



IPRC
International
Pediatric Rehabilitation
Collaborative

The Pediatric Neuropsychologist in Telehealth: What Works?



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Outpatient Neuropsychology



Camille Wilson, Ph.D.
Pediatric Neuropsychologist

Objectives

- Describe how outpatient neuropsychological services have been adapted for telehealth at one pediatric hospital, focusing on the following:
 - Consultation, Assessment, Intervention
- Describe how inpatient neuropsychological assessment and intervention services can be adapted in an inpatient setting, focusing on the following:
 - Consultation, Serial Assessment, Parent and Patient Education during admission and post discharge
- Discuss quality improvement concepts and ways to support change related to neuropsychology and telehealth

Session Overview

- Review considerations for telehealth neuropsychology services
- Discuss models of outpatient care
- Discuss models of inpatient care
- Review promoting change & quality improvement concepts



The Research Institute at Nationwide Children's Hospital **IS ONE OF THE TOP 10** NIH-funded freestanding pediatric research facilities in the U.S.



Vision



**Best outcomes in everything we do, together
delivering the best health care for children.**

One Team Values

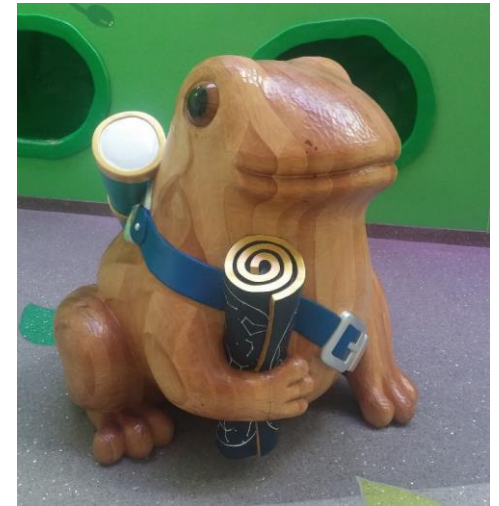


We are agile and innovative

- We embrace and manage change
- We foster a streamlined and entrepreneurial environment
- We generate and share new knowledge and ideas

NCH Neuropsychology Team

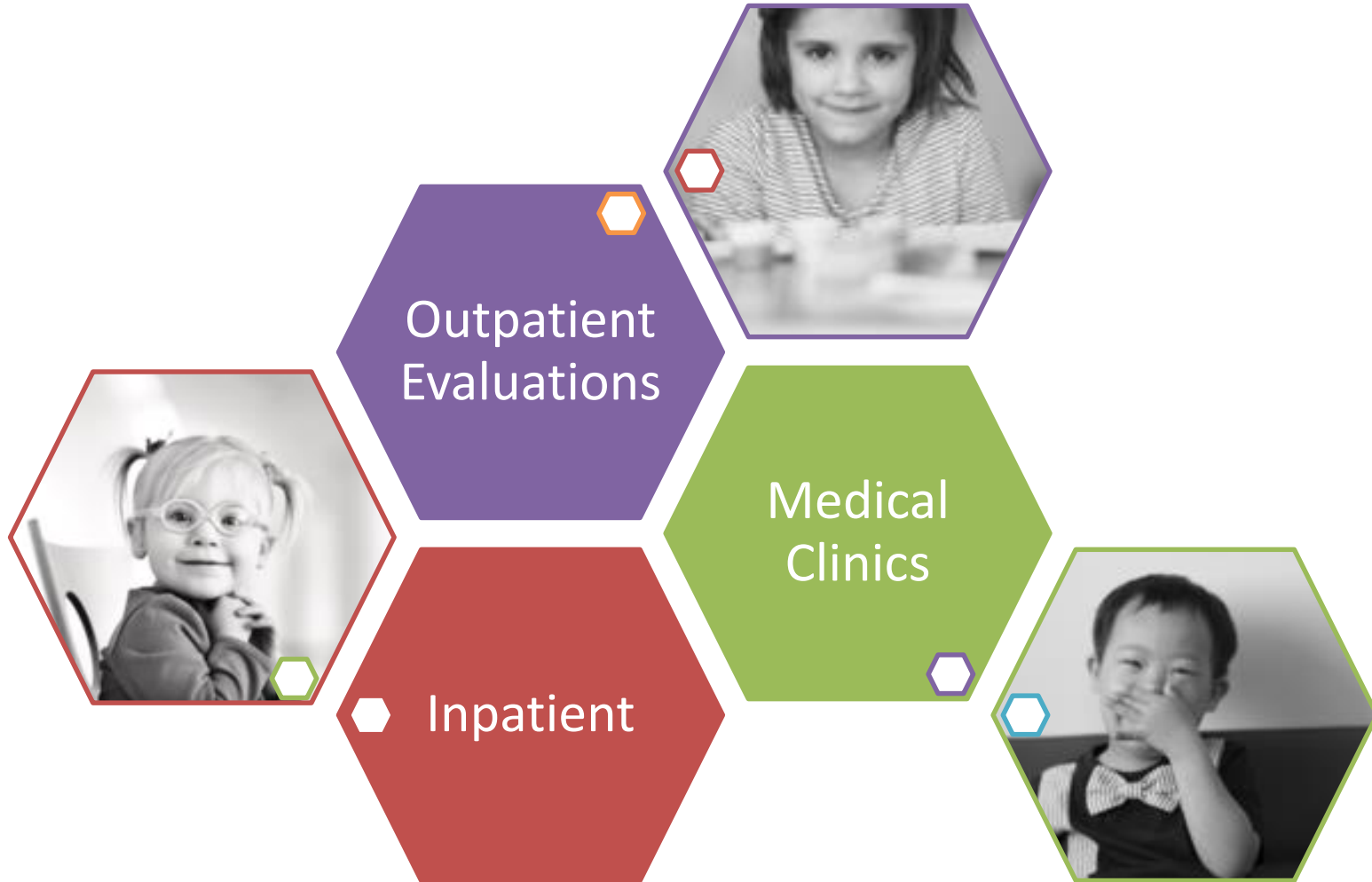
- 8 clinical neuropsychologists
- 2 research neuropsychologists
- 3 fellows
- 1 intern



