Evaluating Team Based Care

September 2021

- **All planners, faculty, and others in control of the content of this educational activity have no relevant financial relationships with ineligible entities (i.e., commercial organizations).**

Objectives

- **Understand importance of developing rigorous ways to evaluate team-based care**

- **Describe the current challenges in assessment of team-based care**

- **Name common resources to assist in the evaluation of team based care & how to assess validity of tools**
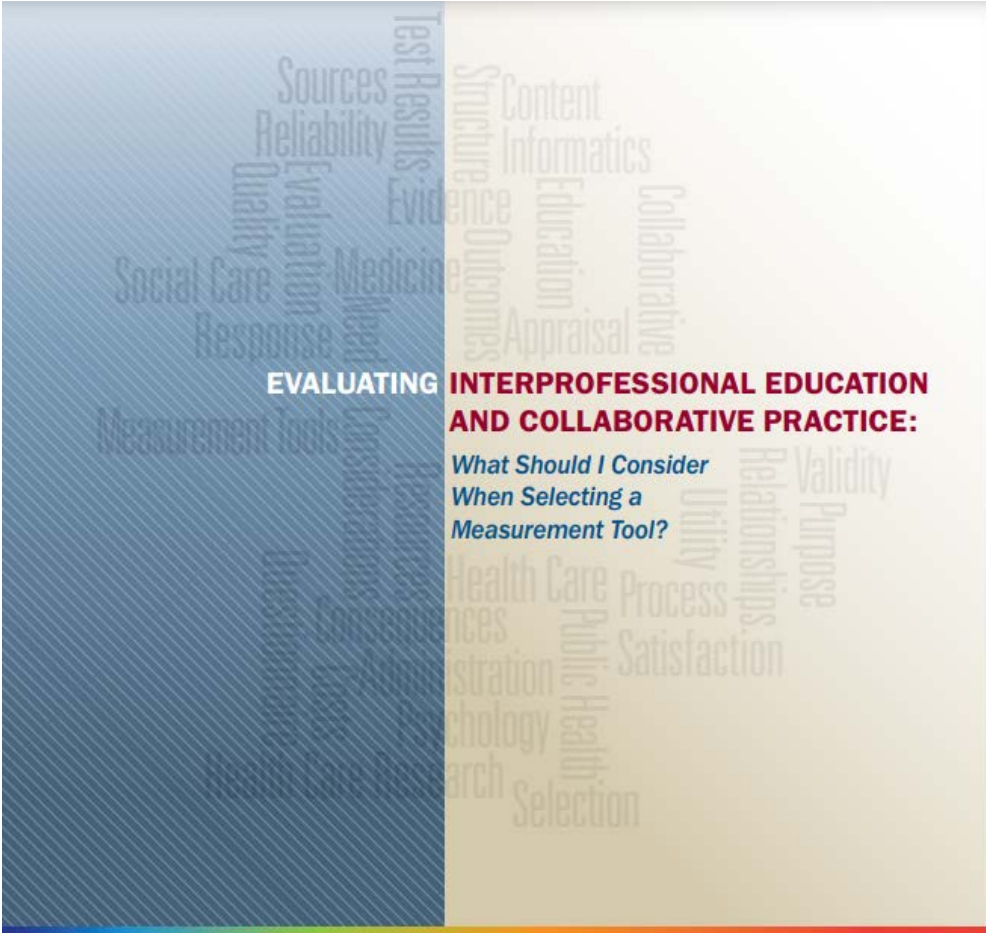
Reflect :

What teams have you been on?

Common outcome? Different roles?

How did you know that it was a good team?

What if it didn't work well?

EVALUATING INTERPROFESSIONAL EDUCATION AND COLLABORATIVE PRACTICE:

What Should I Consider When Selecting a Measurement Tool?

Connie C. Schmitz, PhD
Director of Education Research and Development
Department of Surgery
University of Minnesota Medical School (Twin Cities)

Michael J. Cullen, PhD
Director of Evaluation
Office of Graduate Medical Education
University of Minnesota Medical School (Twin Cities)

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Assessment is important

- **Impact & effectiveness of IPE is in question**
  - **Theoretical**
    - » **No "direct cause-and-effect relationship between IPE and patient, population and systems outcomes"**
  - **Resource intensive**
  - **Lack of engagement & alignment between health care delivery systems & IPE**
  - **Learners' perception of value**

Institute of Medicine (IOM) Consensus Committee Report
Released on April 22, 2015

More purposeful, well-designed, and thoughtfully reported studies are needed to answer key questions about the effectiveness of IPE in improving performance in practice and health and system outcomes

Health professions educators and academic and health system leaders should adopt a mixed-methods research approach for evaluating the impact of IPE on health and system outcomes

When possible, such studies should include an economic analysis and be carried out by teams of experts that include educational evaluators, health services researchers, and economists, along with educators and others engaged in IPE

Where would you start?
How would you approach this?
Stakeholders? Role needs?

