Interprofessional Education and the Clinical Learning Environment

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Learning Objectives

- **After participating in this session, you should be able to describe and discuss:**
  - **One interprofessional education program that was embedded longitudinally in community and academic clinics**
  - **Issues from interprofessional efforts in quality improvement and an education masters program**
  - **A project that aligned CEHP with an interprofessional team-based QI effort**

How can they work together
if they don't learn together?

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Definitions

Interprofessional education (IPE)

- **"When students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes"**

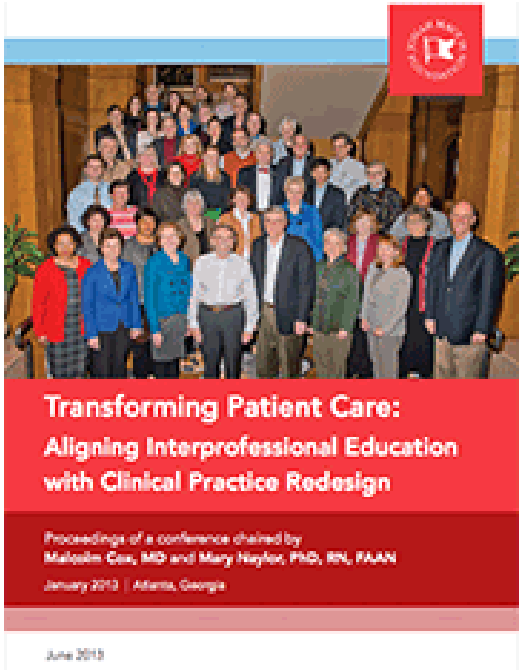
  (Centre for the Advancement of Interprofessional Education, 2002).

- **Develop a "collaborative practice-ready" work force, driven by local health needs.**

  (WHO, 2010)

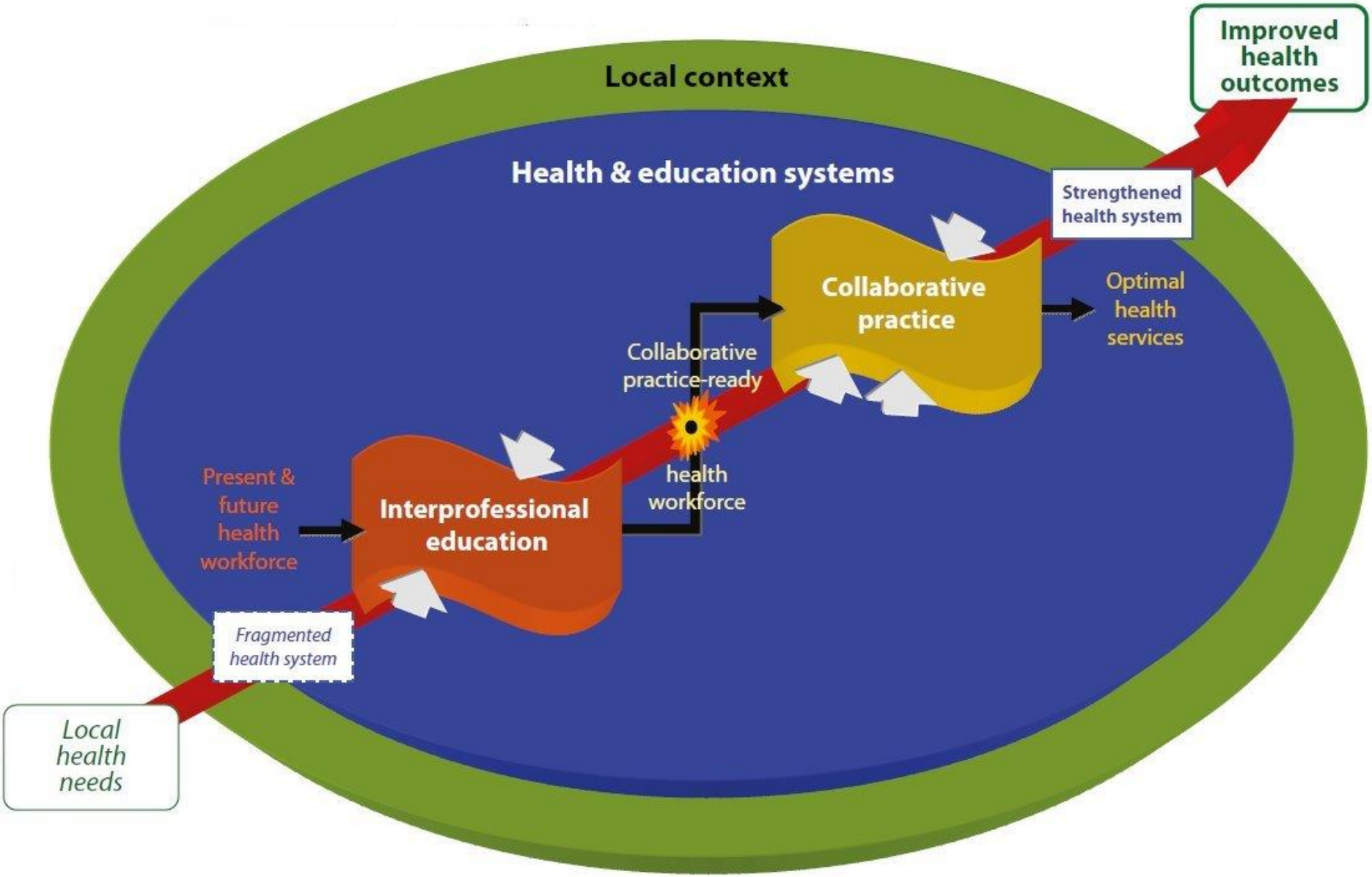
Alignment of education and practice reform