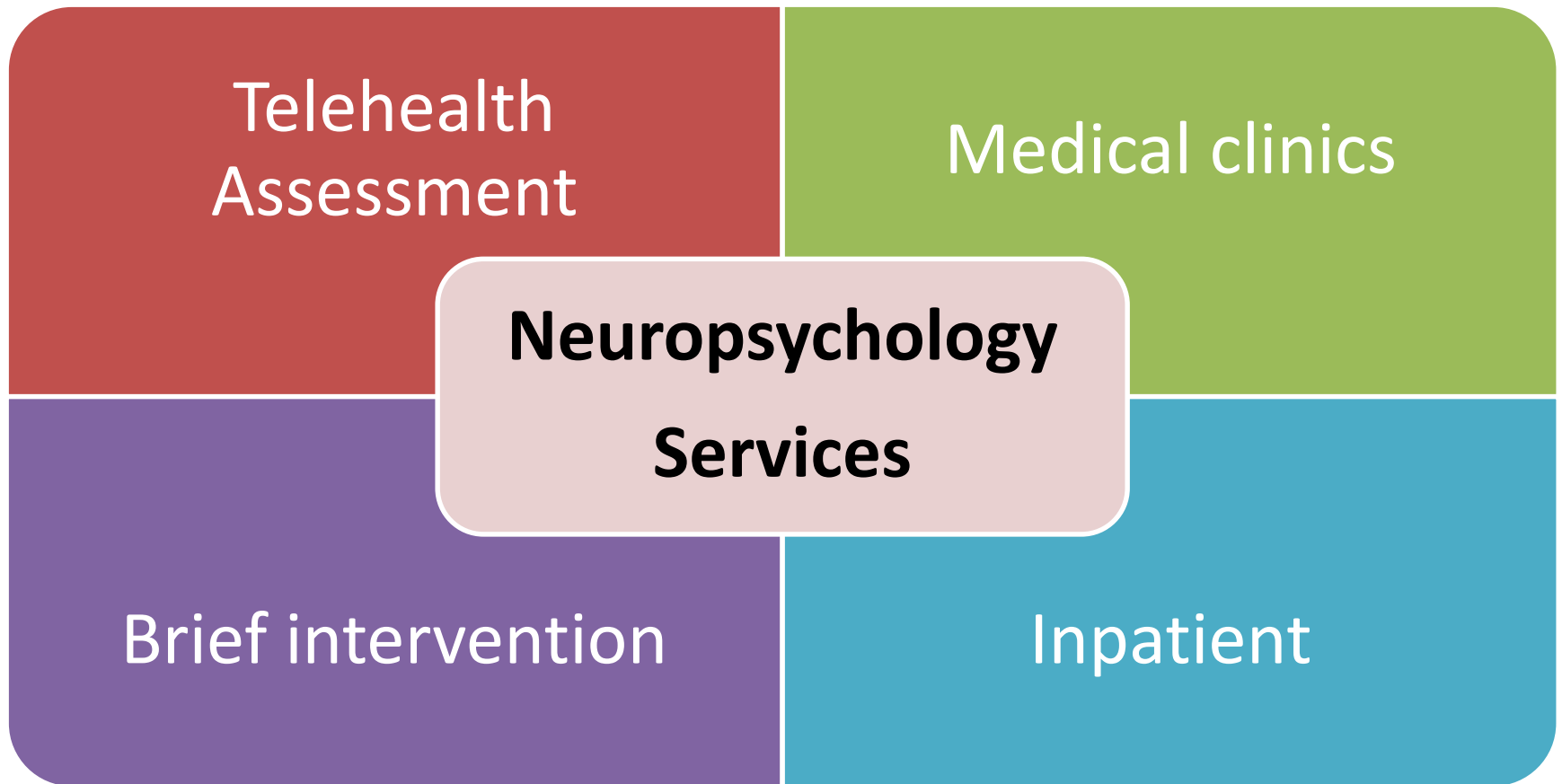
Pre-COVID Neuropsychology

- Around 1,500 referrals annually
- Focus on medical/neurological cases
- ~ 40% referred from Neurology
- 95% of patients are Ohio residents
- Cases seen from 20 states
- Hospital overall: ~55% of patients have a form of Medicaid

Pre-COVID Neuropsychology



Current Telehealth Efforts

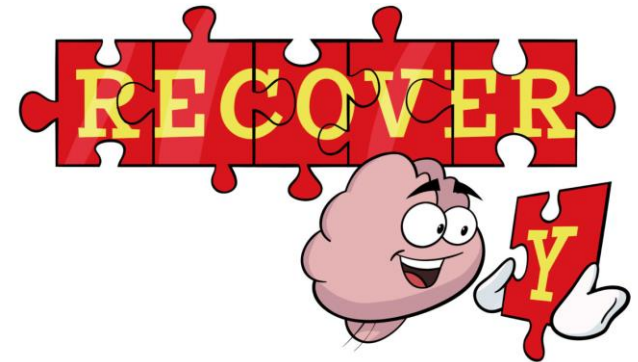


Medical Clinics

- Integrated via telehealth platform
- Focus on psychosocial check ins

Brief Interventions

- Teen Online Problem Solving (TOPS; Wade et al, 2017)
- Executive functioning
- Transition readiness



Assessment

- Team-oriented approach
- Multi-disciplinary collaboration



Question for Thought

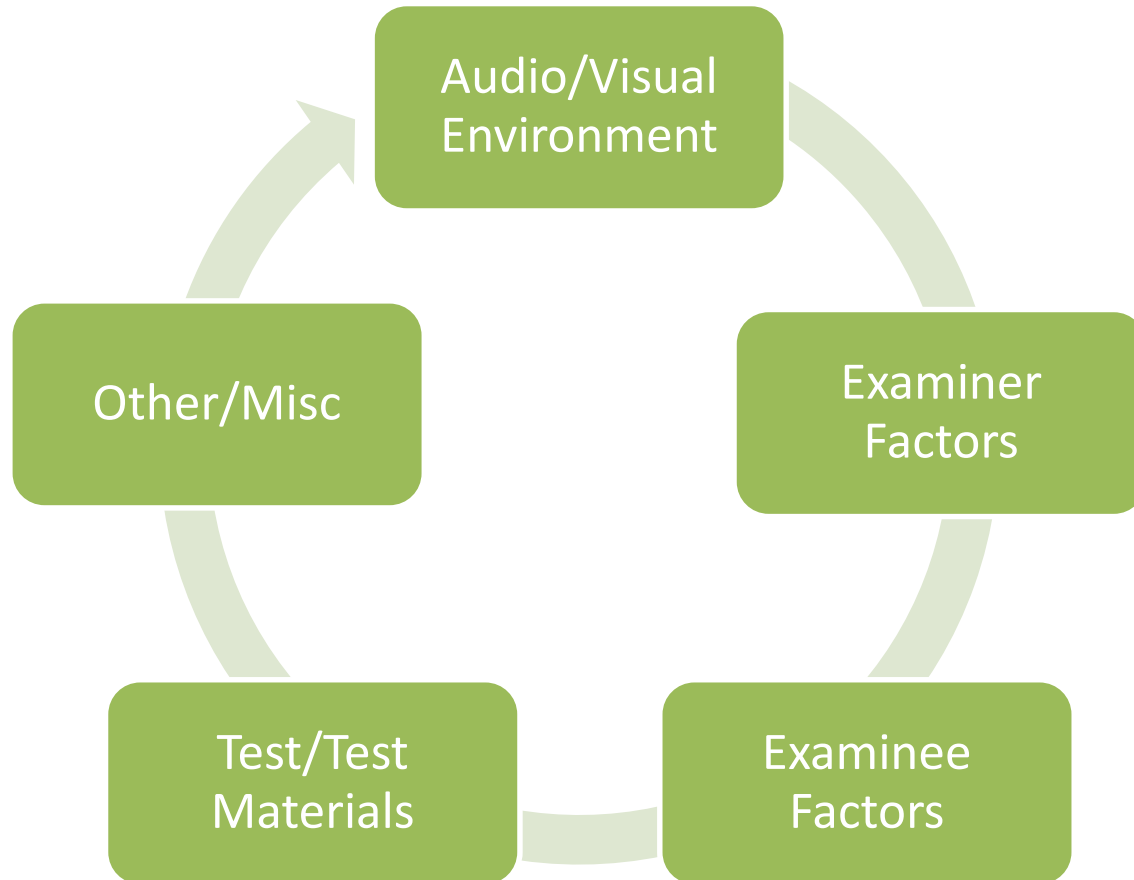
- What unique information might you gain from a telehealth assessment?
- What threats to validity could exist for telehealth vs. face to face evaluations (in the COVID-19 age)?



