

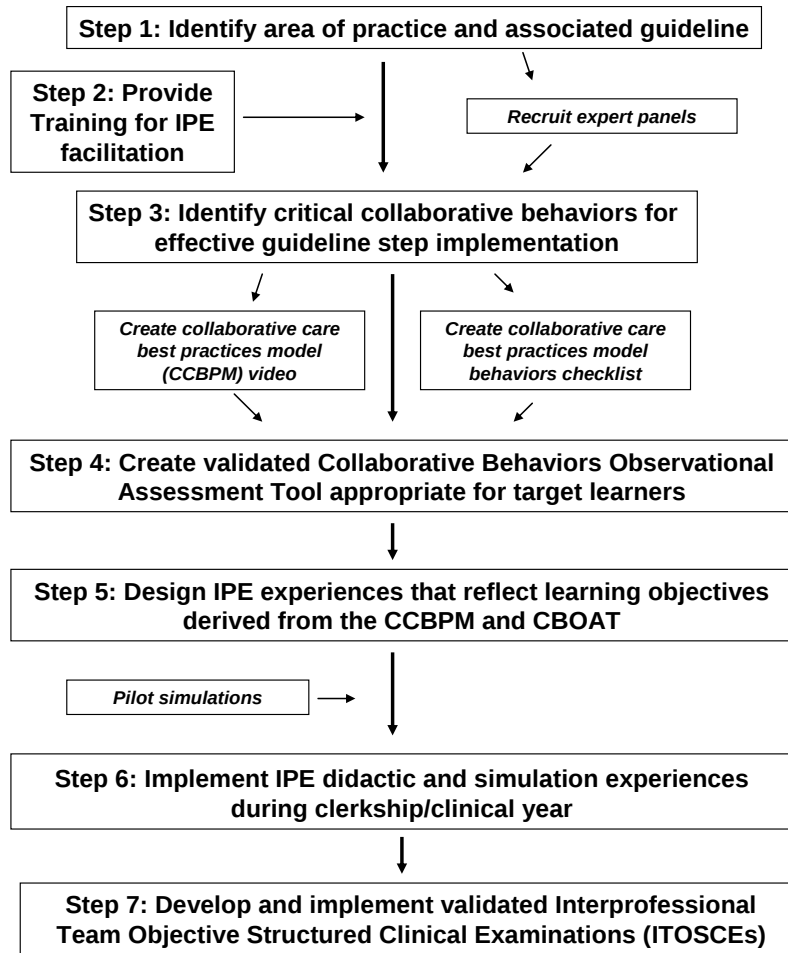
Brief Primer on IPE Evaluation for Univ. of Washington

Tina Brashers (vlb2z@virginia.edu) and John Owen (JAO2B@hscmail.mcc.virginia.edu)
University of Virginia

1. IPE assessment tools measure basic areas: (although there is some overlap between them):
 - a. Attitudes
 - b. Knowledge
 - c. Skills
 - d. Behaviors
 - e. Facilitator evaluation
2. IPE assessment can also be categorized as
 - a. Exam format for knowledge questions
 - b. Survey self-assessment tools
 - c. Survey of instructors for their perceptions of student performance (simulation or clinical)
 - d. Checklists with OSCEs
 - e. Debriefing
 - f. Reflection and journaling
3. IPE assessment tools can be used:
 - a. Pre and post single IPE activity
 - b. Post only, asking "Having participated, I am better able to..."
 - c. Pre and post longitudinal over course of study or some sub_segment thereof for continuous assessment.
 - d. End of Program for summative assessment
4. Basic principles:
 - a. No one tool is perfect – all have pros and cons
 - b. Be clear about your learning objectives and what you really want to measure, then choose the tool accordingly.
 - c. Use explicit learning theories appropriate to IPE to articulate your learning objectives, design your educational experiences, and guide your evaluation strategies.
 - d. Consider using the modified form of the four-level Kirkpatrick typology to guide your assessment of IPE outcomes (Freeth et al, 2005).
 - e. There is a limit to what students will give you on evaluations – short evals with mostly quantitative and an open-ended question or two are well tolerated
 - f. Your response rate will be higher if they have to complete the evaluation immediately
 - g. Surveys are low effort with less impact, observational tools are high effort but potential for major impact
 - h. A mixed-method approach is likely to give you more information
 - i. Creating and validating your own tools is hard work
5. Specific tools to consider – please see Appendix for a list of a few tools and my associated comments. The CIHC has put out an AMAZING list of tools, psychometric data, comments, reference list and who to contact if you want more info about the tools at http://www.chd.ubc.ca/files/file/instructor-resources/CIHC_tools_report_Aug26%202012.pdf

