



Inter-professional education initiatives at Salus University:

A UNIQUE PERSPECTIVE IN BOTH DIDACTIC AND CLINICAL EDUCATION

Anthony Di Stefano, OD, MPH;

Radhika Aravamudhan, PhD; Linda Casser, OD;

Missy Vitek, OD

Introduction and Sequence



- Dr. Aravamudhan: Introduction to the Session and Presenters.
- Dr. Di Stefano: Introduction to Salus and IPE.
- Dr. Casser: IPE task force and Jeff connection
- Dr. Vitek : Evidence based practice –Evolution and Implementation –Lessons learned.
- Dr. Aravamudhan: Specifics on the CPS Initiative and wrap up.

Dr. Anthony Di Stefano

**Introduction to Salus and
Interprofessional Education
at Salus**





 SALUS UNIVERSITY

Salus University

Salus University – An IPE Case Study



- Salus University founded in 1919 as the Pennsylvania College of Optometry
- Formally became Salus University on July 1, 2014
- Today we are composed of :
 - The Pennsylvania College of Optometry
 - The College of Education and Rehabilitation
 - The Osborne College of Audiology
 - The College of Health Sciences
 - The Offices of Research and Graduate Programs in Biomedicine



Salus University – An IPE Case Study



- PCO to SU
- Single-purpose to multi-purpose institution
- Transformation parallels the shift for solo practice to group practice:
 - Disadvantages of solo practice
 - Advantages of group practice

Salus University – An IPE Case Study



- PCO's challenges as a “solo” practice
 - Fiscal challenges
 - Infrastructure needs
 - The need to provide more choices for more students;” changing student expectations
 - Responding to macro changes in the health care system AND higher education trends

Salus University – An IPE Case Study



- And so I said to my friend, PCO is still PCO – we just are building a “group practice”
- **In fact, we’re building an “Interprofessional Group Practice.”**

Salus University – An IPE Case Study



- Evolution of the institution’s mission statement
- Evolution from a “discipline orientation” to a “patient- centered” mission.

Salus University – An IPE Case Study



“The mission of the Pennsylvania College of Optometry is to graduate doctors of optometry, and offer other educational, research, and patient care programs responsive to the health care needs of the public.”

Salus University – An IPE Case Study



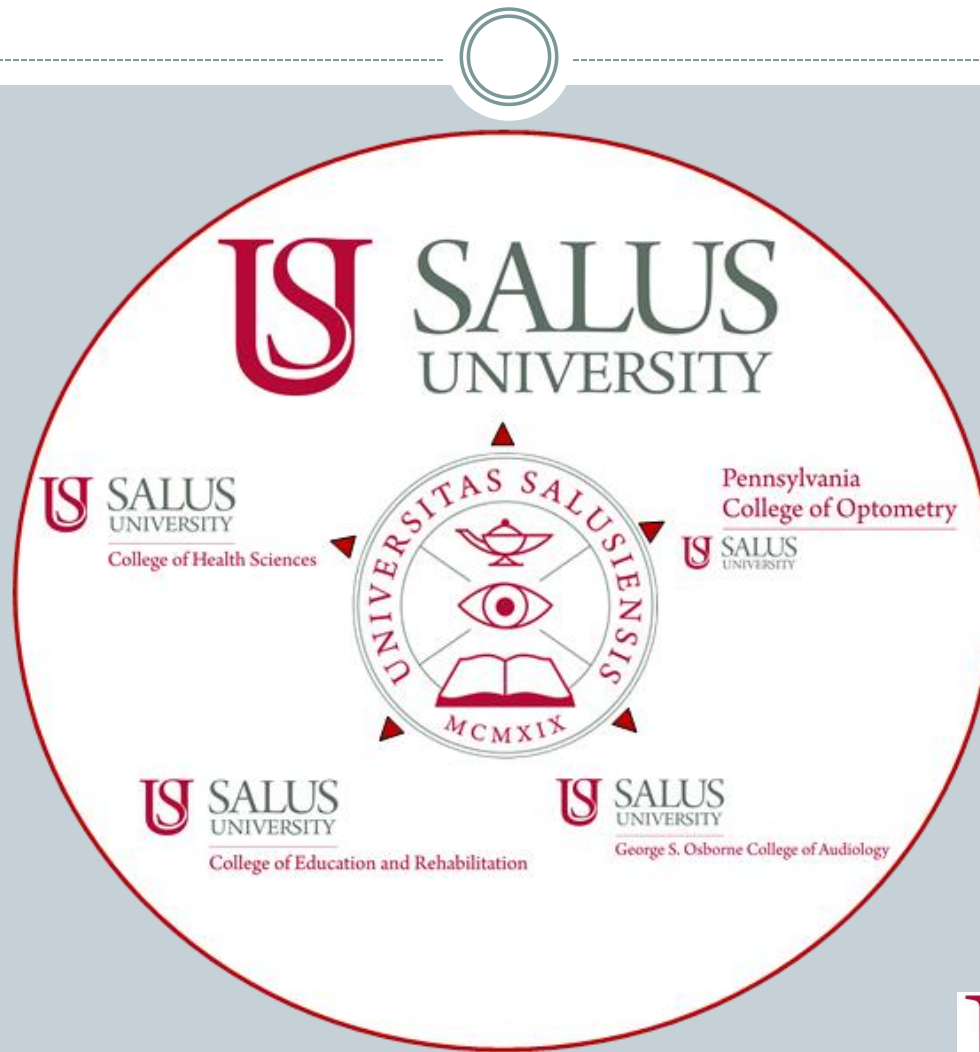
“The mission of the Pennsylvania College of Optometry is to educate health care professionals and educators, conduct research and provide patient care and rehabilitative services that advance the welfare of the public worldwide.”

