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Implementing IPE in an Academic Health Science Center: changing Attitudes, Beliefs, & Knowledge

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Citation Information

Proctor-Williams, Kerry; and Alley, Elizabeth. 2015. Implementing IPE in an Academic Health Science Center: changing Attitudes, Beliefs, & Knowledge. Seminar 1 Hour. *American Speech-Language-Hearing Association Convention*, Denver, CO. <http://submissions.mirasmart.com/ASHA2015/Itinerary/ItinerarySubmissionDetail.aspx?sbmID=2550>

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Implementing IPE in an Academic Health Science Center: changing Attitudes, Beliefs, & Knowledge

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Implementing IPE in an Academic Health Sciences Center: Changing Attitudes, Beliefs, and Knowledge

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ASHA 2015 – Denver, Colorado

Disclosure

I have no relevant financial or nonfinancial relationships in the products or services described, reviewed, evaluated, or compared in this presentation.



My name is Kerry Proctor-Williams and I'm speaking on Interprofessional Education at ETSU. I work for East Tennessee State University. I have no relevant financial or nonfinancial relationships to disclose.

My name is Elizabeth Alley and I am also speaking on IPE at ETSU. I am a graduate student at ETSU and have no financial or nonfinancial relationships to disclose.

ETSU Interprofessional Education Program



East Tennessee State University (ETSU) is a regional university with 15,000+ students. It includes an Academic Health Sciences Center (AHSC) with an approximate total number of students of 4,250, which includes the Colleges of Clinical and Rehabilitative Health Sciences, Medicine, Nursing, Pharmacy, and Public Health. It also includes departments of Psychology and Social Work.

How it started

The Lancet Commissions

THE LANCET

Health professionals for a new century: transforming education to strengthen health systems in an interdependent world

Table 3: Levels of learning

	Objectives	Outcome
Informative	Information, skills	Experts
Formative	Socialisation, values	Professionals
Transformative	Leadership attributes	Change agents

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Several months prior to the first retreat of all deans, associate deans, and the Executive Vice President for Health Affairs a seminal article was published in the Lancet by Julio Frenk (2010) entitled *Health professionals for a new century: transforming education to strengthen health systems in an interdependent world*.

This timely article provided a foundational influence on the formation of the newly forming IPE experience at ETSU.

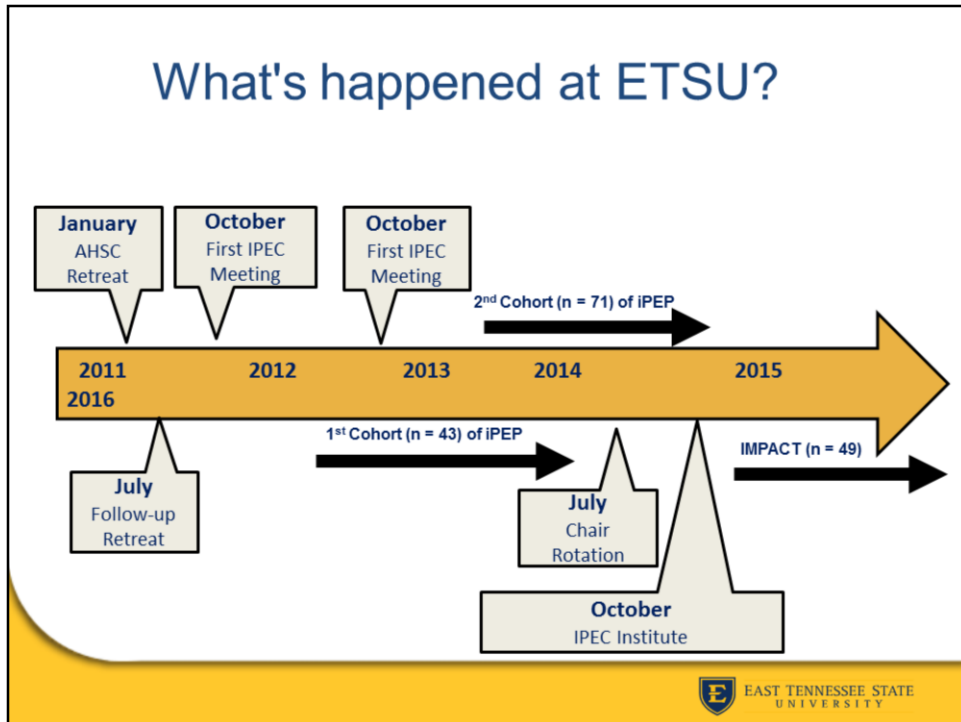
In January of 2011 a retreat of all deans and associate deans of the Academic Health Sciences Center, as well as the Executive Vice President for Health Affairs was held to expand the Interprofessional offerings at ETSU.