UVA Approach to IPE Development, Implementation and Evaluation

Process Template to Develop, Implement, and Assess Undergraduate IPE Experiences



Creation of Collaborative Care Best Practice Models:

Project teams identify a list of “gold standard” for both profession-specific and collaborative behaviors needed to address a SPECIFIC area of practice for which team based care is essential (called the Collaborative Care Best Practices Model [CCBPM]).

- Project team members write a simulated scenario for the chosen area of practice
- Interprofessional panels of clinician experts are engaged with the written simulated scenario to identify essential profession-specific and collaborative behaviors necessary for effective team care
- A videotape role play of the scenario is created in which the behaviors are demonstrated
- Clinician experts view the videotape and revise the list of behaviors as needed
- The scenario is videotaped a second time demonstrating the revised list of behaviors
- Clinician experts meet again to view the second videotape and determine the final checklist of collaborative behaviors necessary for effective team care. This final list is the CCBPM.

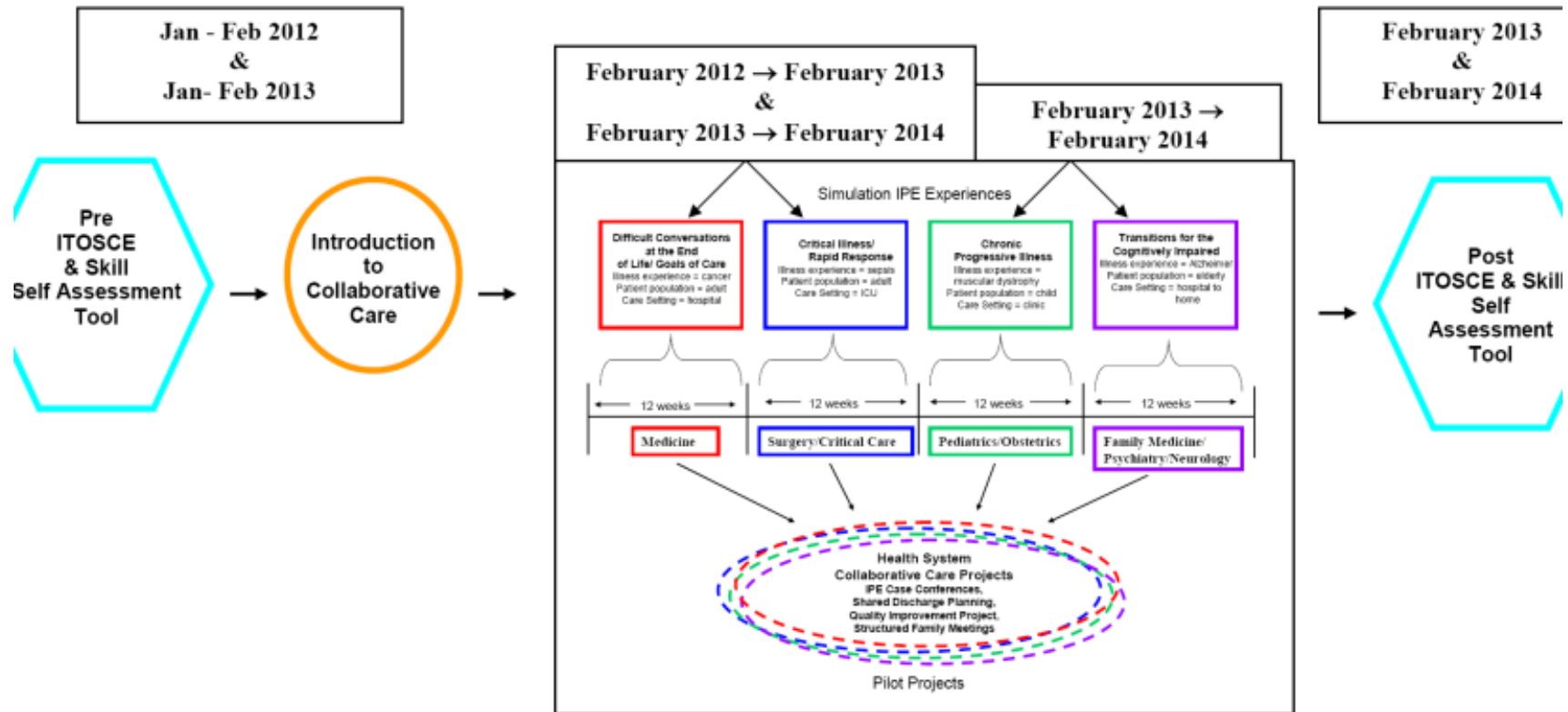
Collaborative Behaviors Observational Assessment Tool (CBOAT)

