Networks** and the **International Transformational Resilience Coalition** for inspiration and guidance. Please visit PACesConnection.com to learn more about the science of ACEs and join the movement to prevent ACEs, heal trauma and build resilience.



How Prevalent are ACEs?

ACE Score	Original ACE Study Prevalence (1998)	BRFSS Data (2011-2014)
0	36%	39%
1	26%	24%
2	16%	13%
3	9%	9%
4 or more	12%	16%

Source: [CDC ACE Study](#) and [Behavioral Risk Factor Surveillance System Data](#)

Trauma Informed Care I

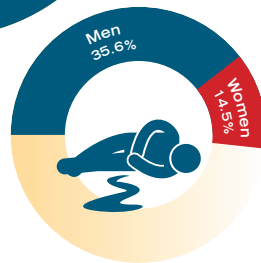
WHY TRAUMA MATTERS IN PRIMARY CARE



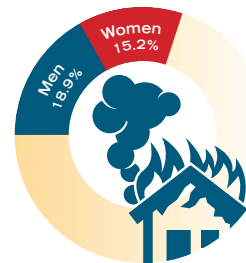
TRAUMA IS COMMON



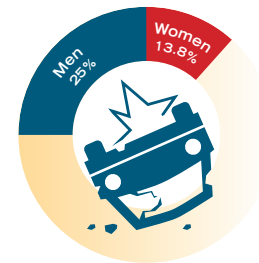
59% of men and women experience at least **one adverse childhood experience (ACE)** in their life and 9% experience five or more ACEs



Witness someone being badly injured or killed



Are involved in a fire, flood or other natural disaster



Experience life-threatening accident/assault

Trauma Informed Care II



48% of children have experienced at least **one of nine types of adverse experiences**, including physical or emotional abuse or neglect, deprivation, addictions or exposure to violence.

TRAUMA HAS IMPACT

The impact of trauma is very broad and can impact a person across many parts of life: health, behavioral health, family, work, school and more.



SOCIETAL AND ECONOMIC

\$161 Billion: cost of untreated trauma-related alcohol and drug abuse alone in 2000

Trauma Informed Care III

Children with trauma experiences are **2½ times** more likely to have repeated a grade in school



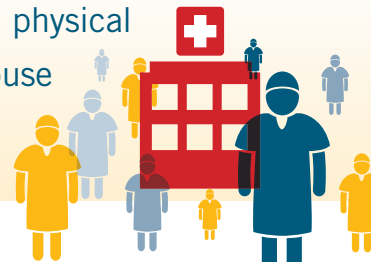
Children who learn **resiliency skills** mitigate negative effects, often enabling them to engage better in school

BEHAVIORAL HEALTH



90% of people seen in public behavioral health clinics have experienced trauma

43-80% of individuals in psychiatric hospitals have experienced physical or sexual abuse



Trauma Informed Care IV



UP TO

90% of people who receive public mental health care have been exposed to trauma



2 adults in addiction treatment experienced child abuse and neglect



70% of teens in addiction treatment have history of trauma exposure

PTSD

Posttraumatic stress disorder affects **2-5%** of people and is one of the most common and least recognized anxiety disorders in primary care. Little is known about PTSD in the primary care setting.

Trauma Informed Care V

PHYSICAL HEALTH

Children with histories of traumatic experiences are **twice as likely** to have chronic health conditions.



Women with PTSD symptoms have a **two-fold increased risk** for type 2 diabetes.



PTSD

Women with no PTSD symptoms who reported traumatic events had **45% higher rates** of cardiovascular disease.

45% HIGHER



Almost half are caused by unhealthy behaviors

Women with four or more PTSD symptoms had **60% higher rates** of cardiovascular disease.



60% HIGHER

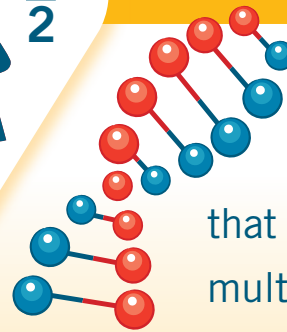


Trauma Informed Care VI

Almost half are caused by unhealthy behaviors like smoking, obesity, lack of exercise and medical factors such as high blood pressure.



60% higher rates of cardiovascular disease.

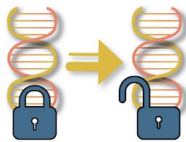


DNA in people with PTSD shows increased levels of a gene that made them more vulnerable to multiple types of sicknesses.

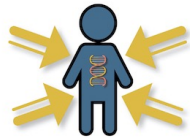
WHAT IS EPIGENETICS?

