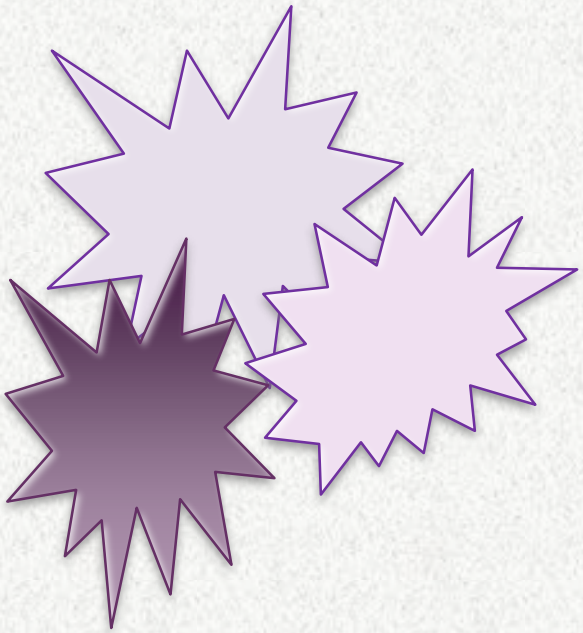
The Effect on Inter-Rater Consistency Using a Standardized Assessment Tool/Framework in Musculoskeletal Examinations



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STTI 28th International Congress

This scholarly project was carried out at the Compensation & Pension Clinic at the Veterans Affairs Pittsburgh Healthcare System in Pittsburgh, PA, over a two year period of time, meeting the requirements for completion of the Doctor of Nursing Practice degree at Carlow University.

There are no known conflicts of interest or financial disclosures to report.

Quality Improvement Project

Compensation & Pension Clinic, VAPHS

- **Problem:**
  - Lack of clearly defined decision making criteria to evaluate "functional loss"
  - Lack of inter-rater consistency among clinicians performing exams
  - Inconsistent rating for compensation due to disability awarded to Veterans

Quality Improvement Project
Compensation & Pension Clinic, VAPHS

Will the Implementation of a Standardized Assessment Tool Increase Inter-rater Consistency in Musculoskeletal Exams?

Literature Review

Musculoskeletal system examinations performed using a valid, reliable assessment tool

Result:

Increased consistency in outcomes

Evidence Based Practice

- ***Standardized tools help clinicians identify and quantify body function and structure limitations, improving clinical practice (AMA, 2014).***
- ***In assessing inter-rater reliability using the Index of ADL, Katz et al.,(1963) found that inter-rater variability occurred 1/20 evaluations or less.***

PDSA Model

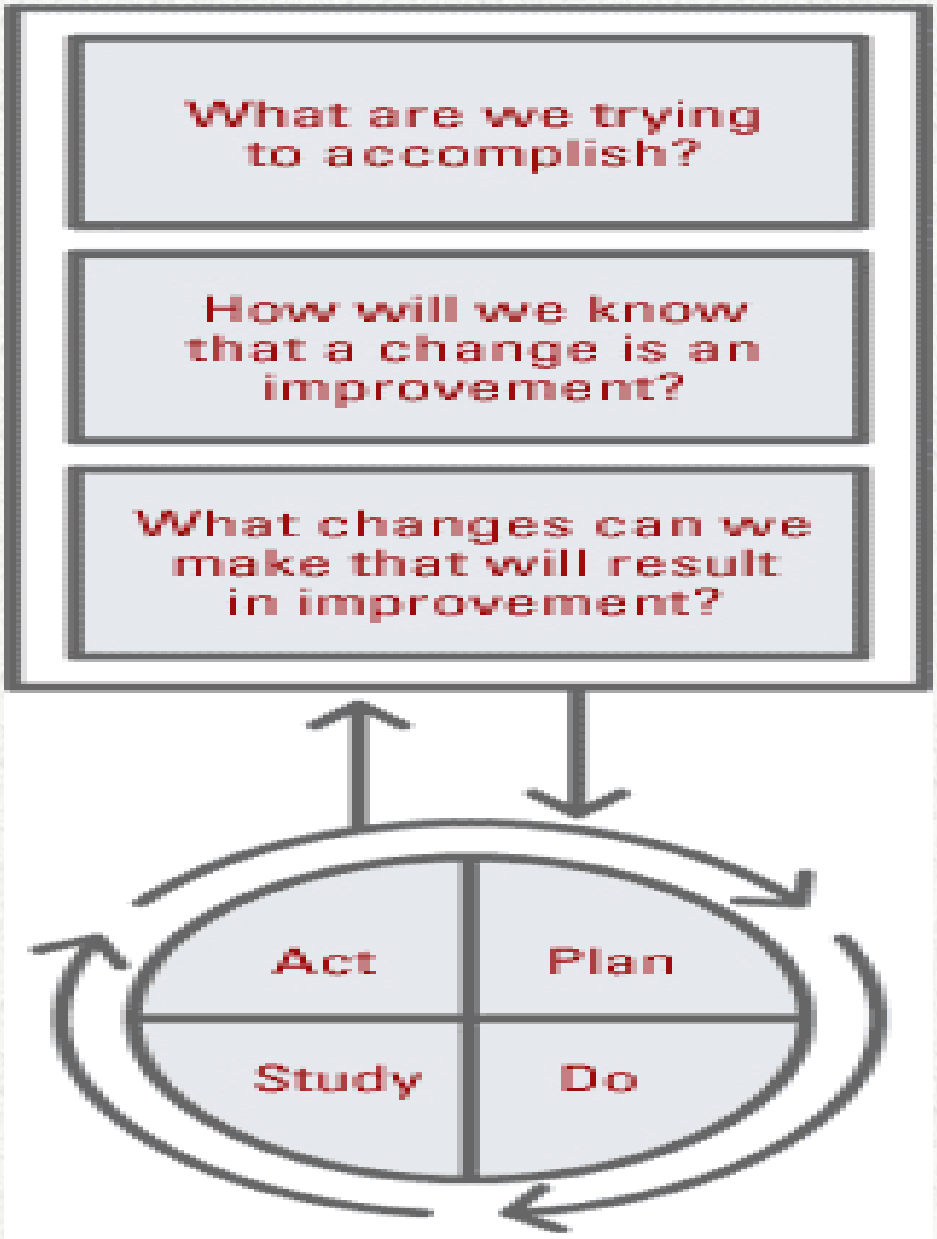
Framework for quality improvement to design and test change on a small scale using cycles:

PLAN

DO

STUDY

ACT



Search For a Tool To Assess Functional Loss

X Functional Movement Screen

✓**International Classification of Functioning (ICF)**

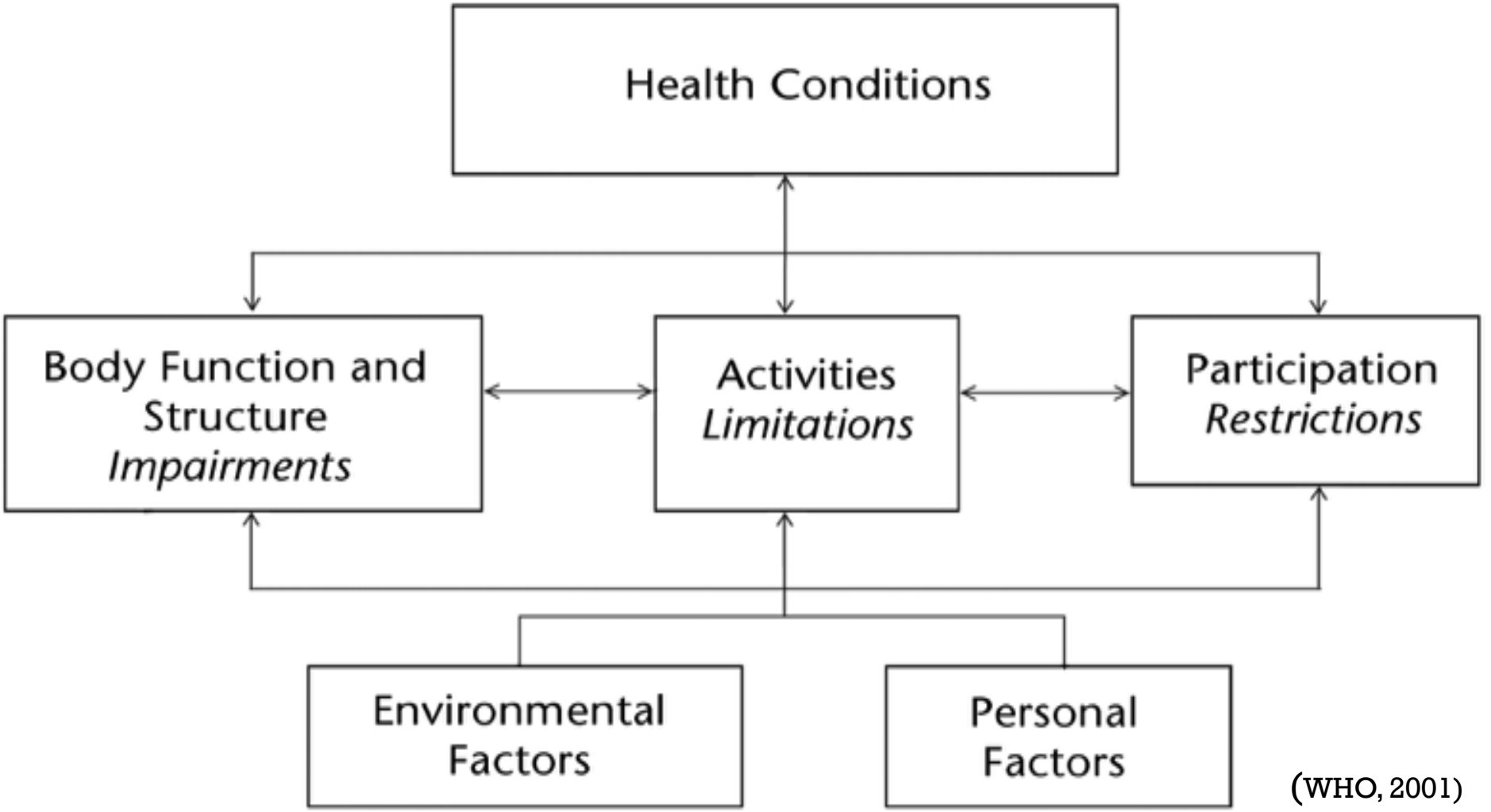
X Katz Index of Activities of Daily Living