Salus University – An IPE Case Study



“The mission of Salus University is to protect and enhance health and well-being through education, research, patient care and community services worldwide.”

Salus University – An IPE Case Study



Salus University – An IPE Case Study



Salus University – An IPE Case Study



/sal•us/ *noun.* 1. health and well-being 2. conglomeration of optometry, audiology, education & rehabilitation, and health sciences – physician assistant

Dr. Linda Casser

**Interprofessional Education
Task Force at Salus**



Salus University's IPE Task Force



- Launched in September 2012
- Comprised of representatives from Salus' colleges:
 - ❑ College of Education and Rehabilitation (CER)
 - ❑ College of Health Sciences (CHS)
 - ❑ Osborne College of Audiology (OCA)
 - ❑ Pennsylvania College of Optometry (PCO)
- Student member participant from OCA
- Charge to the IPE Task Force provided from then Vice President of Academic Affairs, Dr. Di Stefano

Inaugural Charge to the IPE Task Force



1. Develop a strategic vision for interprofessional education at Salus University
2. Conduct an audit of current IPE activities at Salus University
3. Identify at least one key project for FY 2012 - 2013
4. Establish outcome measures for campus IPE projects
5. Evaluate the feasibility of a scholarly article

We Embraced this Definition of IPE



In 1997, the Centre for the Advancement of Interprofessional Education (CAIPE) in London defined IPE as occasions **when students from two or more professions in health and social care learn together** during all or part of their professional training with the object of cultivating practice for providing client- or patient-centered health care.

IPE Task Force Vision Statement



To create, implement, and evaluate models that promote a culture of interprofessional education at Salus University that align with the University's vision to be recognized nationally and internationally for excellence and innovation.

*Accepted by the Salus University Academic Council
November 28, 2012*



Salus University IPE Task Force



- The inaugural charge elements to the IPE Task Force have been successfully met
- Efforts are ongoing, as anticipated
- Brief perspectives today on the benchmark activities and outcomes / impact of the Salus University IPE Task Force

IPE Workshop at Thomas Jefferson University



- JCIPE Interprofessional Education and Care Practicum Winter Immersion Program Center
 - ❑ February 26, 2013
 - ❑ Timing was helpful following initial meetings of the Task Force
- Team Salus participants
 - ❑ IPE Task Force members
 - ❑ Academic program heads
- Per the charge to the Task Force, we decided to put further development of the 2012 – 2013 IPE project on hold until after the JCIPE workshop
- Set the stage for further initiatives of the IPE Task Force