Prior to a second administrative IPE retreat with all deans, associate deans and the Executive Vice President for Health Affairs in July 2011, a second seminal publication was released: *Core Competencies for Interprofessional Collaborative Practice* by the Interprofessional Education Collaborative (IPEC, 2011).

It is within this document that the IPEC put forth the four competency domains of IPE (Values & Ethics for Interprofessional Practice, Roles/Responsibilities, Interprofessional Communication, and Teams and Teamwork) as well as learning objectives and suggested learning activities to be considered in each of the four competency domains. It was these 2 publications (Frenk et al and IPEC) that helped to form the foundational structure that would become the IPE experience at ETSU.

What's happened at ETSU?



Cohort 1 began in August 2012 and finished August 2014

Cohort 2 began August 2013 and finished August 2015

Basic Programmatic Tenets

**No curricular change to any
academic programs**

Address the four core competencies

**Identify and use IP resources
already existing in ETSU programs**

**Supplement existing resources
where needed**



During the second retreat, some foundational principles were established for the content of the program.

In retrospect, I would characterize this approach as trying for the greatest gain with the least upset to what already existed, while trying to introduce IPE in to the university administration, faculty and students.

Prologue

Phase 1: Prologue

- ✓ Each college/department identifies students for the program
 - ✓ 10% in Cohort 1 (2012), 25% in Cohort 2 (2013)
- ✓ Students begin the program in the fall and it continues for approximately two years
- ✓ Fall orientation session addresses interprofessional education at the *informative* level of learning

EXPERIENCE
ional Education Program 2nd Cohort

INTERPROFESSIONAL
EDUCATION and RESEARCH
Building Health Systems
and Improving Lives

Prologue Schedule:

- Welcome and Overview
- Ice-breaker group activity
- Prioritization activity #1 & 2
- Prioritization activity #2 & Debrief
- Lunch and “Box of Stuff”
- “Box of Stuff” Presentations
- Debrief of the day & next steps

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The World Health Organization’s (2010) definition of Interprofessional Education³: “When students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes” was considered central to the creation of the ETSU IPE Prologue experience. The goal of the prologue experience was to bring together approximately 60 interprofessional students from five colleges within the ETSU AHSC, as well as the departments of Psychology and Social Work, to engage in a introduction to IPE and to learn about, from and with each other.

Upon arrival to the event, all students were randomly assigned to learning groups that included 4-5 students from various colleges and departments within the AHSC at ETSU. The makeup of the groups was not the same from group to group, but all groups included 4-5 students from uniquely different professional programs at ETSU.

Activities

Phase 2: Experiences

- ✓ Each student in the pilot program completes four competency-based experiences during the two-year period (all at the *formative* level of learning)
 - If competency-based, an individual course can meet the requirement of one core competency
 - Courses can replace up to two of the four competencies
 - Colleges/departments put forward activities each semester allowing for diverse opportunities to meet competency needs

Values/Ethics for
Interprofessional
Practice

Roles and
Responsibilities

Interprofessional
Communication

Teams and
Teamwork



Phase 2 of iPEP sought to expose students to each of the 4 core competencies for interprofessional collaborative practice by way of coursework and/or extracurricular activities over the course of 2 academic years (a total of 4 semesters).

Each student was asked to complete a course or activity for each competency. They could use up to 2 courses that they were already taking, but also had to complete at least two extracurricular activity

On a rotating basis, each college was assigned a core competency for which to seek extracurricular activity proposals from faculty each fall and spring semester.