X Disabilities of the Arm, Shoulder, and Hand (DASH)

International Classification of Functioning (ICF)

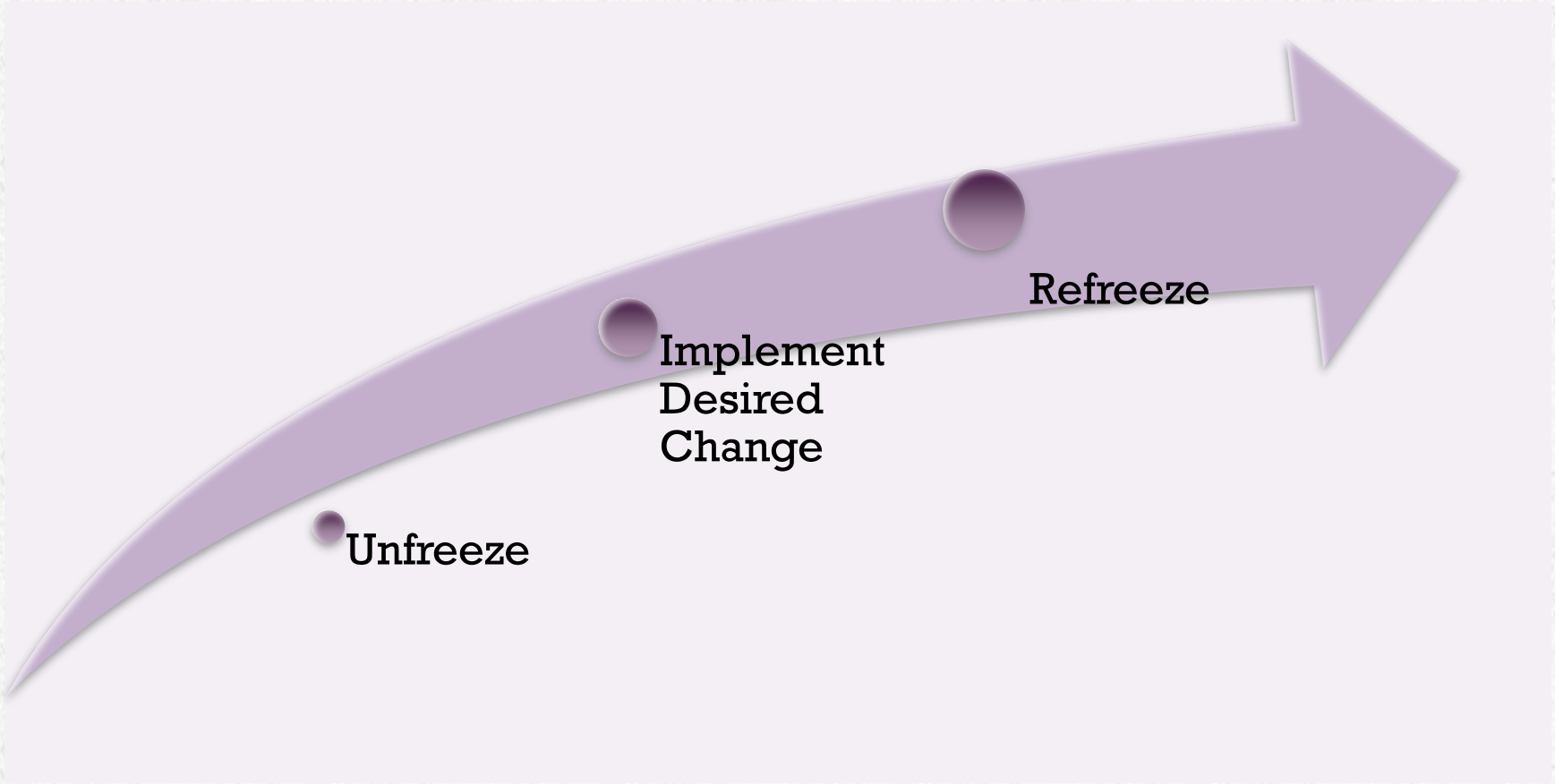
- Developed by the World Health Organization in 2001
- Describes the health status of individuals
- Considers personal and environmental factors and how both impact function
- Adaptable to musculoskeletal system

International Classification of Functioning



(WHO, 2001)

Theoretical Framework – Change Theory



(Lewin, 1951)

Application of PDSA Model for Quality Improvement

"Plan"