IPE Workshop at Thomas Jefferson University February 26, 2013



“Team Salus” Verbal Report

JCIPE Workshop, February 26, 2013

- Title of Team Activity: Interprofessional Education Clinical Problem-Solving (CPS) Course
- Aim/Purpose: To develop, implement, and evaluate a course offering that promotes a culture of IPE and patient-centered collaborative care at Salus University.
- Objectives:
 - ❑ Continue Team Salus development and role modeling by scheduling a one day retreat in May 2013 for the IPE CPS pilot course development
 - ❑ Develop one IPE CPS case
 - ❑ Via modeling and by Fall 2013, introduce IPE and collaborative care in the current interprofessional Evidence-Based Practice course taken by incoming students across the colleges
 - ❑ By Spring 2014, design and implement a pilot IPE CPS course
 - ❑ By 2015, develop and evaluate an assessment tool to track IPE initiatives across the University

“Team Salus” Verbal Report, Continued

JCIPE Workshop, February 26, 2013

- Evaluation (by objective):
 - ❑ Successful development of pilot case – include video of creation as role modeling / faculty development tool
 - ❑ Student focus groups, course evaluations, feedback from CPS facilitators
 - ❑ Assess level of interest among students to volunteer for pilot (8-10 students); conduct student focus groups post pilot
 - ❑ Successful development of mapping tool and auditing of existing courses; submission of a poster/ presentation; administer survey to faculty to measure success

Off-Campus IPE Task Force Retreat: May 2013



- IPE Task Force plus additional invited participants (14 total)
- Purpose of the Retreat
 - Develop, role model, evaluate, and video capture an IPE case (rehabilitation emphasis) for incorporation into the 2013 Fall offering of the Evidence-Based Practice course
 - Plan the August 2013 University Development Day presentation / discussion by the IPE Hot Team
 - Develop a curriculum proposal as appropriate (e.g., CPS course)
 - Explore other related initiatives
 - Review and implement Assessment Tools
- An early defining moment: “I have no idea what you do.”
- Excellent enthusiasm, collaboration, and energy

IPE Workshop at Salus University Faculty Development Day

August 23, 2013



- Opening Comments
- Efforts and Activities of the Interprofessional Education (IPE) Task Force
- The “Pre” Assessment Tool: Attitudes to Community Care Questionnaire; IPE Resources Posted on Academic Nexus
- Document review: Audit of IPE Activities at Salus University
 - (Impressive compilation)
 - (Helpful communication tool)
- Team Salus Demonstration: Interprofessional Approach to Collaborative Patient Care
- What Are the Programs / Professions at Salus University?
 - A Jeopardy Game Discovery of “Who Are We and What Do We Do?”
- Break-out group discussion: identify one proposal for an IPE initiative at Salus University
- The “Post” Assessment Tool: Attitudes to Community Care Questionnaire
- Summary Comments / Consensus Next Steps

Salus University IPE Task Force



- IPE efforts and activities have been very well placed
 - ❑ Communication, collaboration, enthusiasm (faculty and students)
 - ❑ Curriculum development
 - ❑ Visibility and branding of our campus
- Important and contemporary initiative for Salus University
- Discussions underway for appropriate next organizational steps for our IPE initiatives
- Scholarly publications:
 - ❑ Poster and paper presentations to date
 - ❑ Manuscript preparation anticipated this fall

Dr. Melissa Vitek

**Evidence Based Practice
Course: IPE Implementation
and Lessons Learned**

Salus Evidence Based Practice (EBP) Course



- Launched in 2007
- Included first year, first Semester enrollees in OD, PA and AuD degree programs
- 1 Semester credit
- Required core curriculum course
- Sitting in same room in a traditional lecture setting
- Not true IPE

Transformation of EBP Course



- Traditional lecture to blended format
 - Hybrid of online and traditional lecture format
- Modification of course content to contain more foundational topics
- Addition of case scenarios encompassing material from all relevant professions

Transformation (cont'd)



PCO/Salus sponsored instructors to attend:

- Duke University: Teaching and Leading EBM: A Workshop for Teachers and Champions of Evidence-Based Medicine, March 2011 ,2012, 2013
- McMaster University EBP Workshop June 2014

Transformation (cont'd)



- *Fall Semester 2013*

- Re-naming of course from Evidence Based Medicine to Evidence Based Practice
- Addition of flip learning and small group assignments
- Small groups made up of students from OD, AuD and PA degree programs
- Integration of Salus Occupational Therapy degree program enrollees into some lectures