Phase 3: Capstone Activity

- ✓ Students are assigned to interprofessional groups and complete an activity that provides the opportunity for *transformative* learning



The ETSU IPE Capstone event was designed to provide opportunities for education at the transformational level of learning. In keeping with the extra-curricular strategy of the IPE experience at ETSU, this event was held late in the spring semester on a Saturday and for most of the day. The event was held at a remote, off-campus location to provide a more unique environment for the day-long experience. It was a simulated refugee camp experience, wherein the interprofessional learners were tasked with the preparation of an area of land for providing service/care to a group of refugees (students were told to prepare for approximately 100 people to be coming to the camp).

The day began with a brief introduction of the students from the faculty on the scenario and what the learners' expectations were. Over breakfast, the students began to organize; first coming together as the entire group to create a list of priorities that would need to be accomplished in order to prepare the area of land to welcome 100 projected refugees.

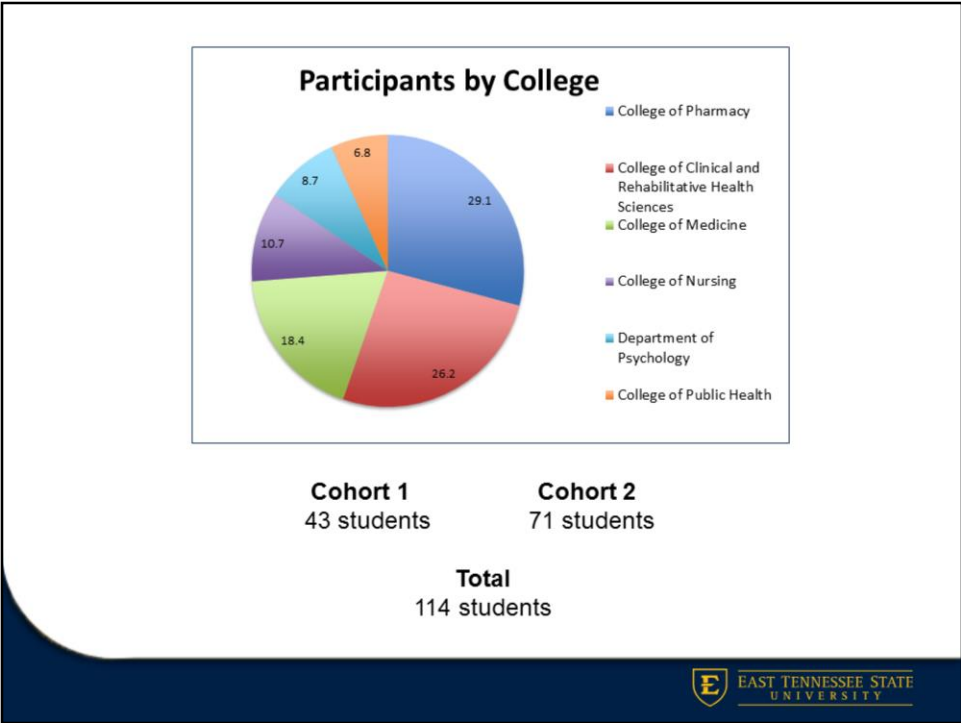
Capstone Schedule:

Welcome & Overview

Student group planning session
Student group preparing area for
refugees entering camp
Student group addresses challenges
created by refugees & workers
Debrief of the day

IPE Pilot Program: Research

- Students were randomly selected to participate in the 2-year IPE pilot program
- If interested in the program, the students reviewed the informed consent document which included the purpose and procedures of the study
 - A demographic questionnaire was also completed and included: gender, age, ethnicity, SES, and residency



College of Clinical and Rehabilitative Health Sciences (CCRHS) includes audiology, speech-language pathology, nutrition, and physical therapy.

11 professions in all included

Pre and Post Surveys

Three surveys were administered at the Prologue and Capstone event to measure attitudes about IP education and practice.

- *Attitudes Toward Health Care Teams Scale* (ATHCT; Heinemann, Schmitt, Farell & Brallier, 1999; Hyer, Fairchild, Abraham, Mezey, & Fulmer, 2000)
- *The Interdisciplinary Education Perception Scale* (IEPS; McFadyen, Maclaren, & Webster, 2007; Luecht, Madsem, Taugher, & Patterson, 1990)
- *Readiness for Interprofessional Learning Scale* (RILS; Parsell & Bligh, 1999; McFayden, Webster, Strachan, Figgins, Brown, & McKechnie, 2005)



The following three surveys measured attitudes and beliefs of IPE. They were administered at the pre-program and post-program in order for us to measure a change in their attitudes.