Project Team members identify the critical behaviors from the CCBPM checklist that are appropriate for target learners (undergrad, grad, clinicians and faculty) and create a modified checklist called Collaborative Behaviors Observational Assessment Tool (CBOATs).

- a. Profession-specific and collaborative behaviors are both identified in the CBOAT as appropriate for the learning level of the target learner
- b. Because CBOATs integrate the profession specific with the interprofessional behaviors, so they are different for each profession.
- c. Each identified collaborative behavior is linked with one or more of the IPE core competencies.
- d. Construct validity is determined by whether the selected collaborative behaviors provide appropriate coverage of each of the core competencies.
- e. The CBOAT is piloted using volunteers engaging in videotaped simulations.
- f. Raters are trained to recognize the collaborative behaviors and inter-rater reliability is established by independently viewing and rating a minimum of 20 different videotaped simulations.
- g. Internal consistency determined by Cronbach's alpha. Inter-rater Kappa scores and % agreement are analyzed.

Interprofessional Teamwork Objective Structured Clinical Examinations (ITOSCEs)

- a. Project teams design simulated ITOSCE scenarios that highlight the CCBPM and associated validated CBOATs.
- b. Standardization for objective rating is difficult with two students demonstrating variable abilities and behaviors, so standardized patients AND standardize providers (eg. for medical students there is a standardized patient and standardized nurse, and for nursing students there is a standardized patient and standardized doctor)
- c. Volunteer medical and nursing students, standardized patients and standardized providers pilot the ITOSCEs.
- d. Project teams view the videotaped pilot ITOSCE scenarios and rate the collaborative behaviors using the CBOAT; ITOSCE scenarios and associated CBOAT are be modified as necessary.
- e. All medical students and nursing students participate in 2 ITOSCEs before the clinical/clerkship years and again after the IPE program



All 260 third year medical and nursing students will participate in the ITOSCEs, the Introduction to Collaborative Care learning module, and all four Simulations (at 12 week intervals) over the clerkship/clinical year for a total of 520 students over two years.

Health System Collaborative Care Project experiences will be piloted throughout the year to bring the skills gained during the simulation experiences to the bedside. The most successful pilots will eventually be made available for all students.

APPENDIX

Brashers' feedback on the tools you mentioned and three alternatives (Team Skills Scale, ATHCT, and TeamSTEPPS)

Behavioral Assessment Tool

Table 7. Behavioral Assessment

	Group A, Self-Directed (n = 7 Teams)	Group B, Instructor Modeled (n = 6 Teams)
Knowledge of the environment	1.9 ± 1.1	3.0 ± 0
Anticipation of and planning for potential problems	2.1 ± 0.7	3.0 ± 0.6
Assumption of leadership role	2.0 ± 0.60	3.7 ± 0.52
Communication with other team members	1.9 ± 0.70	3.0 ± 0.60
Distribution of workload/delegation of responsibility	1.9 ± 0.70	3.2 ± 0.41
Attention allocation	1.9 ± 0.38	3.2 ± 0.75
Utilization of information	2.0 ± 0.58	3.0 ± 0
Utilization of resources	2.1 ± 0.70	3.0 ± 0
Recognition of limitations/call for help early enough	2.0 ± 0.58	2.8 ± 0.41
Professional behavior/interpersonal skills	2.0 ± 0.58	3.5 ± 0.84
Overall team behaviors	19.7 ± 4.6	31.3 ± 2.2

LeFlore JL, Anderson M, Halamek LP, and Anderson JM at University of Texas at Arlington, School of Nursing

The BAT was adapted from Crisis Resource Management (CRM) and behavioral markers previously identified (Fig. 1).¹²⁻¹⁷ The tool was modified later for neonatal resuscitation by simulation experts at the Center for Advanced Pediatric Education (CAPE).¹⁷ In an unpublished manuscript by Anderson and Yaeger, previous internal consistency, as measured by Cronbach's alpha, ranged from 0.8331 and 0.9168 (J. Anderson, personal communication, January 2006). In this study, each group

Pros: Observational, good Cronbachs

Cons: Very large and general categories, not sure how useful for early learners to know exactly what is expected.