Transformation (cont'd)



- *Fall Semester 2014*: Increased structure in small groups incorporating many elements of team-based learning
 - Recommended team size is 5-7 students (OT, OD, AuD and PA)
 - Advanced Student pre-meeting preparation
 - Individual and team readiness assurance testing (iRAT and tRAT)
 - Team Application Problems (tAPP) including discussion and analysis with the entire class

Team-Based Learning Team Elements



- Odd number works well for tie breaking decision making
- Too small: scored lower on tRAT
- Too large: social loafing, decreased quality of group communication, breakdown of team dynamics, increased risk of subgroup formation, etc.
- Should be as heterogeneous as (initially inhibits group processes and performance)
- It is NOT recommended that students self-select their teams
- Random or alphabetical team formation is recommended

Team-based learning-RAT



- Questions should focus on foundational concepts and be difficult enough to promote discussion within the teams for the tRAT
- Students hand in their individual answers and then retake the same assessment as a team-this promotes accountability to the instructor and to the other team members
- The opportunity for intra-team discussion should take place before the correct answer is given by the instructor

Team Application Problems (tAPP)



- *Four S's of tAPP:*
 - SIGNIFICANCE (complex real world issues or commonly encountered clinical scenarios or others requiring higher-level thinking)
 - SAME (all groups working on the same problem)
 - SPECIFIC: There should be a single best fit answer-MCQ's are recommended (roughly 3-5 questions per activity)
 - SIMULTANEOUS reporting of answers: electronic audience response is one of the recommended methods of achieving this

tAPP (cont'd)



- Avoid tasks that can be divided among team members
- Ideally two important lessons regarding group interaction are reinforced:
 - ✦ Input from others is a valuable resource
 - ✦ Things can be accomplished by working together that cannot be accomplished alone

tAPP (cont'd)



- It can be effective to immediately recycle the same problem by changing the question so students will have to look at the same facts from a totally different perspective
- One of the best indicators of the effectiveness of the group assignments:
 - ✦ presence of task-focused energy when the groups report and compare the results of their answers to those of the other groups

Peer Assessment of Team-Based Learning Activities



- Students rate one another on the following elements:
 - ✦ Individual preparation
 - ✦ Class participation
 - ✦ Demonstrating respect for one another
- Another approach has been having team members list observations on how the team has functioned
- Care must be taken that this process is not done too frequently that it disrupts the team development process

Team-Based Learning Assessment



- TBL has been assessed by the following outcomes:
 - knowledge acquisition
 - student perception
 - faculty perception

TBL Assessment (cont'd)



Question: Is TBL effective in improving learning outcomes in health professions education?

Conclusion: TBL enables students to achieve knowledge scores as high or higher than traditional teach strategies.

- Learner reaction to TBL was mixed
- Faculty generally had a positive perception as reported in the literature

TBL Assessment (cont'd)



- There is some evidence to support that TBL increases examination scores by a larger amount in weaker students
- When using the Classroom Engagement Survey and the Value of Team surveys, students rated themselves as being more engaged in a TBL setting vs. a traditional lecture setting

TBL Assessment (cont'd)



- There is evidence to suggest that early socialization and better understanding of teamwork among students in their healthcare education can lead to the existence of less obstacles for patient care collaboration during that student's professional career
- Effectiveness in work teams has yet to be significant outcome measure in the available research

Future Plans for Salus EBP Course



- Use of IPE participant questionnaires-Fall 2014
- Increased emphasis on team based learning and flip learning teaching pedagogies
- Incorporation of Salus Speech and Language Pathology degree program enrollees Fall 2015

**Dr. Radhika
Aravamudhan**

**Clinical Problem Solving:
IPE Initiative-A pilot study:
Report**

CPS - An IPE initiative



Introduction and background:

What is the role of IPE in professional colleges? Need for IPE within the professional colleges.

What is CPS at Salus?

- What is CPS?
- Why did we choose this course to pilot our IPE initiative?
- Problem based learning approach.