Mention where we website or how we came across these measures?

Revised Surveys

- A factor analysis was conducted on the first cohort to determine if the proposed constructs held true
- Broad constructs were confirmed
- A few questions were removed as they did not associate with any construct or any other questions



Using the first cohort, a factor analysis was conducted to determine whether the proposed constructs for each attitude survey held true with our students. While the broad constructs were confirmed, there were a number of questions from the original survey that did not associate. The responses for these questions were excluded from the analyses. A brief description of each survey follows.

Student Response Rates

Instrument	Pre IPEP	Post IPEP
ATHCTS	103	73
IEPS	102	70
RIPLS	102	71



Here is the response rate from students for the three surveys. As you see the response rate for the post-program was significantly lower. This was due to students not attending the final Capstone event.

Attitudes Toward Health Care Teams Scale (ATHCTS)

21 questions on a 1-5 point scale
(1 = strongly disagree to 5 = strongly agree)

Constructs

"The team approach makes the delivery of care more efficient."


"Working in teams unnecessarily complicates things most of the time."

"The physician has the ultimate legal responsibility for decisions made by the team."

Quality of Care: measures team members' perceptions on the quality of care delivered by health care teams.

Costs of Team Care: measures the efficiency, importance, and value of teams.

Physician Centrality: measures team members' attitudes toward physicians' authority in teams and their control over information about patients.

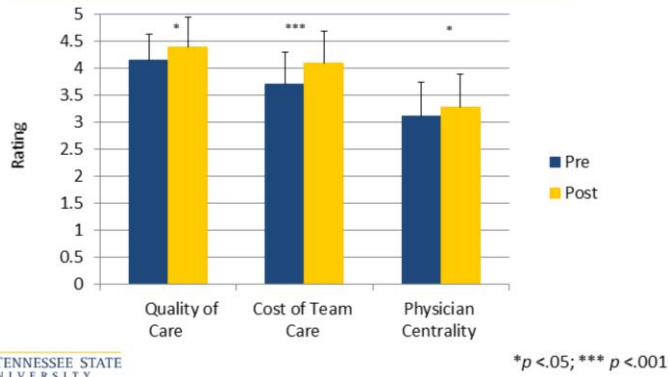


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The boxes on the left side display example questions for each construct. The ATHCTS covered three constructs. QOC measured students' perception of the QOC and teamwork by health care teams. COTC measured the efficiency, importance, and value of teams. PC measured the students' attitudes towards physicians and their roles in a healthcare team.

Attitudes Toward Health Care Teams Scale

ATHCTS	t	p
Quality of Care	2.29	<.05
Costs of Team Care	4.27	<.001
Physician Centrality	2.34	<.05



Students rated QOC the highest, then COTC, and finally PC. The ratings for all constructs improved at statistically reliable levels pre- to post-program.

Interdisciplinary Education Perception Scale (IEPS)

18 questions on a 1-6 point scale
(1 = strongly disagree to 6 = strongly agree)

Constructs

"Individuals in my profession are very positive about their contributions and accomplishments."

Perception of Competency and Autonomy: measures of how highly one respects his or own profession in the sense that their profession is well educated and contributes significantly to the health care field.

"Individuals in my profession need to cooperate with other professions."

Perceived Need for Cooperation: reflects perceptions of the need to work together with other professions.

"Individuals in my profession work well with each other."

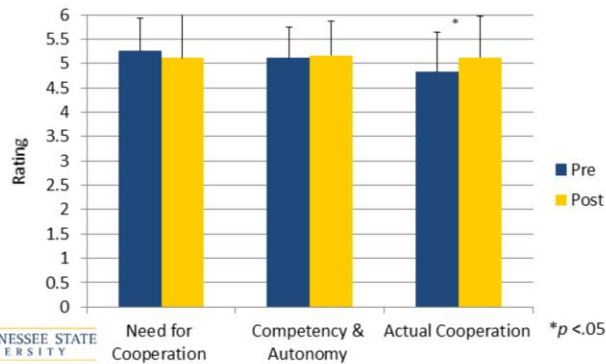
Perception of Actual Cooperation: measures of students' perceptions of their professional's respect and ability to work with other in the health care field.