Conceptualization

- Establish rationale for telehealth assessment
 - Continued ability to meet families with needs
 - Prevent large waitlist when return to face to face assessments
 - Use a stepwise approach for assessment
 - **Assessment is more than standardized test administration**

Five Factors to Consider

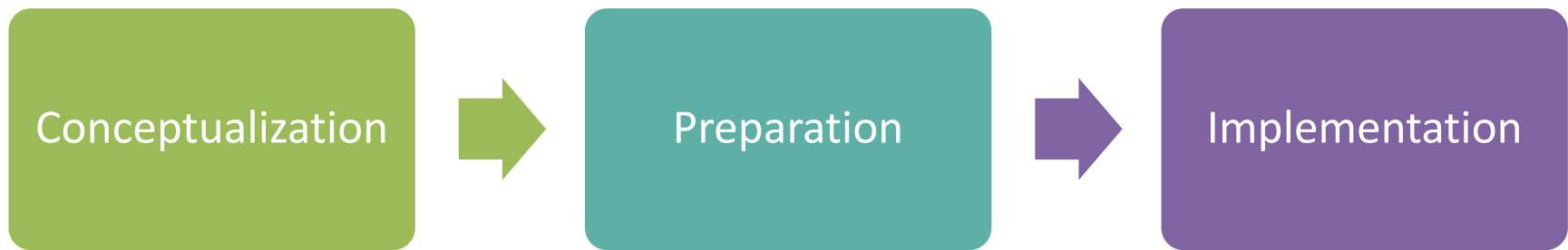


(Eichstadt, Castilleja, Jakubowitz, & Wallace, 2013).....

Conceptualization, cont.

- Consider when telehealth vs traditional testing is appropriate

Telehealth	Traditional
Screen for ADHD/LD	Family lack of/low comfort with technology
Serial monitoring of academic progress	Visual and/or hearing impairment
Brief assessment to inform recommendations / access to resources	Linguistic diversity/need for interpreter
	Suspect potential for suboptimal effort
	High stakes cases



Preparation

Clinicians	Families
Recommended webinars for IOPC and INS	Collaborative conversations
Review materials available for virtual administration	Telehealth checklist
Develop testing protocols <ul style="list-style-type: none">• School age• Preschool screening	Parent letter
Practice administrations	

Preparation: Parent Checklist

Pre-Visit	Test Planning	During the Visit
<input type="checkbox"/> Consent	<input type="checkbox"/> Planning battery	<input type="checkbox"/> Remind parents to remove toys, other devices
<input type="checkbox"/> Technology Access	<input type="checkbox"/> Division of tasks for examiners	<input type="checkbox"/> Pin patient on zoom to make video/face bigger
<input type="checkbox"/> Logistics of room for testing		<input type="checkbox"/> Have patient minimize self-view
<input type="checkbox"/> Review behavioral strategies		<input type="checkbox"/> Review parent role during evaluation



Implementation

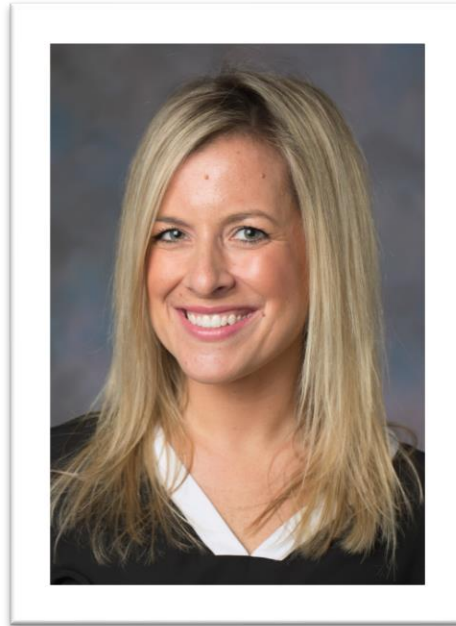
- Telehealth intakes
- Community outreach
- Goal: Triage appropriate cases