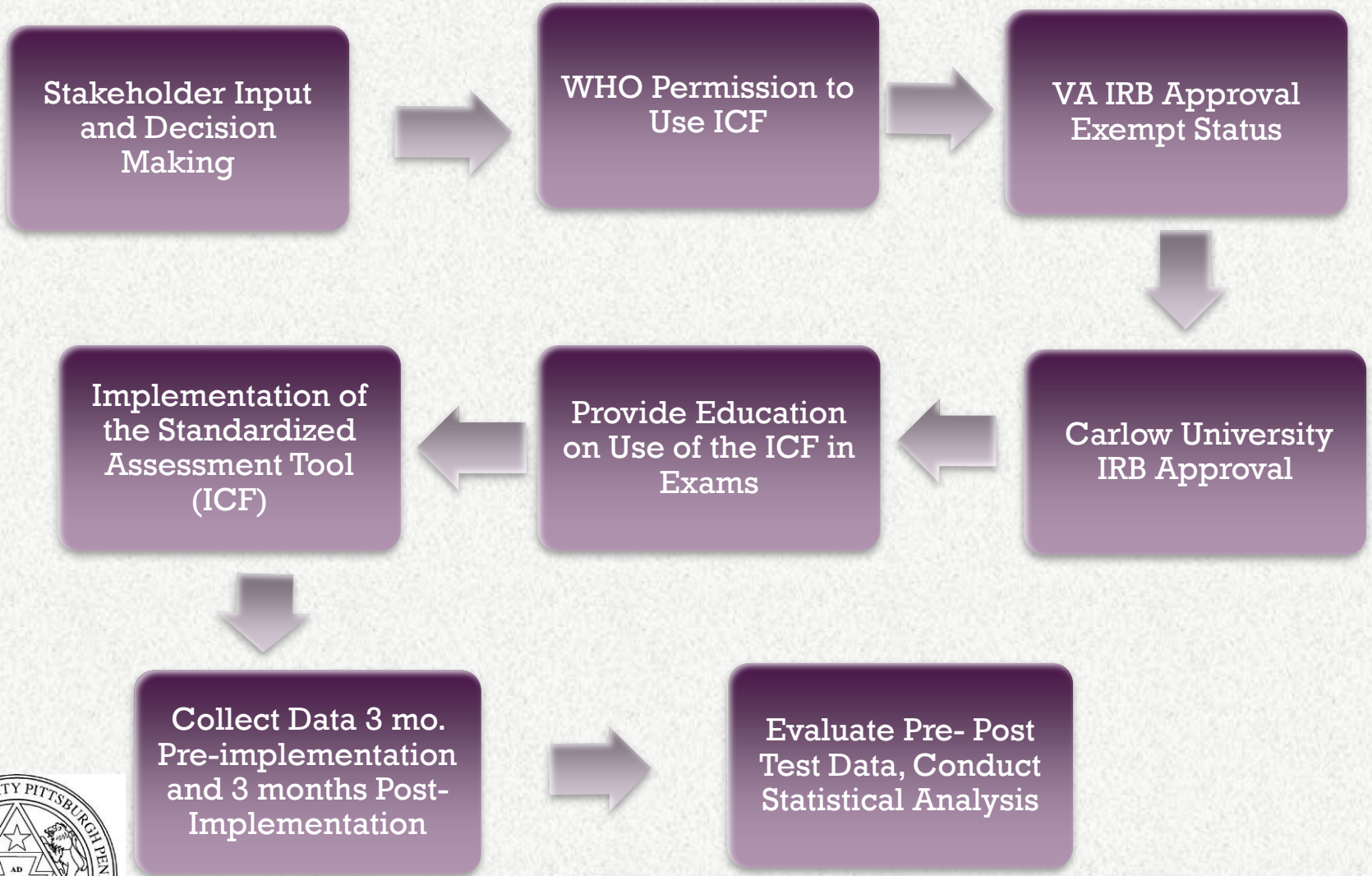
1. Provide education for providers in clinic

2. Implement standardized assessment tool (ICF)

3. Evaluate examination findings x 3 months prior to implementing ICF with 3 months post-education and implementation of ICF

4. Identify and analyze the change in assessment identified as (+)functional loss pre/post-implementation of ICF

Process for Implementation

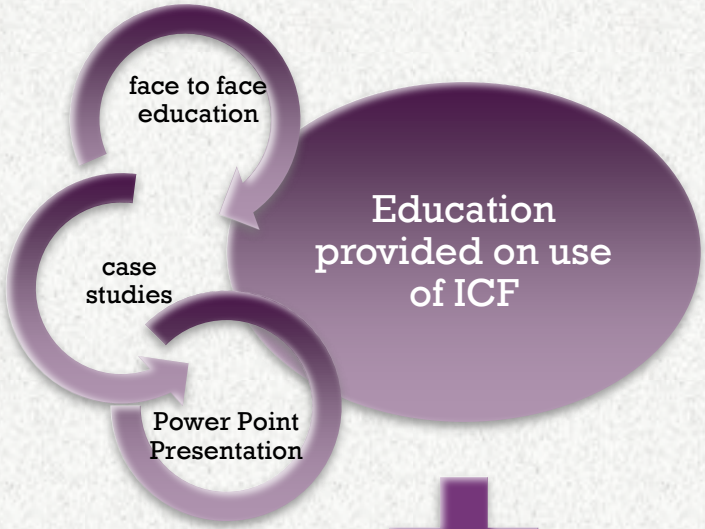


Application of PDSA Model for Quality Improvement

"Do"

- **Education** - provided to increase clinician's knowledge
  - Multiple face to face meetings
    - Describe use of ICF
    - Provide case study examples and application of ICF
    - Follow-up PowerPoint presentation (Functional Loss, ICF, additional case studies, review definitions)

Ready To Go!