PURPOSE

Purpose of the 5 week pilot study is to evaluate the following:

- i. Does exposure to IPE, increase understanding of other professions in health care.
- ii. Does early exposure to IPE enhance IP teamwork?
- iii. Do our current metrics deliver meaningful information?
- iv. What is the impact of IP student team leadership on IP curriculum design and efficacy, and on student teams?

STUDY PLAN

Step 1

Volunteer 1st year students recruited via email call
n=9, 3 students from each program (OD, AuD, and PA)

Step 2

Week-1

Administer Pretest - IPE- questionnaires

Start the CPS process –Introduction -Diagnosis oriented

Study Plan –Contd.



Week-2 of CPS case
Diagnosis

Week-3 of CPS case.
Start Rehabilitation and Treatment discussions

Study Plan –Contd.



Week-4 of CPS case

Continue Rehabilitation and Treatment discussions

Week-5 of CPS case

Introduction to broader impact: Patient to population

Study Plan –Contd.



Week-5 of CPS case

Big picture: Patient to population(MPH)
discussions.

Week-5 of CPS case

Complete post-IPE assessment.

Learning Objectives for the IPE-CPS

- Demonstrate knowledge of the roles, how to collaborate, when to refer.
- Initiate ongoing relationships within an interprofessional small group.
- Discuss how health policy reform will impact interprofessional teamwork.
- Explain the role of IPE as it relates to professionalism and continued professional development.
- Identify effective techniques for contributing opinions, insights and information to team problem-solving.

PRE & POST ASSESSMENT TOOLS



- Readiness of health care students for interprofessional learning **(RIPLS)** - Parsell, G., & Bligh, J. (1999).
- The Interdisciplinary Education Perception Scale **(IEPS)** -McFayden, A.K., Maclaren, W.M., & Webster, V.S. (2007).
- University of West England IPQ **(UWE-IPQ)** - Pollard (2005, 2006).

PURPOSE

- i. Does exposure to IPE, increase understanding of other professions in health care
- ii. Do our current metrics deliver meaningful information?
- iii. What is the impact of IP student team leadership on IP curriculum design and efficacy, and on student teams?

Results

Following slides present the results based on average responses from both groups for each of the questionnaires used in the study.

The UWE -IPE Questionnaire:

Measure	Average Score	Score Range
Communication and Teamwork	18.4	9-20 (Positive) , 21-25 (Neutral), and 26-36 (Negative)
Interprofessional Learning	15.15	9-22, (Positive) , 23-31, (Neutral) and 32-45 (Negative)
Interprofessional Interaction	19.675	9-22, (Positive) , 23-31, (Neutral) and 32-45 (Negative)
Interprofessional Relationships	16.125	8-20,(Positive) , 21-27 (Neutral), and 28-40 (Negative)

The Interprofessional Education Perceptions Scale:

Measure	Average Score	Score Range
Competency & Autonomy	8	7-9: Strongly Agree/Agree
Perceived need for cooperation	3	2-4: Strongly Agree / Agree
Perception of actual cooperation	8.475	6-12: Strongly Agree/Agree

RIPLS: Readiness for Interprofessional Learning Scale

Learning with other students / professionals will make me a more effective member of a health and social care team

Strongly Agree /
Agree:
100%

Patients would ultimately benefit if health and social care students / professionals worked together

Strongly Agree / Agree:
100%

Shared learning with other health and social care students / professionals will increase my ability to understand clinical problems

Strongly Agree / Agree:
100%

Shared learning will help me to understand my own professional limitations

Strongly Agree / Agree:
90 %

I would welcome the opportunity to work on small group projects with other health and social care students / professionals

Strongly Agree / Agree:
100 %

ANALYSIS



Outcome measures and core competency domains

(based on core competencies for IP collaborative practice, report, 2011)

Domain 1: Values/ethics for interprofessional practice (IPP)

Domain 2: Roles / responsibilities of the IPP team

Domain 3: Interprofessional communication

Domain 4: Teams and teamwork: Patient to population

Strong positive perceptions and experience on the IPE – CPS activity on all the domains in both groups pre and post.

Sample Student Comments

- Learned a lot more about other professions.
- Loved thinking with other students.
- Motivated me to research areas that I did not know a lot about and may not have done it on my own if not for this project
- The importance of how co-management is to patients
- Loved the case.
- I learned that I do not need to know everything and how to co-manage patients.

Thank you!

Questions ?