Brief
intervention

Traditional
assessment

Telehealth
assessment

Inpatient Neuropsychology



Christine Koterba, Ph.D., ABPP
Pediatric Neuropsychologist

NCH Inpatient Rehabilitation Unit

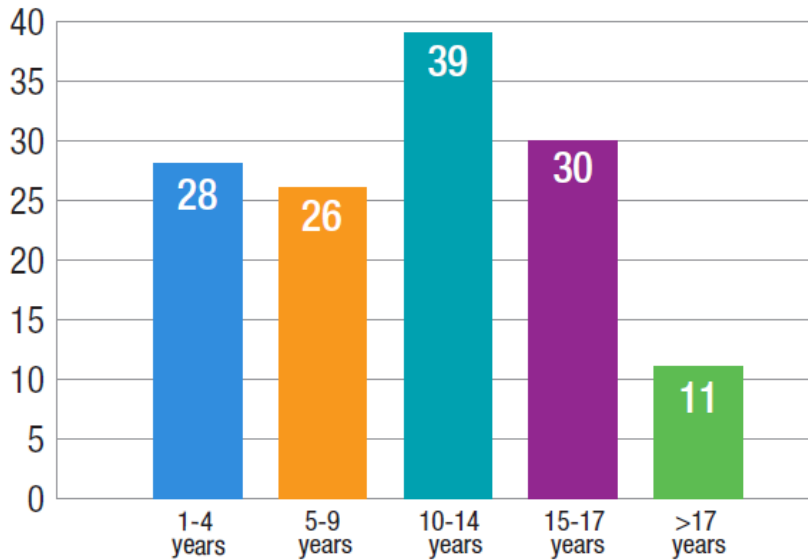
2019 Program Overview

	Admitted Patients	Average Length of Stay (Days)	Average Therapy Hours (Per Day)
Traumatic Brain Injury	25	25	4.8
Non-Traumatic Brain Injury	36	20	4.6
Stroke	8	27	4.4
Spinal Cord Injury	1	19	4.9
Neurologic Conditions	20	18	4.7
Selective Dorsal Rhizotomy	24	15	4.5
Ortho/Deconditioning	11	13	4.6
Overall in 2019	134	19.8	4.7

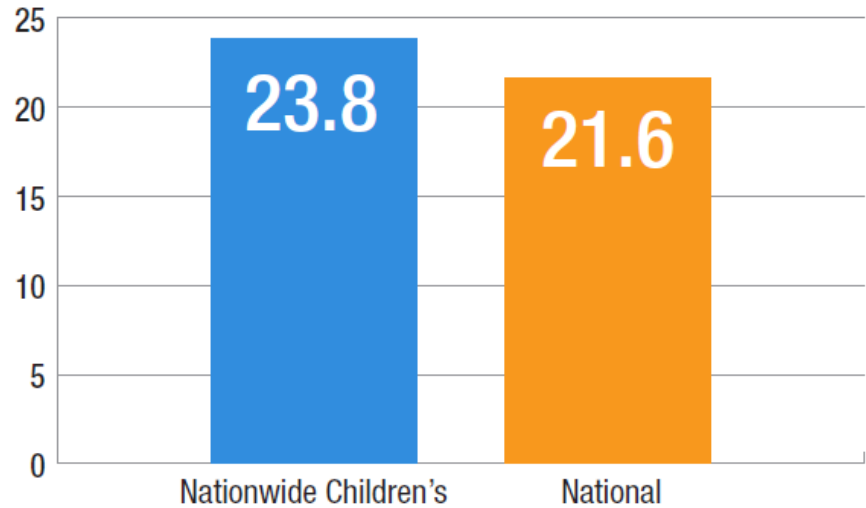
* Therapy hours include physical therapy, occupational therapy, speech therapy, massage, recreational therapy and psychology.

NCH Rehab Unit

Age Groups



WeeFIM[®] Point Gain



Inpatient Services Pre-COVID-19



Psychoeducation



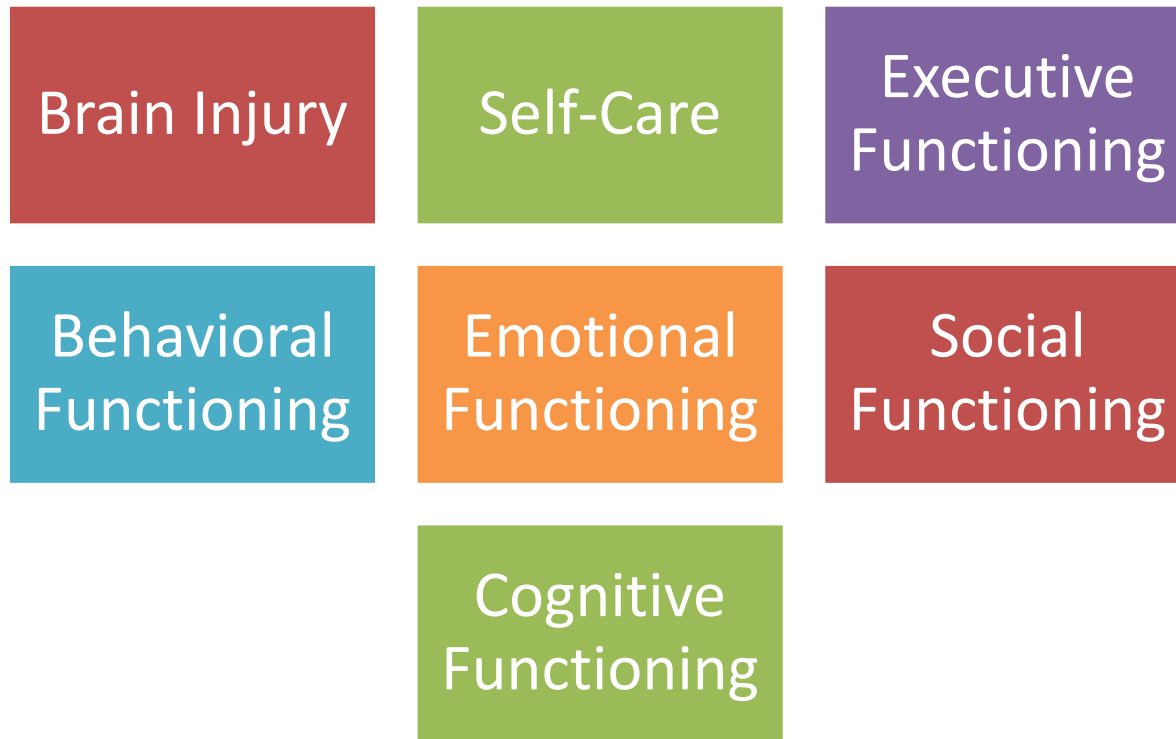
Serial Monitoring of
Cognitive Recovery



Discharge Evaluations
and School Reintegration

BRAIN Education Program

- Core Modules



BRAIN Example

BRAIN Caregiver Education Program

Brain Recovery & Assessment Information with Neuropsychology©

Christine Koterba, Ph.D., ABPP, Kerry Monahan, Psy.D., Jilian O'Neill, Ph.D.

Understanding Your Child's Brain Injury

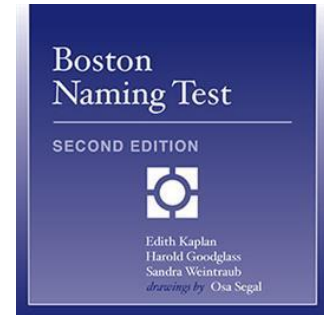
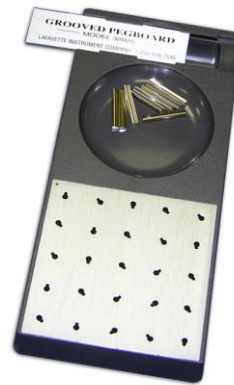
A brain injury causes disruption to the brain and makes it hard for the brain to work how it normally does. This is because nerve cells in the brain get damaged and have trouble sending messages and information. Depending on what parts of the brain are injured, this can cause changes to a person's behavior and abilities.