Education provided on use of ICF

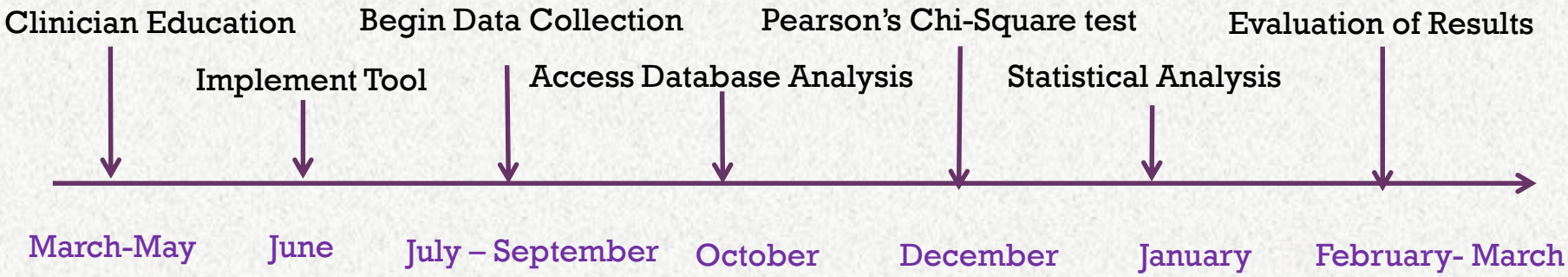
+

Test/Retest using case studies to achieve 80% passing rate by clinicians

→

Initiate use of the ICF in the shoulder examinations

Timeline: Spring, 2016 - Present



Data Collection

3 months pre-/3 months post- intervention

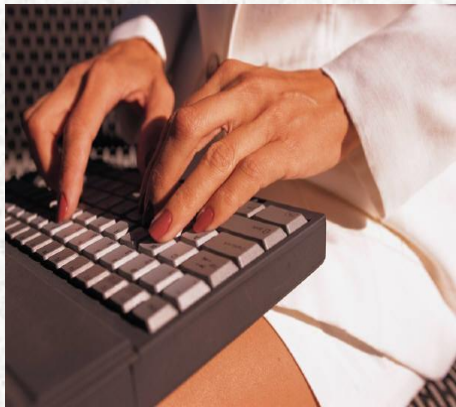
A. Transfer relevant data from patient chart to Access database