National Center for Interprofessional Practice and Education



"We envision a healthcare system in which learners and practitioners across the professions are working collaboratively with patients, families, and communities and with each other to accomplish the Triple Aim."

Cox M & Naylor M. In: Editor. Transforming Patient Care: Aligning Interprofessional Education with Clinical Practice Redesign. Proceedings of a Conference sponsored by the Josiah Macy Jr. Foundation in January 2013; New York: Josiah Macy Jr. Foundation; 2013



Health and Education Systems (WHO, 2010)

IPE Building Blocks

- **More “from” and “about” than traditional curricula**
- **Structured activities and informal interactions**
- **Work in practice settings**
- **Focus on learning process AND content**
- **Explicit strategies needed to build awareness of and respect for different perspectives and roles**
- **Interpersonal skills for effective collaboration and communication**

Sargeant, J. *Theories to aid understanding and implementation of interprofessional education*. JCEHP, 29(3): 178-184, 2009.

IPE Competency Domains

1. **Values/Ethics for Interprofessional Practice: Maintain a climate of mutual respect and shared values.**
2. **Roles/Responsibilities: Use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of the patients and populations served.**
3. **Interprofessional Communication: Communicate with patients, families, communities, and other health professionals in a responsive and responsible manner that supports a team approach to the maintenance of health and the treatment of disease.**
4. **Teams and Teamwork: Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan and deliver patient-/population-centered care that is safe, timely, efficient, effective, and equitable.**

Interprofessional Education Collaborative Expert Panel. (2011). Core competencies for interprofessional collaborative practice: Report of an expert panel. Washington, D.C.: Interprofessional Education Collaborative.