Three general types of problems can occur after brain injury: **physical**, **cognitive**, and **social/emotional/behavioral** difficulties. It can be very hard to tell early on which difficulties a person will have after a brain injury. Problems typically improve as the child recovers, but this may take weeks or months. With more severe injuries, changes can take place over years.

How the Brain Works



Discharge Evaluations and School Reintegration



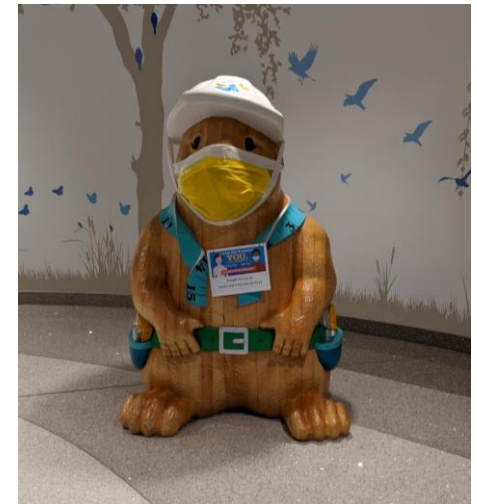
Inpatient Services Post-COVID-19

- **Problem:** No in-person BH services
- **Solution:** Find ways to enhance rehab neuropsychology services

Telehealth
psycho-
education

Telehealth
assessment
options

Improved
post-
discharge
follow-up



Inpatient Services Psychoeducation

BRAIN Education Program

- Collaborated with other institutions to expand the program
 - Now includes all forms of acquired brain injury
 - Added core modules and supplemental materials

BRAIN Education Program

- Current Core Modules



BRAIN Education Program

- Supplemental Modules

Diagnosis Specific
Materials

Disorders of
Consciousness

Visual Impairments

Hearing
Impairments

Speech
Impairments

Hemiparesis

Remote
Learning/Home
School
Environment

Awareness Training

Others???



Inpatient Services Telehealth Assessment

Serial Monitoring

Modify CALS for remote administration

Remote observation of therapy sessions

Discharge Evaluation

Telehealth assessment on the unit

Telehealth or in-person assessment before return to school
(end of summer)

Inpatient Services

Discharge Follow-up

- Neuropsychology telehealth appointments 2 weeks post-discharge

Psychoeducation

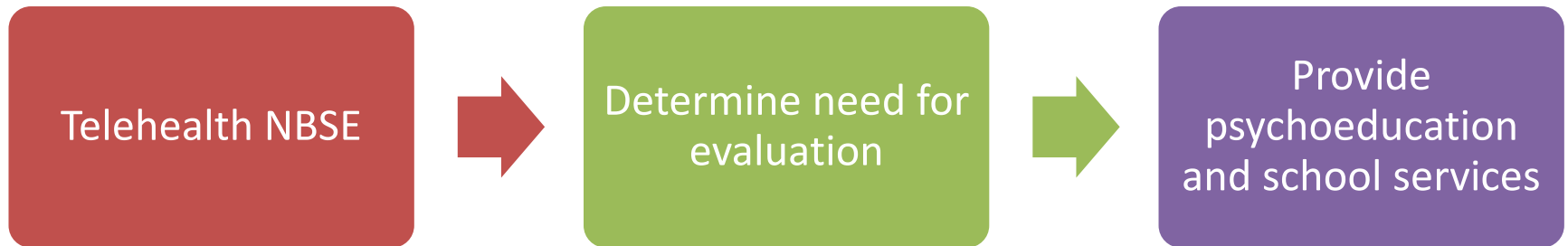
Assess current
functioning

Observe
behaviors at
home

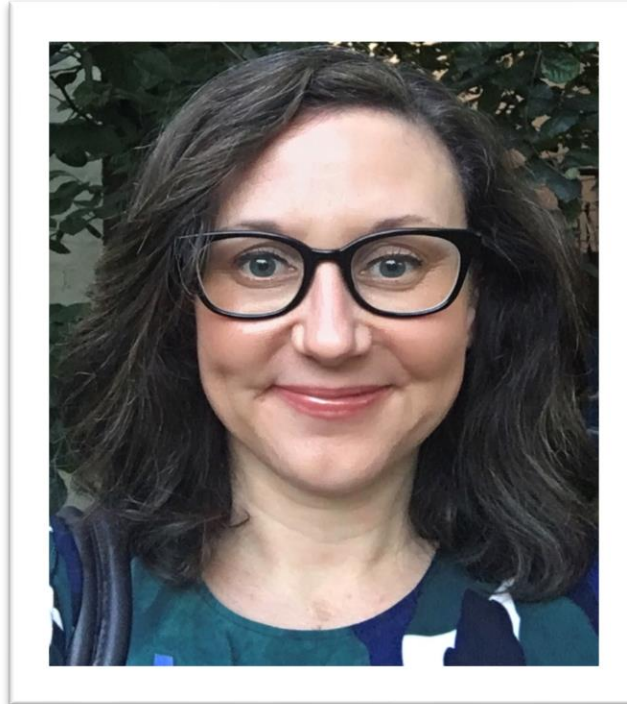
Problem solve in
real-time

Other Inpatient Neuropsychology Services

- Consults on other inpatient units
 - Patients with neurological insults who do not go to rehab
 - Patients with mental status changes