AND HOW DOES IT RELATE TO CHILD DEVELOPMENT?

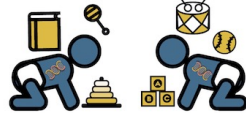
"Epigenetics" is an emerging area of scientific research that shows how environmental influences—children's experiences—actually affect the expression of their genes.



During development, the DNA that makes up our genes accumulates chemical marks that determine how much or little of the genes is expressed. This collection of chemical marks is known as the "epigenome." The different experiences children have rearrange those chemical marks. This explains why genetically identical twins can exhibit different behaviors, skills, health, and achievement.



This means the old idea that genes are "set in stone" has been disproven. Nature vs. Nurture is no longer a debate. It's nearly always both!



±10

Multiple traumatic events during childhood are related to a **10-point difference** in systolic blood pressure.

trauma, stress and primary care. Visit www.TheNationalCouncil.org/TIPC.

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<https://www.cdc.gov/genomics/disease/epigenetics.htm>

<https://developingchild.harvard.edu/resources/what-is-epigenetics-and-how-does-it-relate-to-child-development/>

Aren't medical providers aware?

Scholarly Perspective

Trauma-Informed Medical Education (TIME): Advancing Curricular Content and Educational Context

Taylor Brown, Sarah Berman, Katherine McDaniel, MSc, Caitlin Radford, Pooja Mehta, MD, Jennifer Potter, MD, and David A. Hirsh, MD

Abstract

The majority of patient students experience some psychological trauma over their life course. All forms of trauma can be associated with long-term consequences and can impact learning and professional development. Trauma-informed care (TIC) is a framework to address these consequences and promote safety and health. The American Psychiatric Association and the American Medical Association describe domains of TIC: safety; trust and transparency; peer support; collaboration and mutuality; empowerment, voice, and choice; and cultural, historic, and gender issues.

At present, TIC is not taught routinely in undergraduate medical education (UME)—a crucial educational gap given that UME grounds the development

cultural, historic, and gender issues.

At present, TIC is not taught routinely in undergraduate medical education (UME)—a crucial educational gap given that UME grounds the development

of trauma-informed medical education (TIME) framework.

TIME informs medical schools' curricular content and educational context. In UME, curricular content should address trauma epidemiology, physiology, and effects; trauma-informed clinical skills including sensitive communication and physical exam techniques; and trauma-

institutional policies, and curriculum. TIME offers practical strategies to support teaching, learning, educational administration, and professional development and aims to inspire new strategies for effective learner and faculty engagement. TIME aims to foster students' development of competency in TIC and promote student engagement, learning, health, and well-being.

Brown, T., Berman, S., McDaniel, K., Radford, C., Mehta, P., Potter, J., & Hirsh, D. A. (2020). Trauma-informed medical education (TIME): Advancing curricular content and educational context. *Academic Medicine*, 96(5), 661-667.

Up Close > Trauma-informed design guides Excelsior project

Trauma-informed design guides Excelsior project

Space-creating concepts aim to promote well-being

Karina Elias March 30th, 2023

CityLab | Design

Buildings That Can Heal in the Wake of Trauma

Practitioners of the emerging architectural movement called trauma-informed design see buildings as "the first line of therapy."

By Zach Mortice
April 10, 2023 at 8:15 AM PDT

healthcare design

NEWS TRENDS PROJECTS EVEN

PROJECTS

Trauma-informed Design Guides SCO Family Of Services Clinic

By Anne DiNardo | March 29, 2023
f t in e



ERIC LAIGNEL

SCO Family of Services: In the reception area, upholstered, high-back furnishings with a living room feel offer a sense of privacy and protection.



February 3, 2022

Lingering pandemic provides a new twist to trauma-informed design

- Architects are factoring in the mental effects of COVID-19 and informing their designs to help users cope with toxic stress.

By SAM BENNETT
Special to the Journal

ArchDaily ArchDaily Interviews Form Follows Feeling: Trauma-Informed Design and the Future of Interior Spaces

Form Follows Feeling: Trauma-Informed Design and the Future of Interior Spaces

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Save



Written by Dima Stouhi

Published on March 10, 2021

At the intersection of architecture and mental health: trauma-informed design



Phyllis Barros speaks to a reporter inside Delores Project's new shelter space, April 24, 2019. (Kevin J. Beaty/Denverite)

Donna Bryson

Apr. 29, 2019, 5:26 a.m.

January 27, 2023

How a Health Care Clinic Applied Trauma Informed Design to Serve the LGBTQIA+ Community

With space for public programs as well as a sense of privacy and security Perkins&Will's Family Tree Clinic answers the question, "What does healing look like to you?"