Vanderbilt Program in Interprofessional Learning (VPIL)

Belmont University

Lipscomb University

Tennessee State University

Vanderbilt University

VPIL

VANDERBILT PROGRAM IN INTERPROFESSIONAL LEARNING

"A CLINICAL, LONGITUDINAL EXPERIENCE WHERE ALL WORKERS LEARN AND ALL LEARNERS WORK"

MEDICINE

NURSING

SOCIAL WORK

PHARMACY

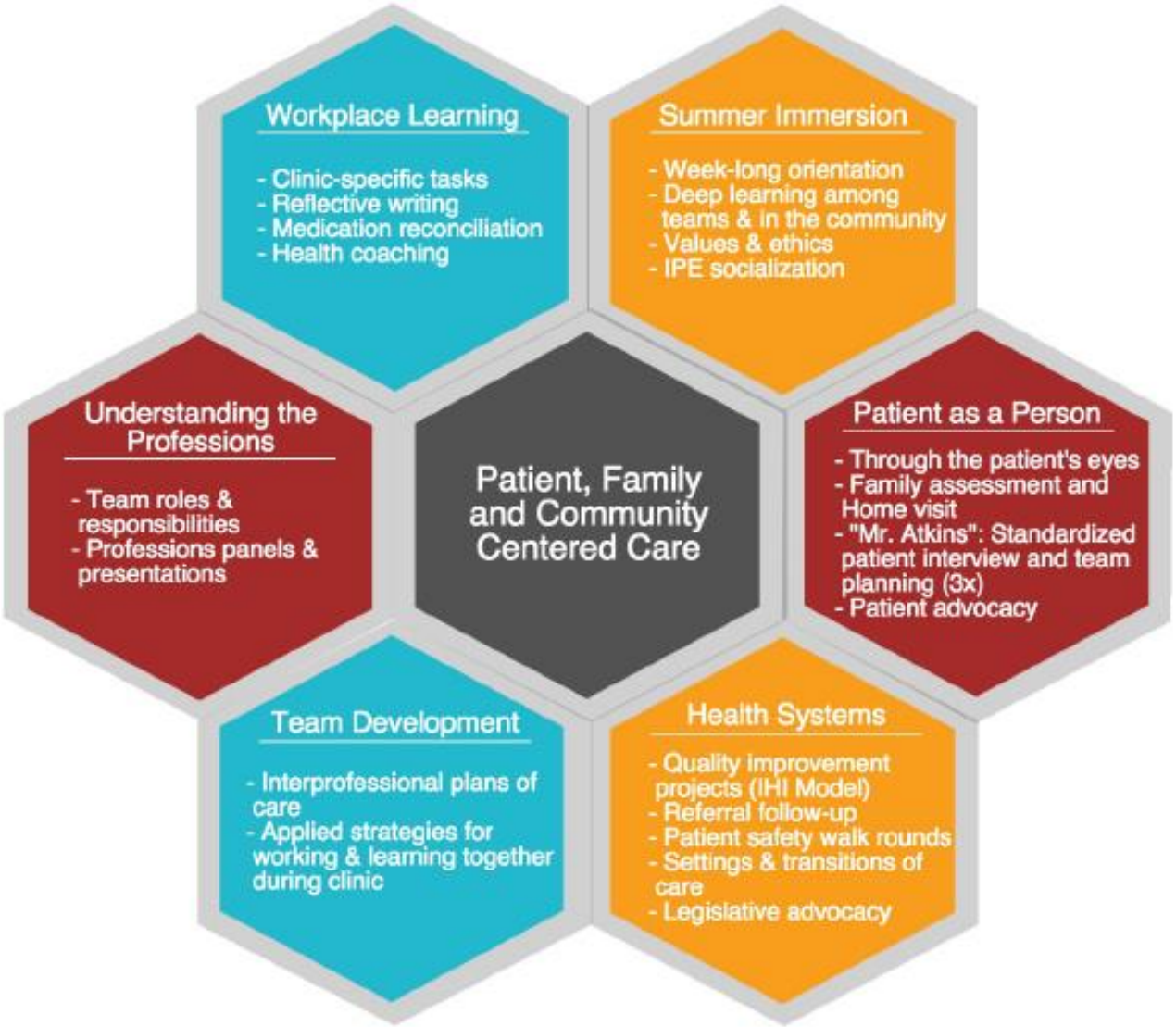
VPIL students work and learn in clinic teams of 4 (1 from each profession)
1 half-day each week over the course of 2 academic years