The IEPS also has three constructs. Perceptions of Competency and Autonomy measured to what degree students respect their own profession. Perceived Need for Cooperation measured the students' perception of the need for collaboration between healthcare professionals. Actual Cooperation measured their actual perception of collaboration.

Interdisciplinary Education Perception Scale

IEPS	t	p
Perception of Competency & Autonomy	0.12	.86
Perceived Need for Cooperation	-0.74	.46
Perception of Actual Cooperation	2.12	<.05



Students rated Perceived Actual Cooperation slightly below the Perceived Need for Cooperation and Competency and Autonomy at the pre-test. There was a statistically significant difference pre to post test for Actual Cooperation.

Readiness for Interprofessional Learning Scale (RILS)

19 questions based on a 1-5 point scale
(1= strongly disagree to 5 = strongly agree)

Constructs

"Learning with other students will help me become a more effective member of a health care team."

Team-work and Collaboration: measures attitudes toward team working skills and the need for positive relationships between various professionals.

"It is not necessary for graduate health-care students to learn together."

Professional Identity: measures positive and negative aspects of professional identity.

"The function of nurses and therapists is to mainly provide support for doctors."

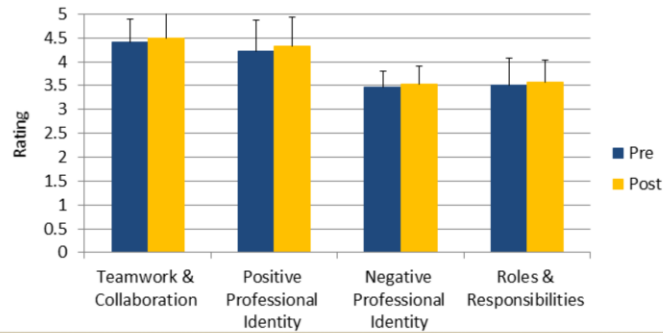
Roles and Responsibilities: measures perceptions of roles in professional practice and the role of academic training in supporting these divisions.



The RILS was developed to measure attitudes and perceptions and to determine their readiness for interprofessional learning and scale. Teamwork and Collaboration measured students' perception of teamwork and their relationships with other health care professionals. The Professional Identity construct measured positive and negative aspects of professional identity. Finally, roles and responsibilities measured students' perceptions their own role and other professionals roles in the health care team.

Readiness for Interprofessional Learning Scale

RILS	t	p
Teamwork and Collaboration	1.40	.17
Positive Professional Identity	1.42	.16
Negative Professional Identity	0.84	.06
Roles and Responsibilities	1.03	.30



Students rated Teamwork and Collaboration higher than any other construct. There were no differences pre- to post program for this survey.

Core Competency and Proficiency Survey (CCPS): Activity Measure

- Used to study acquisition of knowledge and skills from the students' perspective based on their activity experiences
- Four surveys included each core competency and their subcompetencies
- Yielded 9 specific competency questions for Roles and Responsibilities, 10 for Ethics and Values, 8 for Communication, and 11 for Teams and Teamwork



The CCPS survey was given prior to and following the activities to measure the acquisition of knowledge and skills from students' experiences. There were four versions of CCPS, one for each of the competencies (Ethics, Communications, Teams, and Roles and Responsibilities). Each of the competency-specific surveys had a different number of questions because each competency had a different number of subcompetencies.

CCPS: Activity Measure

- Based on the framework on Hanley (1994), each of the specific competencies was made into a statement prefaced with

“I practice developing a trusting relationship with patients, families, and other team members.”

- “I know...” to measure knowledge
- “I practice...” to measure skill
- “I value...” to measure attitude

“I know how to place the interest of patients and populations at the center of interprofessional health care delivery”

“I value respecting the dignity and privacy of patients while maintaining confidentiality in the delivery of team-based care.”

- 1-5 point scale from “I have no or little idea” to “I can teach this to someone else.”
- Total of 114 statements

Each survey was formatted based on the work of Hanley using the “I know” “I practice” and “I value” framework. Know measured knowledge, practice measured skill, and value measure attitude. 1-5 point scale from “I have no or little idea” to “I can teach this to someone else.” In all there were a total of 114 statements including 4 different surveys.