B. Database developer analysis

C. Transfer metrics to Excel spreadsheet

D. Perform statistical analysis

E. Identify significant findings



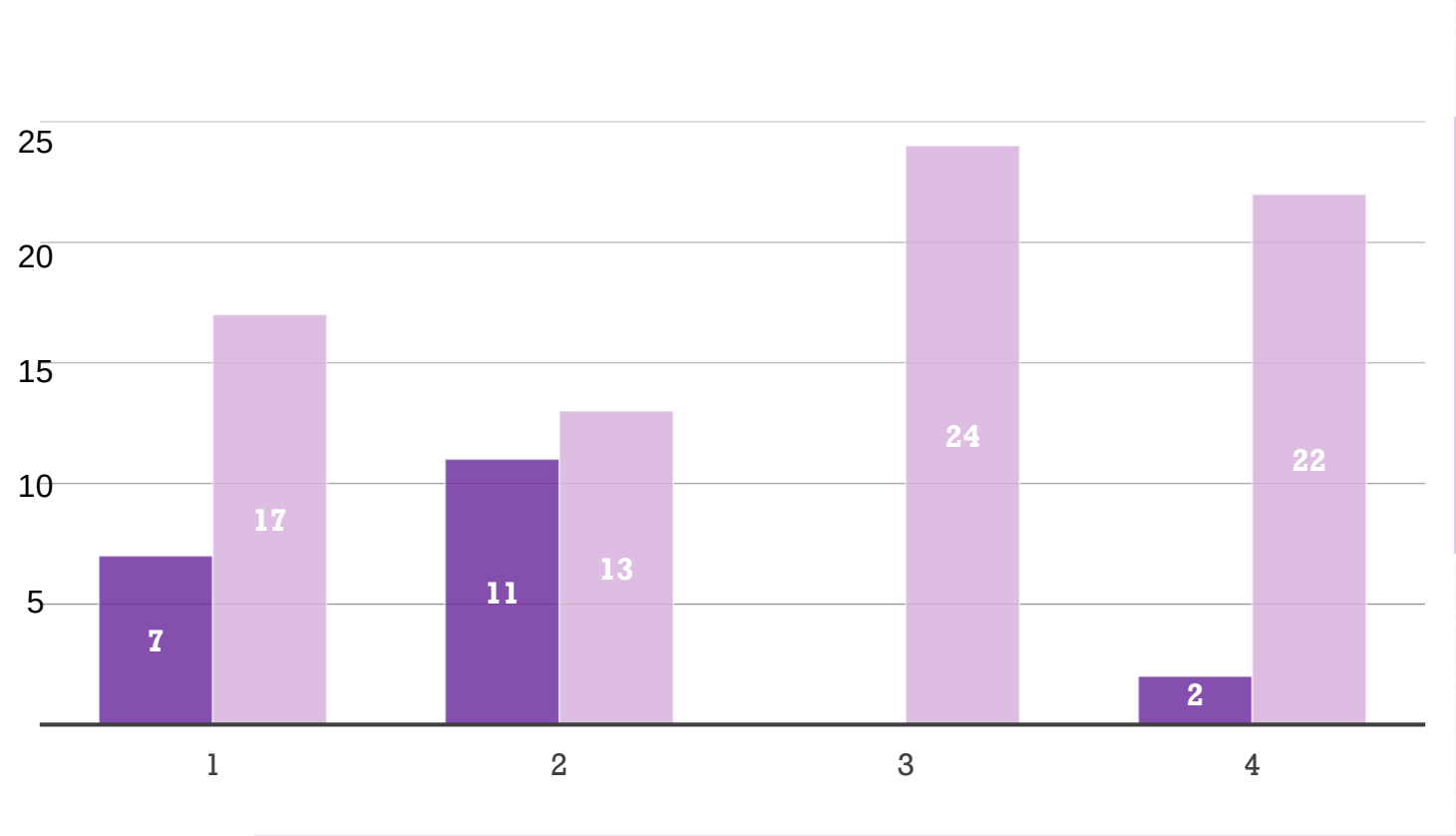
Measurement

"Study"

Evaluate Outcomes Pre/Post:

I. Assessment of Pain
II. Examination Findings
III. Functional Loss Assessment
IV. Functional Loss Findings Per Examiner

Examination Findings



Dark = Pre-Intervention

Light= Post-Intervention

1 = Pain reported by examinee
2 = Flare-ups experienced by examinee
3 = Clavicle impairment noted on exam
4 = Mechanical symptoms noted on exam

Data Analysis

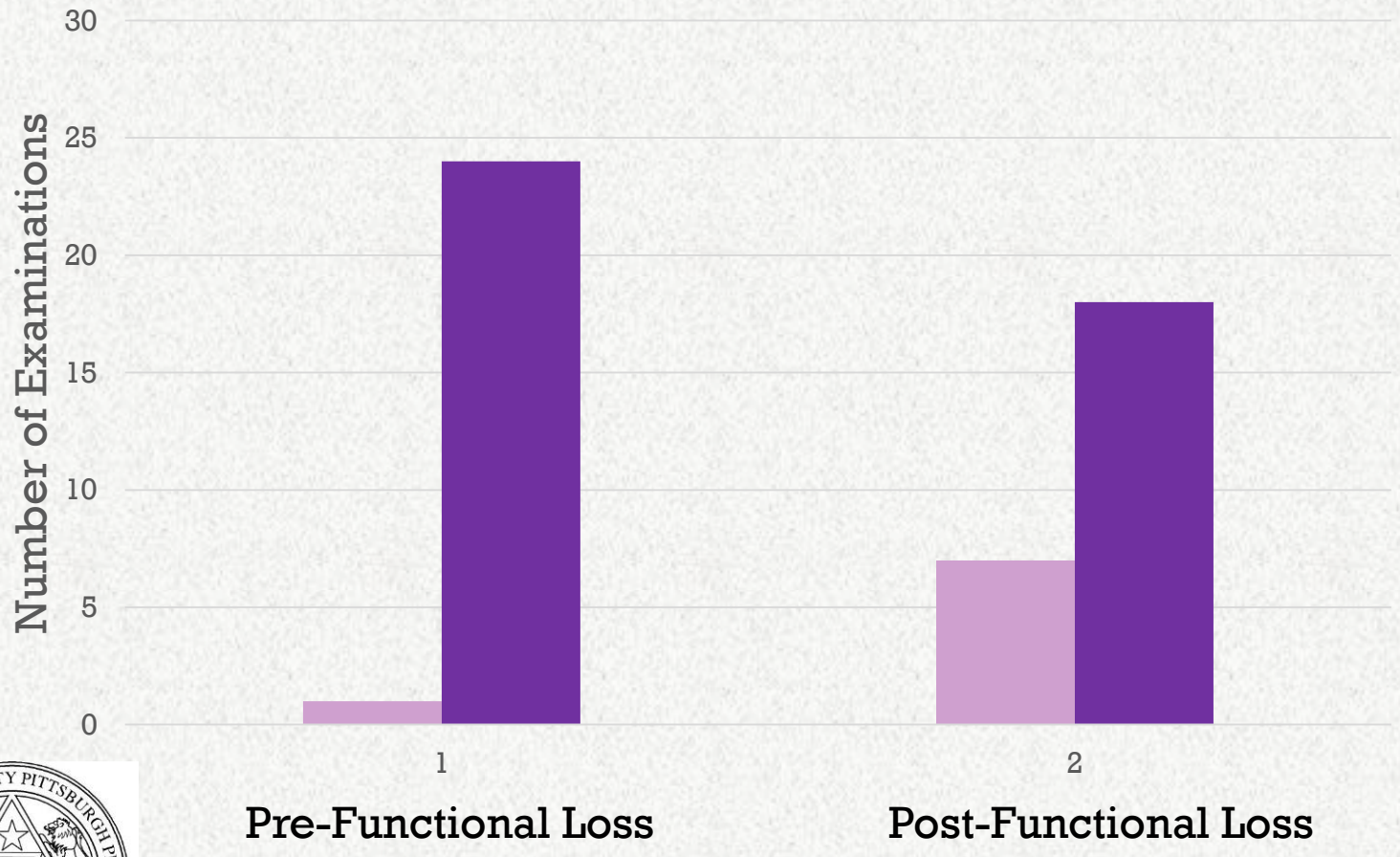
Functional Loss Assessment			
		Positive	Negative
Pre-Intervention		1	24
Post-Intervention		7	18

p-value = 0.02

OR = 8.94
(1.01, 79.46)