VPIL PROGRAM GOALS

- **Cultivate respectful professionals**
- **Nurture self-directed workplace learners**
- **Prepare leaders for a collaborative-ready work force**
- **Improve the health care delivery system**

THE CURRICULUM AT A GLANCE

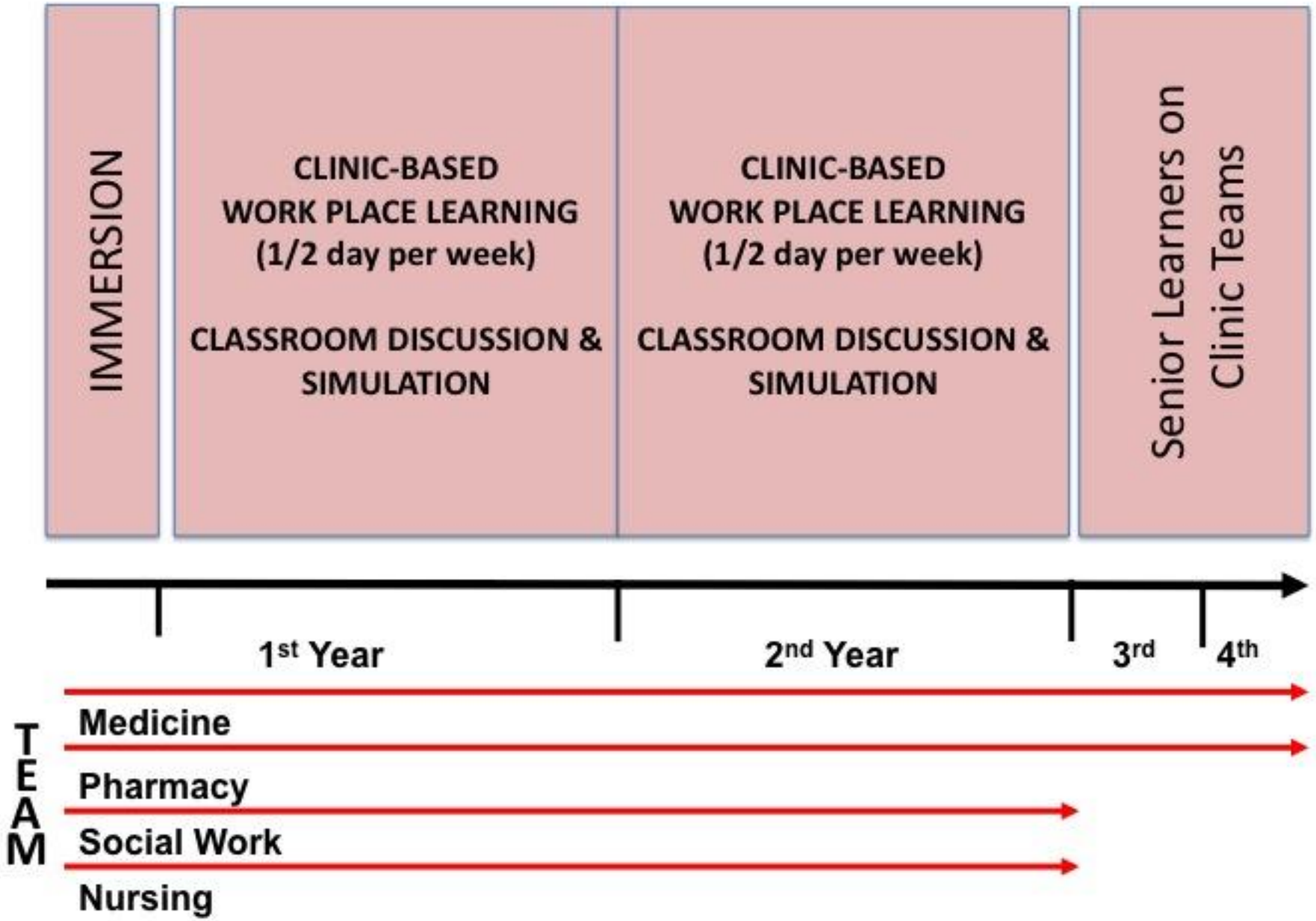
"Health professions students learning with, from and about each other."