Student Response Rate

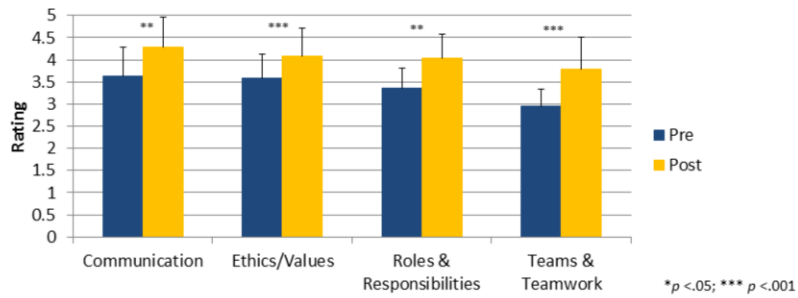
Instrument	Pre Activity	Post IPEP
Roles & Responsibilities	34	21
Values & Ethics	40	23
Communication	18	14
Teams & Teamwork	26	20



A total of 43 students completed both pre and post surveys. While all participant data was included within each time period analysis, only the data of those completed both pre-and post-program or activity were included in the pre-post comparison.

Activity Competencies

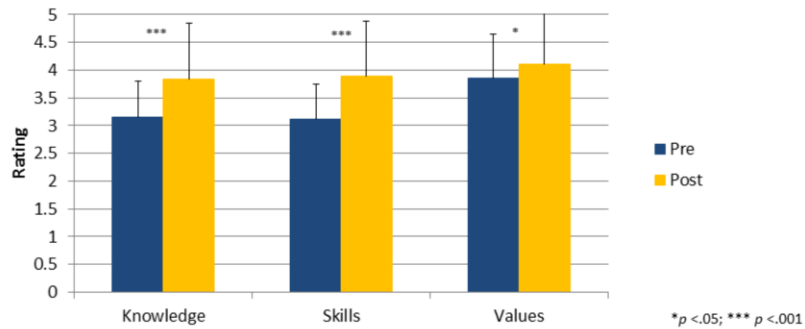
Core Competencies	df	t	p
Communication	1,11	3.72	<.01
Ethics/Values	1,17	4.26	<.001
Roles and Responsibilities	1,15	3.53	<.01
Teams and Teamwork	1,14	5.09	<.001



Students ratings for valuing core competencies were significantly higher following participation in activities.

Activity Proficiencies

Proficiencies	df	t	p
Knowledge	1,42	7.01	<.001
Skills	1,42	8.14	<.001
Values	1,43	2.12	<.05



To determine whether students' knowledge and skills changed pre- to post- activity we used a composite of the specific proficiencies and compared them pre to post. Student significantly increased their ratings for both knowledge and skills following participation of activities. *The values proficiency did not increase at a statistically significant level. We concluded this could be due to their already high level of value for IPE.*

Pre Faculty

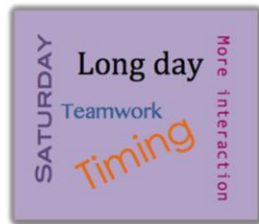
Pre ATHCTS	Mean	SD	Range
Quality of Care	4.11	0.40	1 to 5
Costs of Team Care	3.87	0.55	1 to 5
Physician Centrality	3.28*	0.78	1 to 5

Pre IEPS	Mean	SD	Range
Competency and Autonomy	4.97	0.63	2 to 6
Perceived Need for Cooperation	5.26*	0.72	2 to 6
Perception of Actual Cooperation	4.89	0.69	2 to 6



No post survey has been sent as of yet. It can be seen that the role of physician centrality received lower ratings than the other constructs. Furthermore, physician's ratings were lower than those from other professions. It may be that those in other professions experience physicians taking a more central role than they do themselves. Finally the perceived need for cooperation was rated most, suggesting that faculty feel there is a real need for better interprofessional practice.