By: Zach Mortice

traumainformeddesign.org

6 GUIDING PRINCIPLES TO A TRAUMA-INFORMED APPROACH

The CDC's [Center for Preparedness and Response \(CPR\)](#), in collaboration with SAMHSA's [National Center for Trauma-Informed Care \(NCTIC\)](#), developed and led a new training for CPR employees about the role of trauma-informed care during public health emergencies. The training aimed to increase responder awareness of the impact that trauma can have in the communities where they work.

Participants learned SAMHSA'S six principles that guide a trauma-informed approach, including:



Adopting a trauma-informed approach is not accomplished through any single particular technique or checklist. It requires constant attention, caring awareness, sensitivity, and possibly a cultural change at an organizational level. On-going internal organizational assessment and quality improvement, as well as engagement with community stakeholders, will help to imbed this approach which can be augmented with organizational development and practice improvement. The training provided by [CPR](#) and [NCTIC](#) was the first step for CDC to view emergency preparedness and response through a trauma-informed lens.

Unique Compassionate Lens

6 principles trauma-informed approach

(by CDC & Substance Abuse & Mental Health Services Administration)

Evidence-based design (See EDAC page for more info)

+ Research-informed design (Peavey & Vander Wyst, 2017)

Trauma-informed design (practice)

to anticipate and mitigate potential triggers

https://www.cdc.gov/orr/infographics/6_principles_trauma_info.htm

<https://www.healthdesign.org/certification-outreach/edac>

Peavey, E., & Vander Wyst, K. B. (2017). Evidence-based design and research-informed design: What's the difference?

Conceptual definitions and comparative analysis. *HERD: Health Environments Research & Design Journal*, 10(5), 143-156.

TiD Case Study:

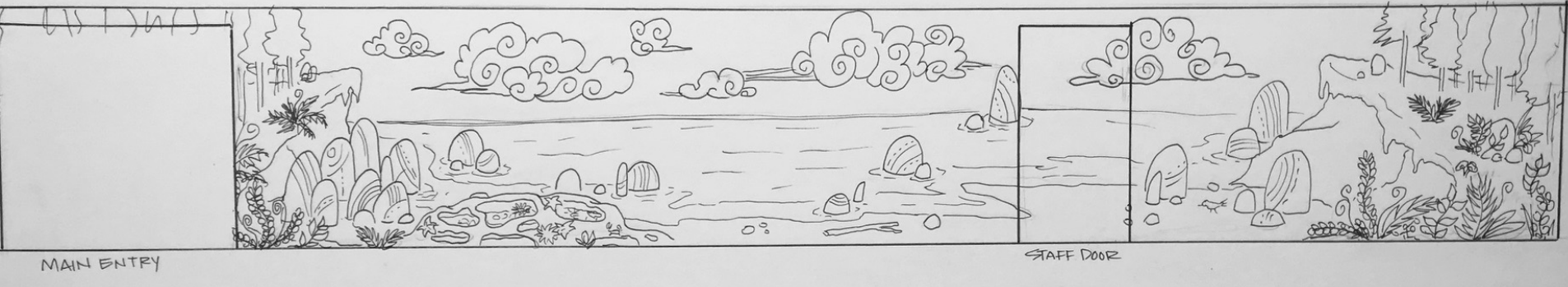
ABC House, Albany Oregon

an abuse intervention center / child advocacy center





<https://youtu.be/ba6MaBtSMho>



Local muralist Erica Greminger hired to do exterior mural to:

- brighten under cover parking area,
- create connection between interior and exterior
- guide wayfinding
- communicate both dignity, restorativeness and whimsy