BELMONT UNIVERSITY · LIPSCOMB UNIVERSITY · TENNESSEE STATE UNIVERSITY · THE UNIVERSITY of TENNESSEE KNOXVILLE · VANDERBILT UNIVERSITY

The Funding Agencies
The Josiah Macy, Jr. Foundation & The Baptist Healing Trust

LONGITUDINAL CLINIC EXPERIENCE



CLINIC-BASED WORK PLACE LEARNING

CLASSROOM DISCUSSION & SIMULATION

½ day per week

1st Year Focus

Semester 1: Patient as Person

Semester 2: The Professions

CLASSROOM LEARNING ACTIVITIES

Standardized patients encounter
Through the Patient's Eyes
Home Visits and Interprofessional Plan of Care
Health Coaching
Medication Reconciliation

2nd Year Focus

Semester 3 & 4: Teams & Health Systems

CLASSROOM LEARNING ACTIVITIES

Fundamental Quality Improvement skills
Transitions & Settings of Care
Advocacy
Capstone project: Improvement project

Who are our students?

2010 entering cohort (29 students, 8 teams)

- 8 Advanced Practice Nursing, Medicine & Pharmacy
- 5 Social Work

2011 entering cohort (36 students, 10 teams)

- 10 Advanced Practice Nursing, Medicine & Pharmacy
- 6 Social Work

2012 entering cohort (45 students, 13 teams)

- 13 Advanced Practice Nursing, Medicine & Pharmacy
- 6 Social Work

2013 entering cohort (32 students, 8 teams)

- 8 Advanced Practice Nursing, Medicine & Pharmacy
- 8 Social Work

2014 entering cohort (40 students, 11 teams)

- 11 Advanced Practice Nursing, Medicine & Pharmacy
- 7 Social Work

Clinic Placements

Community-based primary care
United Neighborhood Health Services
Matthew Walker Comprehensive Health Center
Siloam Family Health Center
Vine Hill Community Clinic
The Clinic at Mercury Courts

Hospital-based primary care at Vanderbilt
Primary Pediatrics Care Clinic
Adult Internal Medicine
Medicine-Pediatrics Primary Care Clinic

Subspecialty care at Vanderbilt
Congestive Heart Failure Clinic & Acute MI
Henry-Joyce Cancer Clinic
The Comprehensive Care Clinic (HIV/AIDS)
Pediatric Pulmonary Clinic
Center for Integrative Health
Pain Management
Palliative Care
Adult & Peds Diabetes
Peds Neurogenetics and Metabolism

Faculty (Truly a team effort)

- **Student teams have a primary preceptor (currently a Nurse or Physician provider); some sites have additional preceptors from different professions, depending on the nature of the clinic.**
- **We believe that ALL members of the clinic team are educators for our students.**
- **VPIL faculty rotate through the clinics to provide guidance and consultation to the students (2 Advance Practice Nurses, 2 Physicians, 3 Pharmacists, & 2 Social Workers)**
- **Faculty from each profession are involved in classroom discussions and simulation facilitation.**

Clinic work and activities

- **Wide range of activities that differ among clinics**
  - **Direct patient care appropriate for a novice learner**
    - **History, medicine reconciliation, intake process, redesigning educational handouts**
  - **System level engagement**
    - **Prescription Assistance Program and Early Intervention Program**
    - **Process mapping**
  - **Practice based improvement projects**
    - **Using data to proactively target patient needs**