Interdisciplinary Education Perception Scale (IEPS)

Modified by:

A. K. McFadyen a; W. M. Maclaren a; V. S. Webster

The Interdisciplinary Education Perception Scale (IEPS): An alternative remodelled sub-scale structure and its reliability Journal of Interprofessional Care, August 2007; 21(4): 433 – 443

Table I. Interdisciplinary Education Perception Scale (adapted from Luecht et al., 1990).

1. Individuals in my profession are well-trained	6	5	4	3	2	1
2. Individuals in my profession are able to work closely with individuals in other professions	6	5	4	3	2	1
3. Individuals in my profession demonstrate a great deal of autonomy	6	5	4	3	2	1
4. Individuals in other professions respect the work done by my profession	6	5	4	3	2	1
5. Individuals in my profession are very positive about their goals and objectives	6	5	4	3	2	1
6. Individuals in my profession need to cooperate with other professions	6	5	4	3	2	1
7. Individuals in my profession are very positive about their contributions and accomplishments	6	5	4	3	2	1
8. Individuals in my profession must depend upon the work of people in other professions	6	5	4	3	2	1
9. Individuals in other professions think highly of my profession	6	5	4	3	2	1
10. Individuals in my profession trust each other's professional judgment	6	5	4	3	2	1
11. Individuals in my profession have a higher status than individuals in other professions	6	5	4	3	2	1
12. Individuals in my profession make every effort to understand the capabilities and contributions of other professions	6	5	4	3	2	1
13. Individuals in my profession are extremely competent	6	5	4	3	2	1
14. Individuals in my profession are willing to share information and resources with other professionals	6	5	4	3	2	1
15. Individuals in my profession have good relations with people in other professions	6	5	4	3	2	1
16. Individuals in my profession think highly of other related professions	6	5	4	3	2	1
17. Individuals in my profession work well with each other	6	5	4	3	2	1
18. Individuals in other professions often seek the advice of people in my profession	6	5	4	3	2	1

Please indicate the degree to which you agree or disagree with the statement by drawing a circle around the number of the response that best expresses your feeling.

The scale is as follows: 6 = strongly agree, 5 = agree, 4 = somewhat agree, 3 = somewhat disagree, 2 = disagree, 1 = strongly disagree.

Pros: Questions are interesting and are phrased so it is less likely that students will “guess the answers WE want them to pick”.

Con: All about “MY” profession, not about perceptions of other professions – interesting...

Readiness for Interprofessional Learning Scale (RIPLS)

Table 1 Summary of principal components contributing to each subscale

Item	Factor loading		
	I (α 0.88)	II (α 0.63)	III (α 0.32)
Learning with other students will help me become a more effective member of a health care team	0.79		
Patients would ultimately benefit if health care students worked together to solve patient problems	0.78		
Shared learning with other health care students will increase my ability to understand clinical problems	0.77		
Learning with health care students before qualification would improve relationships after qualification	0.75		
Communication skills should be learned with other health care students	0.72		
Shared learning will help me to think positively about other professionals	0.68		
For small group learning to work, students need to trust and respect each other	0.66		
Team-working skills are essential for all health care students to learn	0.65		
Shared learning will help me to understand my own limitations	0.44		
I don't want to waste my time learning with other health care students		0.78	
It is not necessary for undergraduate health care students to learn together		0.71	
Clinical problem-solving skills can only be learned with students from my own department		0.55	
Shared learning with other health care students will help me to communicate better with patients and other professionals		-0.54	
I would welcome the opportunity to work on small-group projects with other health care students		-0.44	
Shared learning will help to clarify the nature of patient problems		-0.43	
Shared learning before qualification will help me become a better team worker		-0.41	
The function of nurses and therapists is mainly to provide support for doctors			0.63
I'm not sure what my professional role will be			-0.52
I have to acquire much more knowledge and skills than other health care students			0.49

We have used this, not good for pre and post test use in our experience.