Later expanded the scope with 3 additional interior murals



ABC House
Paradigm Spaces, llc

Main entrance

Donor funded large fish tank = positive distractors

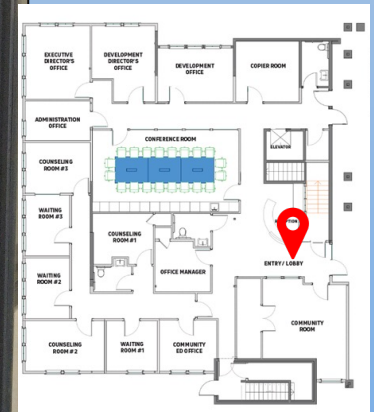
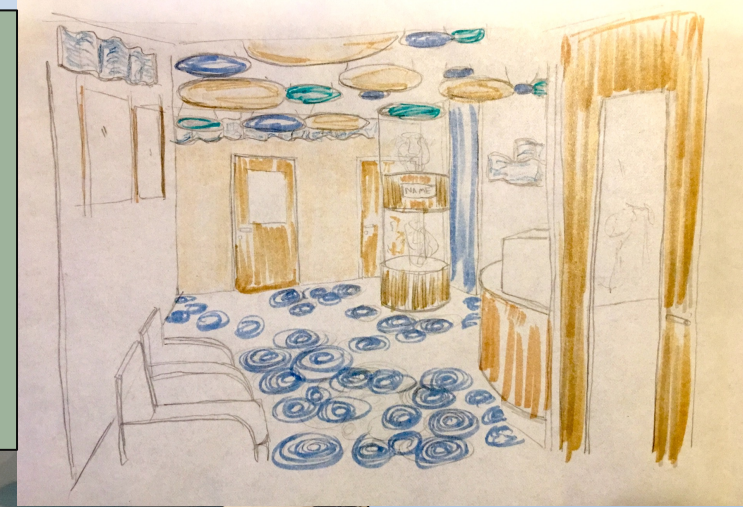
(Drahota, Ward, Mackenzie, et al., 2012)

Acoustic ceiling clouds throughout building

(Reinten, Braat-Eggen, Hornikx, et al., 2017).

Curvilinear furniture and finishes when possible

(Dazkir + Read, 2011)

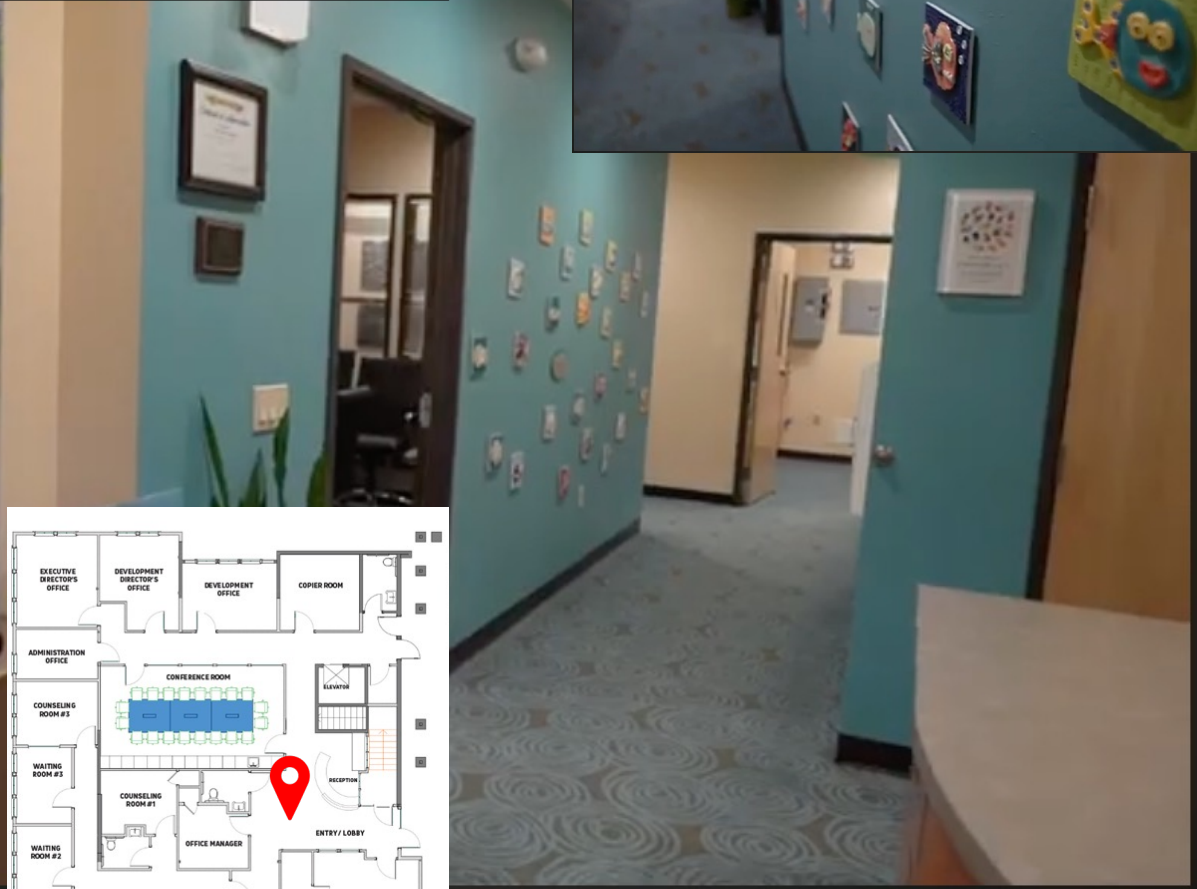


Oceanic ripples on carpet tiles

ABC House
Paradigm Spaces, llc

120-gallon fish tank in main entrance
(donor requested)