A Pearson's Chi-Square test was calculated between Pre/Post intervention. There is a statistically significant association between Pre vs. Post Intervention for functional loss.

Functional Loss Assessment



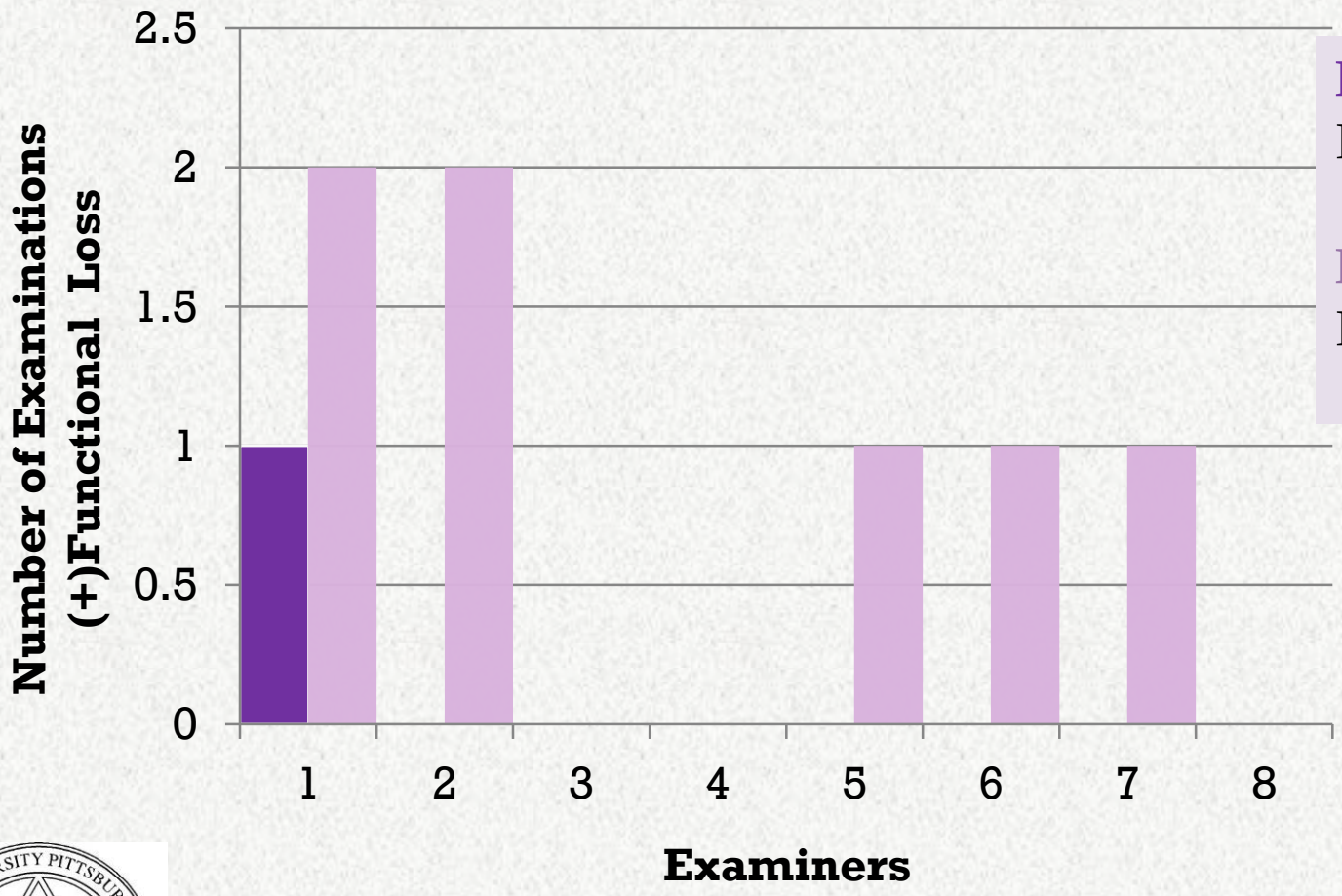
p-value = 0.02

OR = 8.94 (1.01, 79.46)