General overview of early success

Observations suggests:

- Increasing maturity

- Added sophistication of discussion in home curriculum

- Increase in student level of confidence in the clinic and working with other professions

- Deep appreciation for other professions and scope of practice

- Wide variety of projects are possible to add value to clinic work flow and patient care

- Impact on faculty and staff practice behavior

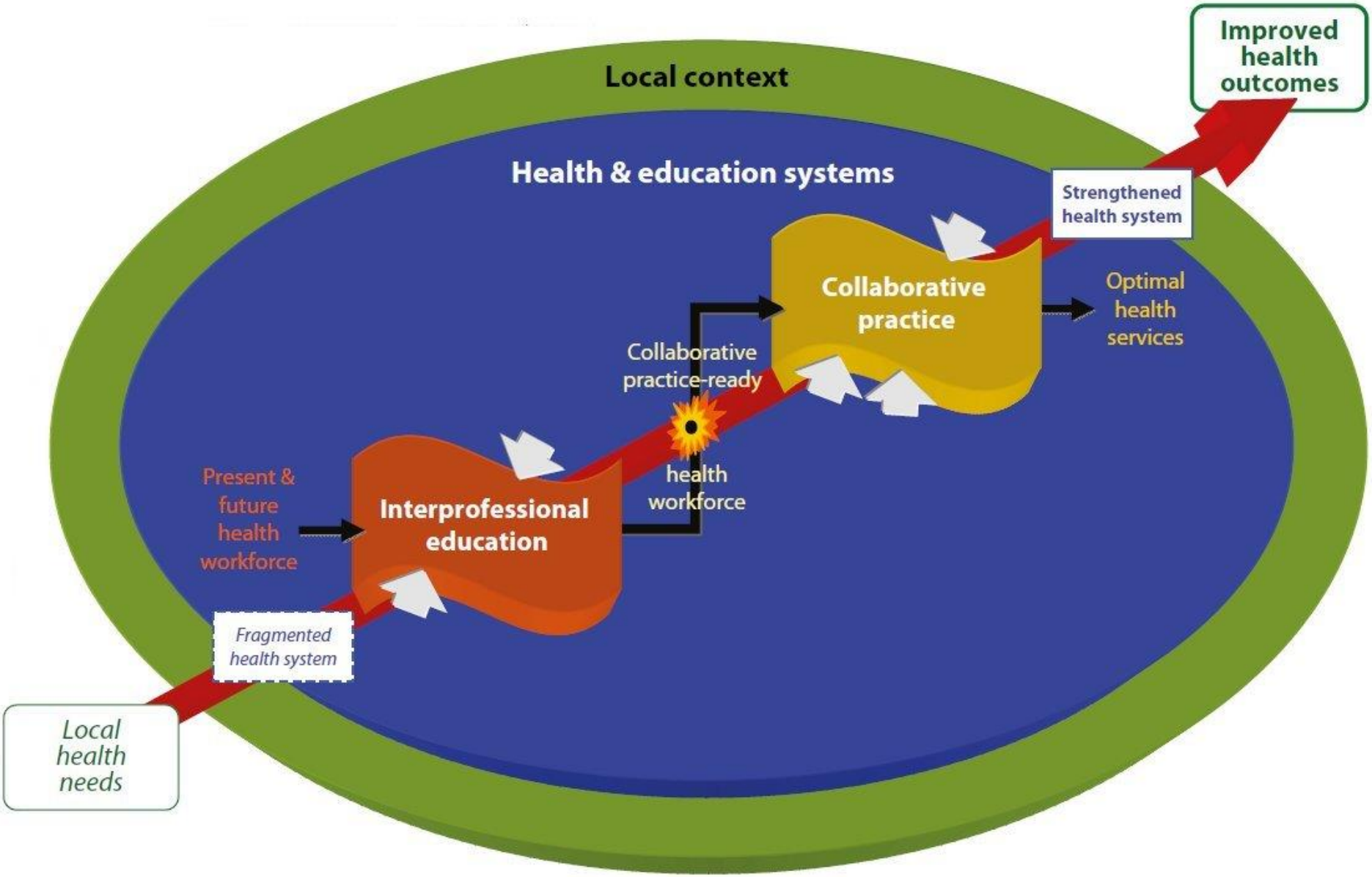
Unpublished evaluation data (VPIL, 2014)