Worry that learners will pick the "right" answer

ALTERNATIVES TO CONSIDER:

Team Skills Scale

Team Skills Scale¹

Please rate your ability to carry out each of the following tasks at this point in your training using a five-point scale:

	Poor	Fair	Good	Very Good	Excellent
1. Function effectively in an interdisciplinary team	☐	☐	☐	☐	☐
2. Treat team members as colleagues	☐	☐	☐	☐	☐
3. Identify contributions to patient care that different disciplines can offer	☐	☐	☐	☐	☐
4. Ensure that patient/family preferences/goals are considered when developing the team's care plan	☐	☐	☐	☐	☐
5. Handle disagreements effectively	☐	☐	☐	☐	☐
6. Strengthen cooperation among disciplines	☐	☐	☐	☐	☐
7. Carry out responsibilities specific to your discipline's role on a team	☐	☐	☐	☐	☐
8. Address clinical issues succinctly in interdisciplinary meetings	☐	☐	☐	☐	☐
9. Participate actively at team meetings	☐	☐	☐	☐	☐
10. Develop an interdisciplinary care plan	☐	☐	☐	☐	☐
11. Adjust your care to support the team goals	☐	☐	☐	☐	☐
12. Develop intervention strategies that help patients attain goals	☐	☐	☐	☐	☐
13. Raise appropriate issues at team meetings	☐	☐	☐	☐	☐
14. Recognize when the team is not functioning well	☐	☐	☐	☐	☐
15. Intervene effectively to improve team functioning	☐	☐	☐	☐	☐
16. Help draw out team members who are not participating actively in meetings	☐	☐	☐	☐	☐
17. Toward other disciplines working in the team setting	☐	☐	☐	☐	☐
18. About practicing in a team care environment	☐	☐	☐	☐	☐

¹ Hepburn, Tsukuda, and Fasser (1996), Team Skills Scale, all rights reserved

Pros: Quick and easy to complete; we have gotten some good results, does not immediately alienate any students

Attitudes Toward Health Care Teams (ATHCT)
developed by Heinemann, Schmitt & Farrell

STRONGLY DISAGREE (SD)	= 0
MODERATELY DISAGREE (MD)	= 1
SOMEWHAT DISAGREE (SWD)	= 2
SOMEWHAT AGREE (SA)	= 3
MODERATELY AGREE (MA)	= 4
STRONGLY AGREE (SA)	= 5

		<u>SD</u>	<u>MD</u>	<u>SWD</u>	<u>SA</u>	<u>MA</u>	<u>SA</u>
1.	Working on teams unnecessarily complicates things most of the time	0	1	2	3	4	5
2.	The team approach improves the quality of care to patients	0	1	2	3	4	5
3.	Team meetings foster communication among team members from different disciplines	0	1	2	3	4	5
4.	Physicians have the right to alter patient care plans developed by the team	0	1	2	3	4	5
5.	Patients receiving team care are more likely than other patients to be treated as whole persons	0	1	2	3	4	5
6.	A team's primary purpose is to assist the physician in achieving treatment goals for patients	0	1	2	3	4	5
7.	Working on a team keeps most health professionals enthusiastic and interested in their jobs	0	1	2	3	4	5
8.	Physicians, as a rule, are team players	0	1	2	3	4	5
9.	Developing a patient care plan with other members avoids errors in delivering care	0	1	2	3	4	5
10.	Health professionals working on teams are more responsive than others to the emotional and financial needs of patients	0	1	2	3	4	5

11.	The team approach permits health professionals to meet the needs of family caregivers as well as patients	0	1	2	3	4	5
12.	The physician should not always have the final word in decisions made by health care teams	0	1	2	3	4	5
		<u>SD</u>	<u>MD</u>	<u>SWD</u>	<u>SA</u>	<u>MA</u>	<u>SA</u>
13.	The give and take among team members help them make better patient care decisions	0	1	2	3	4	5
14.	Hospital patients who receive team care are better prepared for discharge than other patients	0	1	2	3	4	5
15.	The physician has the ultimate legal responsibility for decisions made by the team	0	1	2	3	4	5
16.	In most instances, the time required for team meetings could be better spent in other ways	0	1	2	3	4	5
17.	Physicians are natural team leaders	0	1	2	3	4	5
18.	The team approach makes the delivery of care more efficient	0	1	2	3	4	5
19.	Developing an interdisciplinary patient care plan is excessively time consuming	0	1	2	3	4	5
20.	Having to report observations to the team helps team members better understand the work of other health professionals	0	1	2	3	4	5