Re-visioning the Program



Student Feedback

- Teaming and timing

IPEC Institute:

- Develop programmatic changes to promote meaningful teaming knowledge and experiences
- Increase the likelihood of transformational change



As the program was ending for the second cohort, the steering committee of the program began to ask “ what have we learned and “what’s next?” We felt the outcomes were generally positive but it did not seem to have the impact we thought it should, especially as a an incubator for transformative change.

We took the student feedback seriously. Then we attended the IPEC institute as a team. This was transformative for us.

Re-visioning the Program



NEXUS Outreach to ETSU

- Reevaluate Research Program Direction

Where We are and Where We are Going

- Classification of the possible outcomes of interprofessional education


1. Reaction	Learner's views on the learning experience and its interprofessional nature.
2a. Modifications of attitudes/perceptions	Changes in perception or attitude towards the value and/or use of team approaches in patient care.
2b. Acquisition of knowledge/skills	Including knowledge and skills linked to interprofessional collaboration
3. Behavioral change	Identifies individuals' transfer of interprofessional learning to their practice setting and changed professional practice
4a. Change in organizational practice	Wider changes in the organizational and delivery of care.
4b. Benefits to patients/clients	Improvements in health or well-being of patients/clients.

Modified Kirkpatrick's Model of Educational Outcomes for IPE (Freeth et al., 2002, as cited in Reeves 2010)



We got back and began to plan. At the same time NEXUS reached out to us about participating collaboratively in IPE research. We looked at our research program so far, identified what we had accomplished and what was to come next.

5 year Strategic Plan



Mission: To promote and enable faculty and students to *learn with, from and about each other* in a student-centered environment with the goal of demonstrating effective interprofessional community-based clinical practice and research that respond to changing health care and population health needs.

Strategies	Responsible Party	Activities	Time Frame - Year					Outcomes
1. Establish the Office of Interprofessional Education & Research (see chart - Appendix A) <ul style="list-style-type: none"> Associate VP Executive Aide Graduate Assistant Director 	VP Health Affairs; Interim Director of IPER	<ul style="list-style-type: none"> Identify Interim Director → Associate VP Identify Sub-Committee Chairs → Directors 	1	2	3	4	5	1. Request for Associate VP PER made in 12-14 2. Interim Director to be selected in Fall 2013 and begins spring 2014 3. Sub-committee chairs to be selected in Fall 2013
2. Develop a budget for the Office of Interprofessional Education & Research that incorporates all strategies from the 2015-2020 Strategic Plan	VP Health Affairs; Interim Director of IPER → Associate VP; DPERC Steering Committee	<ul style="list-style-type: none"> Use strategic plan as budgeting framework Coordinate efforts with the Office of the VP for Health Affairs 	1	2	3	4	5	1. A portion of the ASHC health centers fee allocated to IPER beginning Fall 2014 2. Request a portion % of fee be allocated to IPER 3. Assess QCCM & DPERC students to support IPER
3. Promote interprofessional education and research via campus-wide communication efforts	Interim Director of IPER → Associate VP; DPERC Steering Committee	<ul style="list-style-type: none"> Quarterly newsletters Website Announcements 	1	2	3	4	5	1. DPERC brochure developed summer 2013 2. Website to go live Fall 2013

- Infrastructure
 - Organizational Chart
 - Dedicated IP Education & Research Building
- Faculty Development
 - Training, workload, networking
- Curriculum
 - Online units, course development, simulation
- Evaluation and Assessment
 - Nexus, evaluation tool development
- Clinical & Community-Based Practice & Research
 - Incubator sites, community submitted service learning



And this is what we have come up with.

IMPACT 2015-2017

(Interprofessional Method for Practical Application of Values and Ethics in Teams)



We have held our first day-long session. And students have almost completed the Communications course. N=49

We'll have to let you know how it all turns out...hopefully at ASHA

Acknowledgements

Interprofessional Education and Research Steering Committee

Dr. Katie Baker

Dr. Jodi Polaha

Dr. Reid Blackwelder

Dr. Ken Tillman

Dr. Brian Cross

Dr. Kerry Proctor-Williams

Special thanks to:

- Dr. Wilsie Bishop, Vice president of Academic Health Sciences and champion of IPE at ETSU
- Dr. Michael Crouch, our initial chair of the committee
- Ms. Wendy Guinn, our Executive Aide for her ongoing support.

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