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Define the Question – Before Finding the Tool

Table 2: Education Outcome Categories with Examples Relevant for IPECP

KNOWLEDGE	SKILLS	BEHAVIORS	AFFECTIVE STATES
Knowledge of...(e.g.) • Own profession • Other professions • Job duties • Cost-effective care • Patient centered care • IPCP care pathways • Quality measures • Teamwork • Patient safety • Health care systems • Triple Aim	**Skilled in...(e.g.)** • Pager etiquette • Hand-off transitions • EMR documentation • Patient safety protocols • Leading effective team meetings • Communication • Conflict negotiation • Collaborative practice, leadership	**Demonstrates...(e.g.)** • Professionalism • Ethical decision making • Timely consults • Collaborative decisions for care transitions • Effective end of life family conferences	**Has...** • Attitudes • Beliefs • Feelings • Perceptions • Self-confidence • Self-efficacy • Locus of control

Other things

- **Patient satisfaction**

- **Patient care outcomes**

- **Student test scores/performance**

- **Resource utilization**

- **Participation in QI activities**

Table 3: Examples of Measurement Tools by Respondent Level and Outcome Category

RESPONDENT LEVEL	KNOWLEDGE		SKILLS		BEHAVIORS		AFFECTIVE
	SUBJECTIVE	OBJECTIVE	SUBJECTIVE	OBJECTIVE	SUBJECTIVE	OBJECTIVE	SUBJECTIVE
INDIVIDUAL RESPONDENT	Pre-post self-assessment	Multiple choice test	Pre-post self-assessment	Ratings of individual simulated performance	Self-reflection inventory	360 degree evaluation; Situational judgment test	Opinion survey: Pre-post confidence
TEAM	Pre-post team self-assessment	Team quiz	Pre-post team self-assessment	Ratings of team simulations	Team debriefing	Observation rating tool	Summary of team interviews
ORGANIZATION	Key leader assessment of needs	Readiness for IPE audit	Trainer feedback on course	Review of quality measures	Self-study	External site visit, review of documents	Climate survey

Subjective: e.g., self-report, self-assessment
Objective: e.g., standardized tests, observed by others using standardized methods, systematic reviews of logs

Got your question? Time to find a tool

When picking assessment tools – ask yourself:

1) Does it measure what I want it to?

2) Is it valid?

3) Will it be feasible?

Finding a tool is harder than you think…

- **No gold standards**

- **Literature is massive**
    - **Education, Health Care, Public Health, Healthcare Research, Social Care & Psychology**
    - **Settings (clinical practice sites)**
    - **Learners**
- **Attitudinal & subjective**

Team-based??

Interprofessional education:
"When students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes." (WHO 2010)

Interprofessional collaborative practice:
"When multiple health workers from different professional backgrounds work together with patients, families, [careers], and communities to deliver the highest quality of care." (WHO 2010)

Interprofessional teamwork:
The levels of cooperation, coordination and collaboration characterizing the relationships between professions in delivering patient-centered care.

Interprofessional team-based care:
Care delivered by intentionally created, usually relatively small work groups in health care who are recognized by others as well as by themselves as having a collective identity and shared responsibility for a patient or group of patients (e.g., rapid response team, palliative care team, primary care team, and operating room team).

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Tool repositories

- **Canadian Interprofessional Health Collaborative (CIHC)**
  http://www.cihc.ca/

- **National Center's Resource Exchange (NEXUS)**
  https://nexusipe.org/measurement-instruments

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Refine by ?

Subject
☑ Teamwork
☐ Education & Learning (80)
☐ Assessment & Evaluation (63)
☐ Collaborative Practice (43)
☐ Patients & Families (25)

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Authors
☐ David Miller (2)
☐ American Institutes for Research (1)

☐ Carole A. Orchard, BSN, MEd, EdD (1)
☐ Carolyn Giordano (1)
☐ Cherie P. Brunker, MD (1)

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Resource Type
☑ Tool
☐ Journal Article (247)
☐ Report (60)
☐ Conference Paper (59)
☐ Other (44)

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Tags

Search for books, articles, webinars and more ?

[   ] [Reset]

SORT BY   RECENTLY ADDED   **MOST POPULAR**   TITLE

Showing 1 - 10 of 28 fo   ✕ **Tool**   ✕ **Teamwork**

🔧 **RIPLS: Readiness for Interprofessional Learning Scale**
The Readiness for Interprofessional Learning Scale (RIPLS) was developed to assess the attitudes and perceptions of students and professionals to determine their readiness for interprofessional learning and change. RIPLS is proposed to measure a change in attitudes, the effect of different...