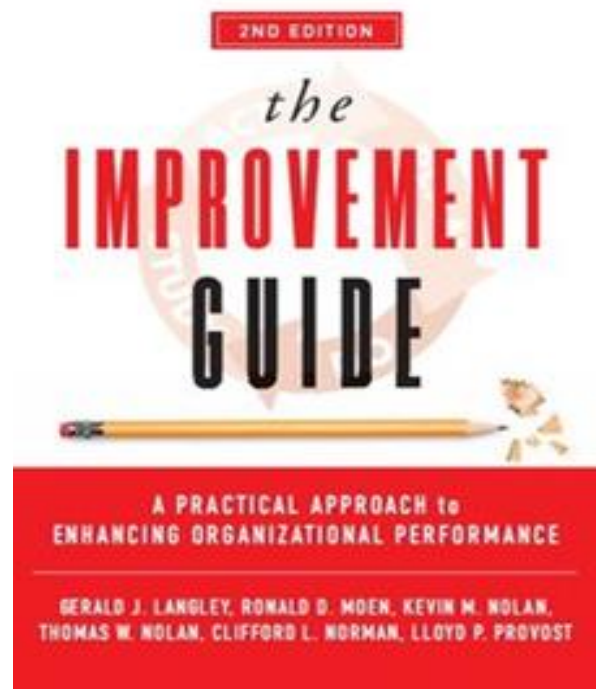
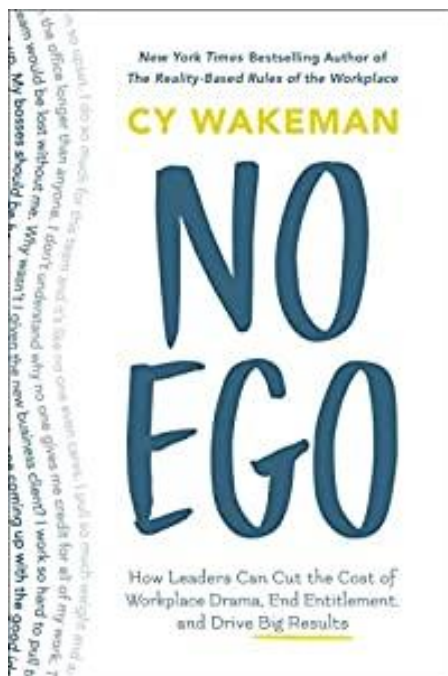
Promoting Change & Quality Improvement Concepts



Jennifer Cass, Ph.D., ABPP
Clinical Director, Neuropsychology

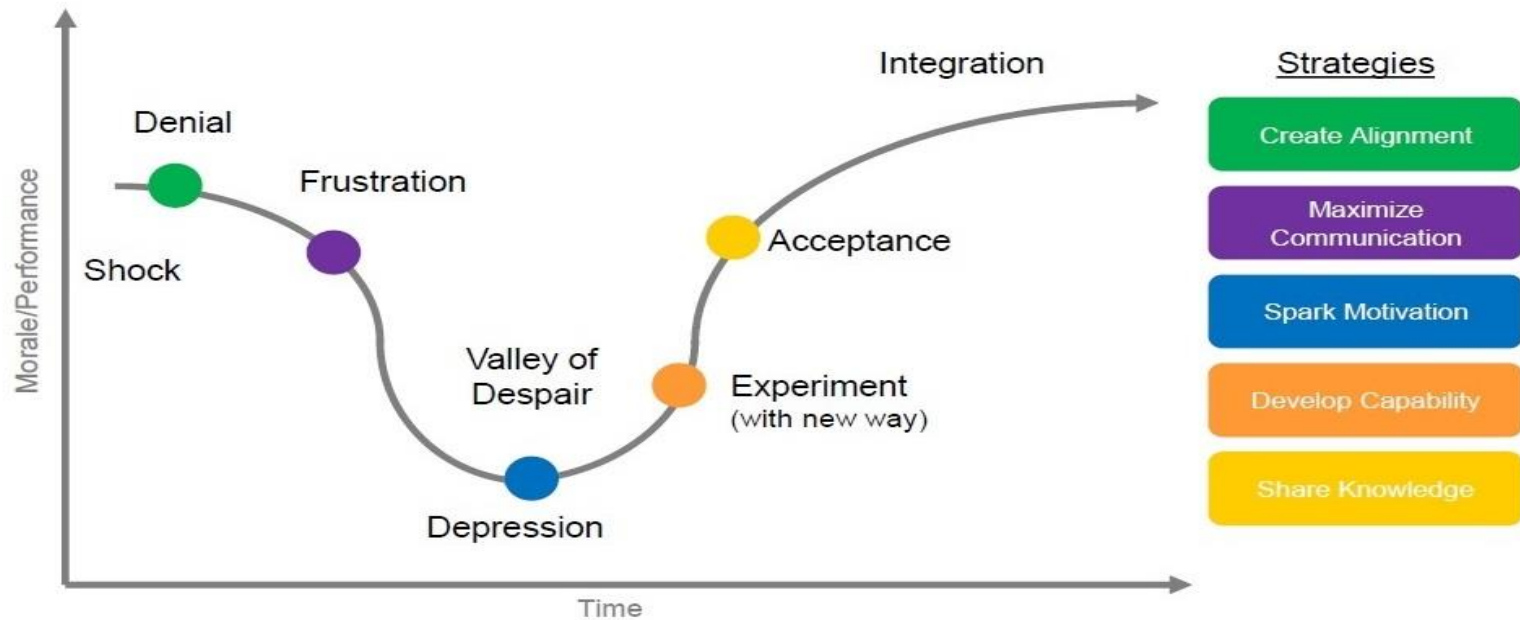
Promoting Change

- COVID-19 has challenged us more than ever to rapidly adapt



Classic Change Curve

How People Respond to Change



Understanding the change cycle, can help you manage change in your unit

Creating the Vision

- Clear, concise description of the desired future state
- Communicated with passion and energy
- Starting point for transformational change
- Inspires greater commitment

“People can’t get ‘there’ if they don’t know where ‘there’ is!”



The Vision

To drive change, leaders must

- Articulate and sell the vision
 - What’s our “burning platform”?
- Create and support the team
- Articulate a method to achieve results
- Achieve results & celebrate successes