Instructions for using the Attitudes toward Health Care Teams Scale developed by G.D. Heinemann, M.H. Schmitt, and M.P. Farrell:

The Attitudes Scale includes two subscales--The Quality of Care/Process Subscale (items 1, 2, 3, 5, 7, 9, 10, 11, 13, 14, 16, 18, 19, 20) and the Physician Centrality Subscale (items 4, 6, 8, 12, 15, 17). To score, reverse code items 1, 8, 12, 16, 19 and sum the items for each respective subscale. The Quality of Care/Process Subscale ranges from 0 to 70; the higher the score, the more positive the attitude about quality of care from teams and quality process in teams. The Physician Centrality Subscale ranges from 0 to 30; a high score indicates an acceptance of high physician authority in the team.

And of course TeamSTEPPs – highly validated, widely used - can send you pdf.

TeamSTEPPS™ Teamwork Attitudes Questionnaire

The purpose of this survey is to measure your impressions of various components of teamwork as it relates to patient care and safety.

Instructions: Please respond to the questions below by placing a check mark (✓) in the box that corresponds to your level of agreement from *Strongly Disagree* to *Strongly Agree*. Please select only one response for each question.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Team Structure						
1.	It is important to ask patients and their families for feedback regarding patient care.					
2.	Patients are a critical component of the care team.					
3.	This facility's administration influences the success of direct care teams.					
4.	A team's mission is of greater value than the goals of individual team members.					
5.	Effective team members can anticipate the needs of other team members.					
6.	High-performing teams in health care share common characteristics with high-performing teams in other industries.					
Leadership						
7.	It is important for leaders to share information with team members.					
8.	Leaders should create informal opportunities for team members to share information.					
9.	Effective leaders view honest mistakes as meaningful learning opportunities.					
10.	It is a leader's responsibility to model appropriate team behavior.					
11.	It is important for leaders to take time to discuss with their team members plans for each patient.					
12.	Team leaders should ensure that team members help each other out when necessary.					

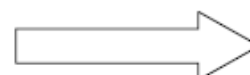
PLEASE CONTINUE TO THE NEXT PAGE





		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Situation Monitoring						
13.	Individuals can be taught how to scan the environment for important situational cues.					
14.	Monitoring patients provides an important contribution to effective team performance.					
15.	Even individuals who are not part of the direct care team should be encouraged to scan for and report changes in patient status.					
16.	It is important to monitor the emotional and physical status of other team members.					
17.	It is appropriate for one team member to offer assistance to another who may be too tired or stressed to perform a task.					
18.	Team members who monitor their emotional and physical status on the job are more effective.					
Mutual Support						
19.	To be effective, team members should understand the work of their fellow team members.					
20.	Asking for assistance from a team member is a sign that an individual does not know how to do his/her job effectively.					
21.	Providing assistance to team members is a sign that an individual does not have enough work to do.					
22.	Offering to help a fellow team member with his/her individual work tasks is an effective tool for improving team performance.					
23.	It is appropriate to continue to assert a patient safety concern until you are certain that it has been heard.					
24.	Personal conflicts between team members do not affect patient safety.					

PLEASE CONTINUE TO THE NEXT PAGE



		Strongly Disagree					Disagree					Neutral					Agree					Strongly Agree				
Communication																										
25.	Teams that do not communicate effectively significantly increase their risk of committing errors.																									
26.	Poor communication is the most common cause of reported errors.																									
27.	Adverse events may be reduced by maintaining an information exchange with patients and their families.																									
28.	I prefer to work with team members who ask questions about information I provide.																									
29.	It is important to have a standardized method for sharing information when handing off patients.																									
30.	It is nearly impossible to train individuals how to be better communicators.																									

Please provide any additional comments in the space below.

Thank you for your participation!