National Center for Interprofessional Practice and Education - Nov 4, 2013

🔧 **ISVS: Interprofessional Socialization and Valuing Scale**
The Interprofessional Socialization and Valuing Scale (ISVS) was developed to evaluate the beliefs, behaviors, and attitudes that underlie interprofessional socialization and collaborative practice in health care settings. This is a 24-item tool with a 7-point scale used to assess the extent of...

National Center for Interprofessional Practice and Education - Nov 4, 2013

🔧 **CPAT: Collaborative Practice Assessment Tool**
CPAT was developed to assess levels of collaboration intended to assist clinical teams in identifying strengths and weaknesses in their collaborative practice thereby providing opportunities for focused educational interventions.

National Center for Interprofessional Practice and Education - Nov 4, 2013

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Table 4: Relevance to Your Situation

CHARACTERISTICS	SAMPLE QUESTIONS TO ASK YOURSELF
CONTENT	• Does the tool cover the content domain that I am interested in? • For example, does it: (a) Cover what I teach? (b) Reflect the goals of our program? (c) Address the research questions I am asking?
PURPOSE	• What is the purpose of this tool, and to what extent does it match my reasons for assessment/evaluation/research?
POPULATION	• For whom is this tool intended? • What types of individuals (teams, programs, sites, etc.) were included in the sample during tool development, or during its subsequent use? • To what degree does this sample resemble my population? • How large was the sample? • Was the tool used successfully across different professions and programs? • Is there information on how these different populations responded?

When picking assessment tools – ask yourself:

1) **Does it measure what I want it to?**

2) **Is it valid?**

3) **Will it be feasible?**

How valid is it?

- Validity = conclusions are those which can be trusted

- Validity = reliability of interpretation
    - Stable, consistent, reproducible, repeatable

- Validity is situationally dependent
    - Mode of administration
    - Timing
    - Population & circumstances

- Validity is not black or white

    - Performance judged on correlation with other measured outcomes or percent of variation that can be explained by real differences vs. measurement error

Evidence of Validity

1) Content

- Must adequately represent the intended content domain

2) Response Process

- Participants must understand activity and respond in an appropriate manner

- If participants response unpredictable, cannot draw any conclusion based on activity being assessed

Table 1. A seven-step, survey scale design process for medical education researchers.

Step	Purpose
1. Conduct a literature review	To ensure that the construct definition aligns with relevant prior research and theory and to identify existing survey scales or items that might be used or adapted
2. Conduct interviews and/or focus groups	To learn how the population of interest conceptualizes and describes the construct of interest
3. Synthesize the literature review and interviews/focus groups	To ensure that the conceptualization of the construct makes theoretical sense to scholars in the field and uses language that the population of interest understands
4. Develop items	To ensure items are clear, understandable and written in accordance with current best practices in survey design
5. Conduct expert validation	To assess how clear and relevant the items are with respect to the construct of interest
6. Conduct cognitive interviews	To ensure that respondents interpret items in the manner that survey designer intends
7. Conduct pilot testing	To check for adequate item variance, reliability and convergent/discriminant validity with respect to other measures

Adapted with permission from Lippincott Williams and Wilkins/Wolters Kluwer Health: Gehlbach et al. (2010). AM last page: Survey development guidance for medical education researchers. Acad Med 85:925.

Anthony R. Artino Jr., Jeffrey S. La Rochelle, Kent J. Dezee & Hunter Gehlbach (2014) Developing questionnaires for educational research: AMEE Guide No. 87, Medical Teacher, 36:6, 463-474

Validation process

3) Internal structure

- Items within a domain must correlate

- High correlation suggest that they are measuring construct of interest

Validation process

4) Relationship to other (external) variables

- **Must correlate (show evidence of measurement) with things measuring similar constructs**

  » *Example: a tool to measure knowledge of interprofessional communication skills should correlate with performance*

- **Must not correlate with things that may effect performance but are unrelated to construct being measured**

  » *Example: performance on a teamwork skill in ICU shouldn't correlate with number of nights on call (measuring fatigue or teamwork??)*

- **Must be able to discriminate between groups that would be expected to score differently**

  » *Example: novices should perform reliably different than experts*

  Must be able to predict

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Validation process

5) Consequences of assessment

- Scores useful?