Dark = Negative

Light= Positive

Functional Loss Assessment

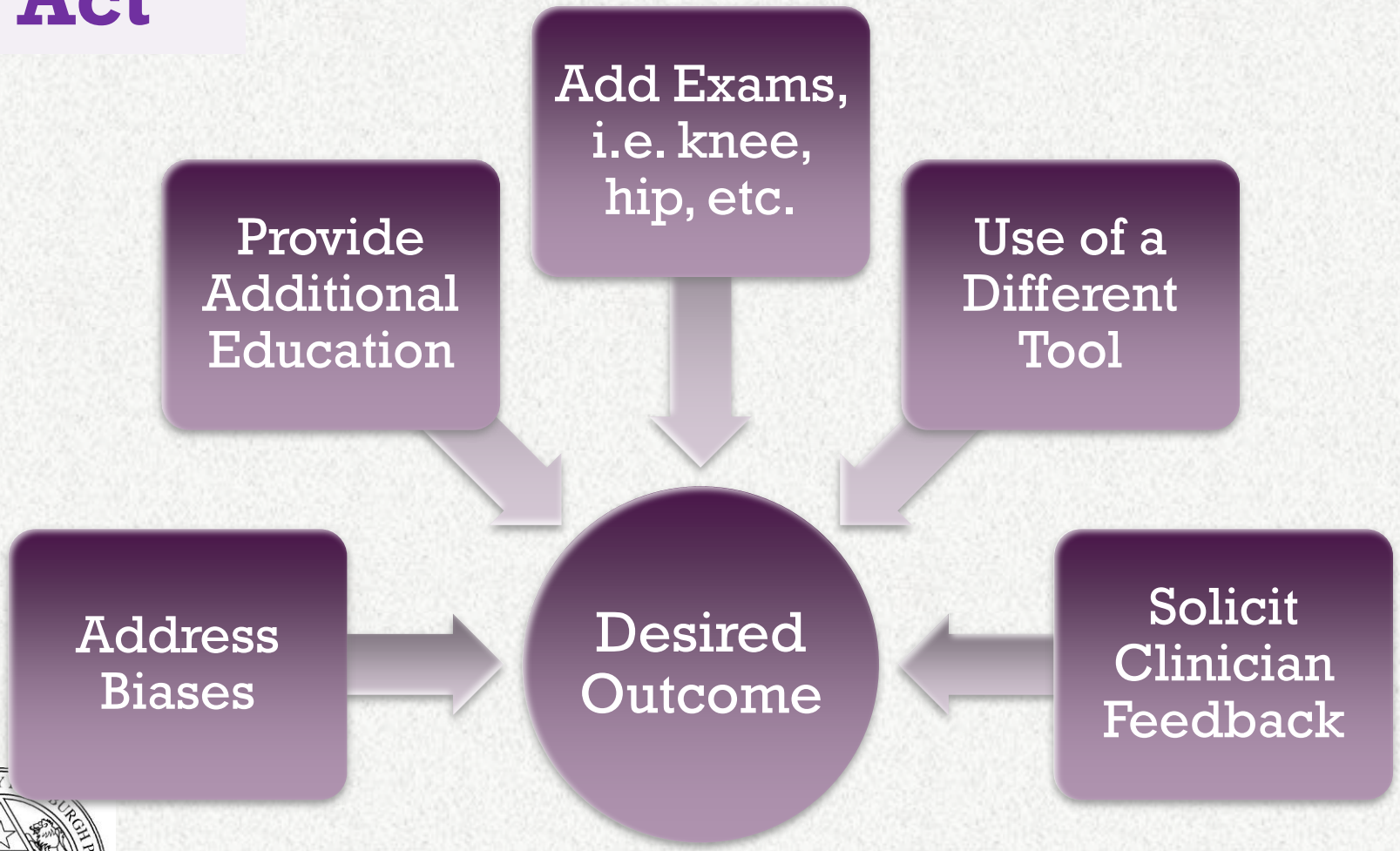


Dark = Pre-Intervention

Light = Post-Intervention

Action Plan

"Act"



What Does This Mean for Nursing?

- ✓Quality Improvement Projects Provide Value and Improve Nursing Practice
- ✓Use of Standardized Framework/Tools Increases Inter-rater (Examiner) Consistency
- ✓Use of Evidence Based Practice in the Clinical Setting Improves Nursing Outcomes
- ✓Use of Evidence Based Practice in Nursing Improves Patient Outcomes

Future Planning

- Disseminate Project Outcome To Benefit Other Clinicians
- Collaborate With Workgroups Outside VAPHS
- Solicit Input From VBA Regional Office

Challenges

- C&P Clinicians
- Organizational Complexity (VA)
- Midstream Events
- Biases
- Subjectivity of the Issue
- Dependence on Others
- ICF Not Specific

Bonuses

(In Addition to Intended Outcome of the Project)

- VA EXPO-ceptional Poster Presentation
  Winner of Veterans' Choice Award

- Sigma Theta Tau International
  28th Annual International Conference,
  July, 2017
  Presenter - Dublin, Ireland

Data Security

Maintained all information in locked cabinet within locked office/exam room located in area that requires passcode for entry

All communication between stakeholders conducted via secure encrypted Outlook messaging system

Pre- and post- implementation exam files obtained from Service Line Chief who has access to the secured information

Relevant data extracted from charts and recorded in ACCESS database maintained in shared drive

Identifiers remained anonymous for clinicians, subjects, and exam reports

Thank you

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