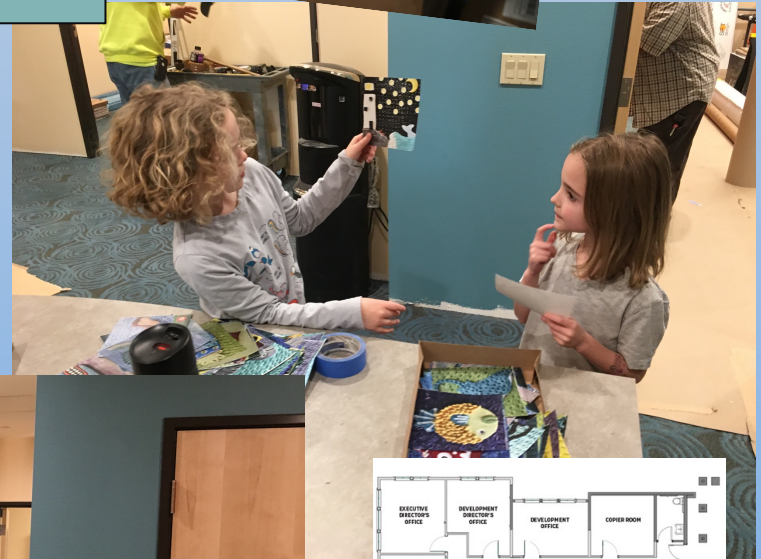
Themes 'above ocean/nautical' + 'below ocean'



ABC House
Paradigm Spaces, llc

144 custom ceramic tiles* throughout

- facilitates positive distraction, sense of place + landmark/wayfinding 'scavenger hunt'
- tactile + visual senses
- child expert proxy for actual users



* Mary Hubbard at White Clover Kiln, Maryland

ABC House
Paradigm Spaces, llc

Window cut lace vinyl graphic
light permeates yet obscure
identities



ABC House
Paradigm Spaces, llc

Pass-through window between advocates office + waiting rooms, diffused with fish tank to provide positive distracters + safety



View from the waiting room



View from the advocates office



ABC House
Paradigm Spaces, llc



Private waiting rooms to respect family privacy rules
Teens, youth and children spend multiple hours in and out of these spaces



ABC House
Paradigm Spaces, llc

Waiting rooms are geared towards younger children and older youth



One of the 2 themes represents the deeper work that clients undergo (below ocean) such as **forensic interviews** and **medical exams**. The color of the ceiling clouds and the images on the walls helps communicate these two related yet distinct themes.



ABC House
Paradigm Spaces, llc

One of two rooms for upset adults + difficult conversations



ABC House
Paradigm Spaces, llc

Medical exam room



ABC House
Paradigm Spaces, llc

Forensic interview room, equipped with video and audio recording

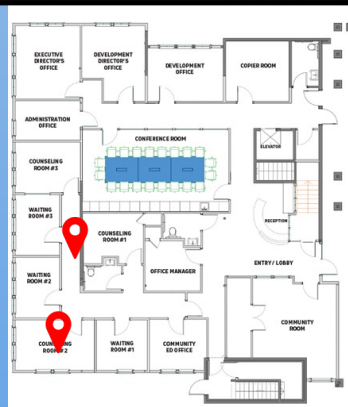


Monitor room



ABC House
Paradigm Spaces, llc

Counseling wing – office, counseling space and hallway



Keys to Trauma-informed Design





🔑 Get to know *who will be using the space* and what is important to them

🔑 To better:

🔑 Anticipate and mitigate potential triggers

🔑 Create a safe environment that provides empowerment and comfort

Other Considerations

-  Invite input from the users of the space and work directly with them to identify possible triggers
-  Keep parking lots, common areas, bathrooms, entrances, and exits well lit
-  Consider designs that discourage smoking or congregating outside entrances and exits
-  Use design elements to keep the noise level down

Other Considerations

- 👉 Include lots of signage with clear and welcoming language
- 👉 Ensure clear walkways, hallways, and access to entrances and exits
- 👉 Create spaces that encourage informal connections
- 👉 Strive for consistency in design

Trauma Informed Care VII

Learn more about trauma, stress and primary care. Visit www.TheNationalCouncil.org/TIPC.

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Recent book chapters

J. Davis Harte, PhD, WELL AP

www.traumainformeddesign.org

email: davis.harte@the-bac.edu