- No evidence of unintended assessment/outcomes (marginalization, conflict, stereotypes)

Evidence of Validity

1) **Content**

2) **Response process**

3) **Internal structure**

4) **Relationship to other variables**

5) **Consequences of assessment**
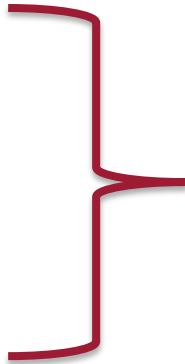
SHOULD HAVE

Table 5: Validity Evidence

VALIDITY CLAIM	QUESTIONS TO ASK YOURSELF
CONTENT	• What provided the theoretical or practical framework of the tool? • How were the items/tasks/cases selected? • What evidence suggests that the tool neither under-represents the construct (content domain) I am interested in, nor introduces construct-irrelevant variance?
RESPONSE PROCESS	• Are the instructions to respondents clear? • Are the items clear? Do they ask only one thing at a time? • Are the response options clearly labeled, and congruent with what the question is prompting the respondent to do? • How was the tool administered? What were the conditions of its administration? • What did the developers learn during pilot testing or debriefings about the response process? • Are there any reliability data that suggest the scoring guidelines were applied consistently from rater to rater (e.g., inter-rater agreement) • Are there any reliability data that suggest the scores are stable across different forms of the tool, or repeatable (e.g., "test-retest" correlations)?
INTERNAL STRUCTURE	• Is there evidence that the items in the test are highly correlated with each other (e.g., internal consistency reliability)? • Is there evidence that the items which form subscales within a test are also highly correlated? • Does factor analysis confirm the same grouping of items as theorized? • Are there other statistics that support the relevance and functionality of the items (e.g., item-total correlations; item discrimination; item difficulty)? • Is there information on the standard error of measurement? • Are the confidence intervals around the scores reasonably small?

Evidence of Validity

1) **Content**

2) **Response process**

3) **Internal structure**

4) **Relationship to other variables**

5) **Consequences of assessment**

} HELPFUL FOR INTERPRETATION

When picking assessment tools – ask yourself:

1) **Does it measure what I want it to?**

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3) **Will it be feasible?**

Currently being collected	Tool/Data Source	Domains Covered	Total Number of Domains Covered	Domains	Availability	Analytic Ease	Ability to Answer Que.	Reliability	Other
	iPACE Process metrics	ICP1, PC, WB, Cost iPACE		5					Number of changed appointment times, PCP notified upon admission/discharge; # records requested; # post-discharge appointments being made; # family at rounds
	Daily Census	Cost, iPACE		2					Attribution
	Focus Group (Interns, Residents, Attendings, Nurses)	IPCP1-3; IPE1-2, WB, QC, iPACE, IMPACT		9					
	NUHSyE observations	IPCP1&3; IPE1; PC; WB		5					Provider/Nurses observation; teachable moment
	RCS Provide Survey[1]	IPCP2; WB; PC; IPE1-2; QC; iPACE		6					Proprietary; includes mini-z questions
	Adapted Mallory Tool[2]	IPCP2; QC		2					NUHSyE administering – pilot data
	HCAHPS data[3]	IPCP2; PC; IMPACT		3					Low numbers; low sensitivity
	Informal Qualitative Data[4]	IPCP1-3; IPE1-2, WB, QC, iPACE, IMPACT		9					
	iPACE Milestones/Significant Changes to Design	iPACE		1					Collected informally by iPACE staff
	Paging Data (Dclark)	IPCP1; WB		2					
	Resident Modified End of Rotation Evaluation	IPCP 1-3; IPE 1-2; WB; QC		7					Pharmacy resident experiences already being collected
	Team of Team Evaluation (360)	IPCP 1-3; IPE 1-2; WB		6					
	KPI	IPCP3; Q&S; QC; iPACE; IMPACT; LL		6					
	Patient Questionnaire	PC;		1					
	Financial Metrics	Cost, iPACE		2					
	Educational sessions offered & attendance	IPE1-2		2					
	Appointment times (rounds)	IPCP1; WB		2					7:30-1:30 pm; schedules of day available but not deviations
	Duty Hours	IPCP1; WB		2					New Innovations; unclear if total hours collected or just violations
	Turn over statistics/exit interviews	IPCP2; WB; Cost							vs. pressures on the floor **HR NEEDS TO FACILITATE**
	Safety Reports	Q&S; QC		2					Falls, delirium, CODE GRAY/CODE GREEN
	Architectural Analysis	IMPACT		1					Unclear of methodology, etc.
	Institutional lessons – Focus								

Summary

- **Evaluation is not an afterthought!**

- **Should be grounded in the purpose of the intervention**

- **Consider if evaluation methods:**

  - **Reflect construct of interest**

  - **Is valid?**

  - **Is feasible?**

QUESTIONS?