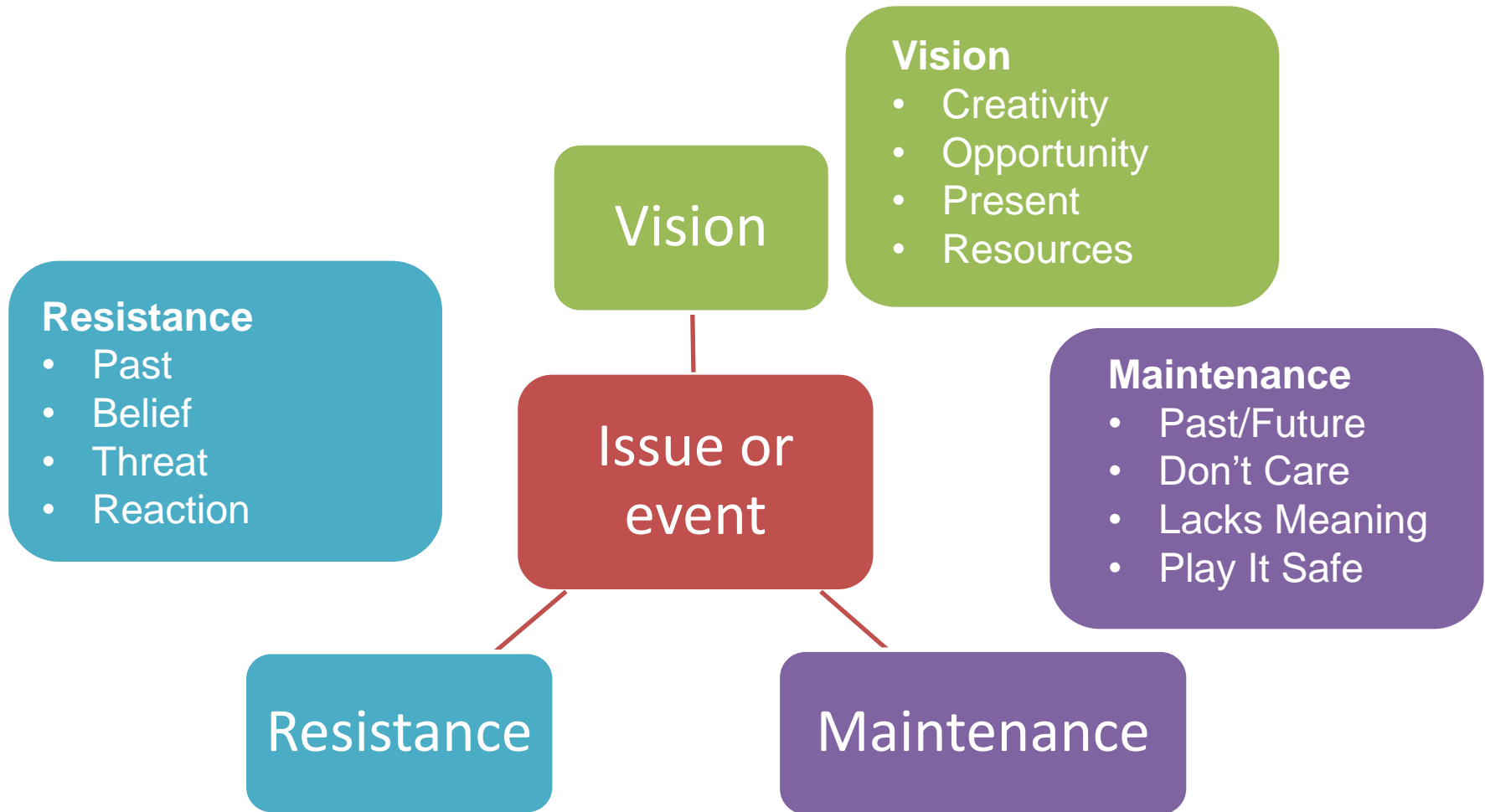
The Burning Platform



Cy Wakeman-Reality Based Leadership

- **Myth:** Change is hard
- **Reality:** Change isn't equally hard for everyone. It's hard for the unready
- Foster readiness for whatever is next rather than trying to slow down change
- <https://www.youtube.com/watch?v=JbCJwiBrHCQ>

Cy Wakeman's Choosing to Respond



Institute for Healthcare Improvement Psychology of Change Framework

Unleash Intrinsic Motivation

Tapping into sources of intrinsic motivation galvanizes people's individual and collective commitment to act.

Adapt in Action

Acting can be a motivational experience for people to learn and iterate to be effective.

Distribute Power

People can contribute their unique assets to bring about change when power is shared.

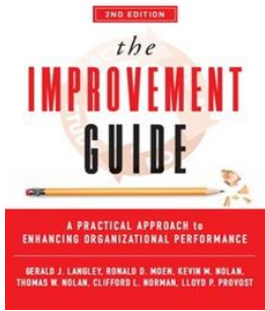


Co-Design People-Driven Change

Those most affected by change have the greatest interest in designing it in ways that are meaningful and workable to them.

Co-Produce in Authentic Relationship

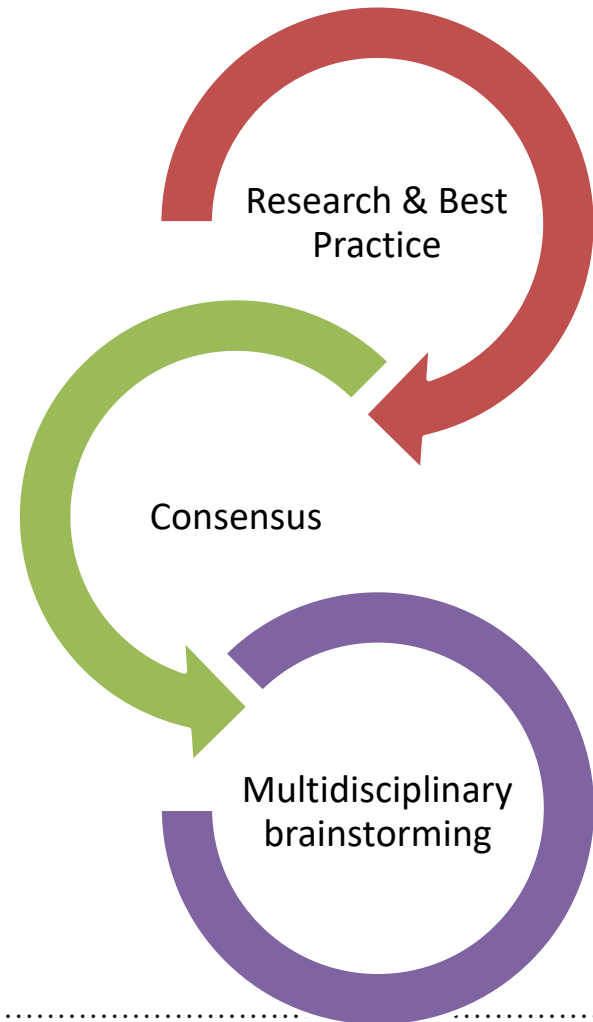
Change is co-produced when people inquire, listen, see, and commit to one another.



Change Processes

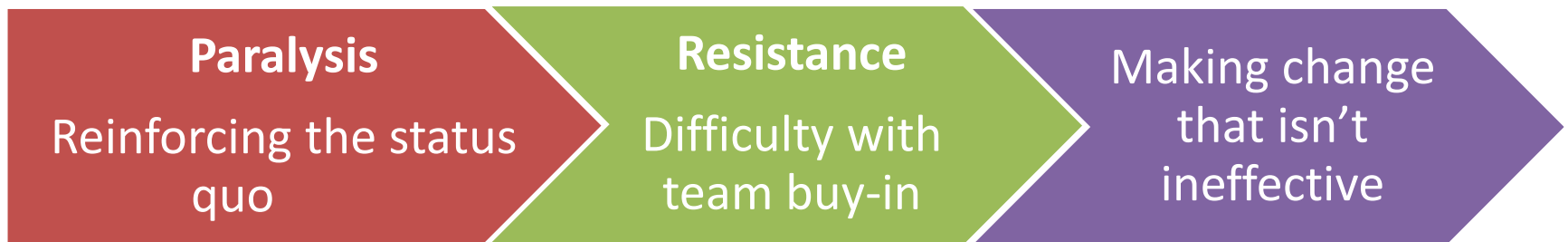
Sample Process

- Team members write solutions down to avoid bias and “group-think
- Each shares their ideas
- Post to identify highest frequency ideas



Changing a System

Planning **big changes** without small tests for feasibility or improvement can cause:



IHI Model

AIM

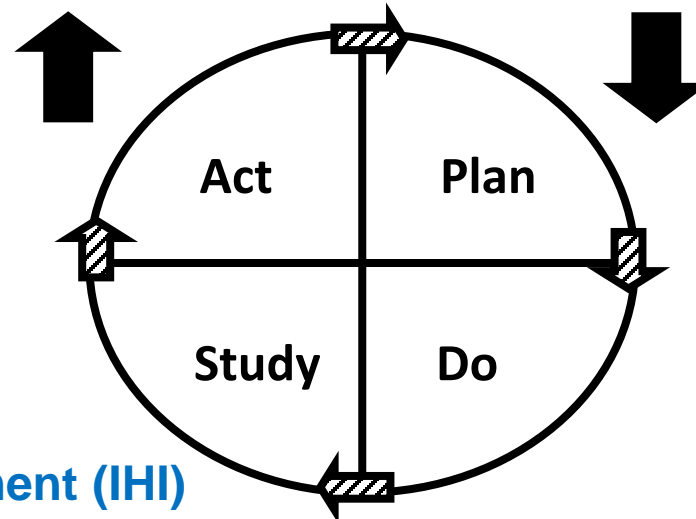
What are we trying to accomplish?

Run & Control
Chart

How will we know that a change is an improvement?

Key Drivers &
Interventions

What changes can we make that will result in
improvement?



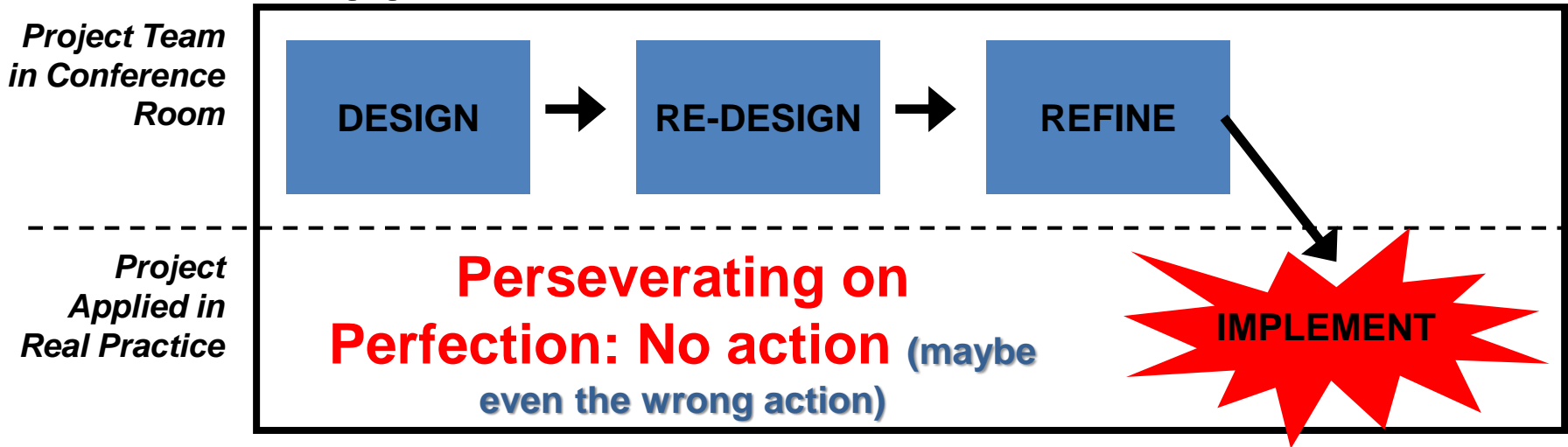
PDSA Cycles

- Test hypotheses
- *Small tests* of potential change
- Drives rapid change

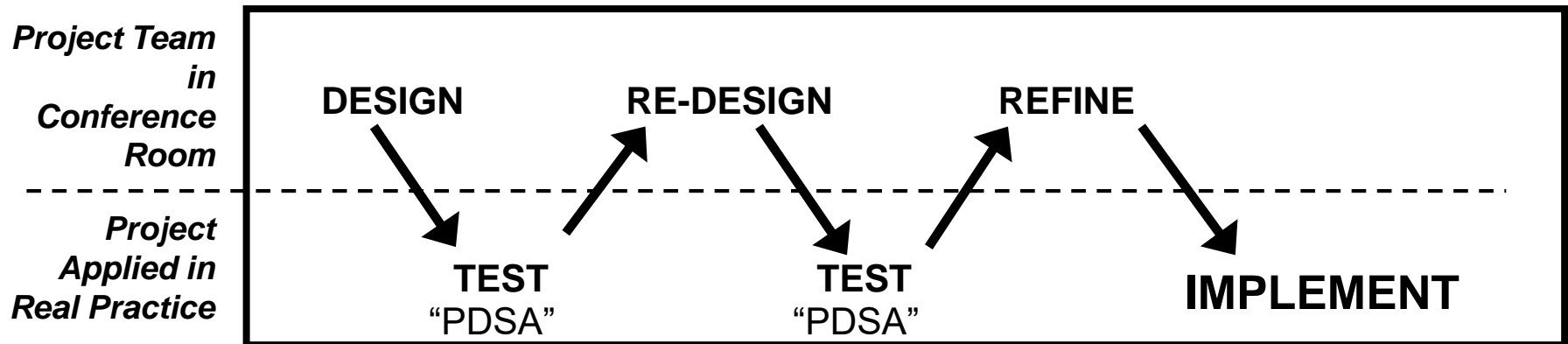


Design, Test, Implement

Common Approach to QI:



More Efficient Approach:



Designing a PDSA Test on Small Scale

- Those in vision test 1st
- Test the change with an individual or small group of volunteers
- **Goal** to spread enthusiasm & drive change and refine/weed out what doesn't work



Feel “the force” of change

- PDSAs are about Doing
- Checking results and doing again
- NOT perseverating on perfection (the perfect roll out) but rather DO something and learn from the results



***“Do or do not,
there is no try”***

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Certificates of Attendance

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Questions?

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