Tensions revealed

- **Being engaged in the messiness of interprofessional care is a beautiful testament to people trying their best to share the load of caring for people to ensure that the patient gets exceptional care. It's simply complicated and messy.**

- **Interprofessional care is impossible if providers do not respect each other. VPIL has shown me that everyone wants to be respected for their training and what they bring to the table. If teammates feel threatened and not respected, the system falls apart.**

VPIL medical student, end of the year reflection 2013



Health and Education Systems (WHO, 2010)

Comments – Tom Van Hoof

General observations from work with primary care practices through a Medicare-designated Quality Improvement Organization:

1. **Physicians often underutilize their staff and other clinicians (e.g., medical assistants, physician assistants, and advanced practice registered nurses).**
   - **I wonder if this reflects, at least in part, a lack of understanding about what staff and other clinicians can offer to patient care.**
   - **IPE may increase physician knowledge about other disciplines and comfort with sharing responsibility with them for patient care.**

Comments – Tom Van Hoof

General observations from work with primary care practices through a Medicare-designated Quality Improvement Organization:

2. **For a variety of reasons, clinicians other than physicians may be uncomfortable describing how they can be helpful in primary care practices and in other settings.**
   - **IPE may increase clinician comfort level in talking with clinicians of other disciplines, including medicine.**
   - **This would have many benefits to patient safety efforts, in particular.**

Comments – Tom Van Hoof

General observations from work with primary care practices through a Medicare-designated Quality Improvement Organization:

3. **Team care and workflow redesign are important strategies to improve patient care.**
   - **Both require an understanding of systems, relative strengths and weaknesses of team members, and interprofessional collaboration.**
   - **IPE is an appropriate mechanism to promote such understanding.**

Comments – Tom Van Hoof

General observations from work with doctors, nurses, and other clinicians in a graduate-level, interprofessional certificate program in health professions education:

1. **Clinicians of all disciplines, particularly mid and late-career ones, reflexively think of group didactic lectures as the only intervention in continuing education.**

Comments – Tom Van Hoof

General observations from work with doctors, nurses, and other clinicians in a graduate-level, interprofessional certificate program in health professions education, continued:

2. **Accreditation and regulation pose some challenges to bringing multiple disciplines together for IPE.**
   - **Requirements are not often the same, and courses must reflect single discipline or specialty requirements that are not written with IPE in mind.**
   - **For example, most approved courses are specific to nurses, doctors, or pharmacists, and changing them to be more inclusive requires an act of congress.**
   - **Similar to joint accreditation in the CE realm, perhaps joint accreditation at the undergraduate and graduate levels would facilitate more interprofessional courses and programs.**

Comments – Tom Van Hoof

General observations from work with doctors, nurses, and other clinicians in a graduate-level, interprofessional certificate program in health professions education, continued:

3. **Schools and departments are often geographically separate, which makes collaboration quite challenging.**
   - **Additionally, each has its own administrative structure and leadership (e.g., Chief Nursing Officer and Chief Medical Officer, and Dean of Medicine and Dean of Nursing).**
   - **IPE requires that leadership collaborate and find ways to span distance.**

Reduction of Venous Thromboembolism (VTE) in Hospitalized Patients: Aligning Continuing Education With Interprofessional Team-Based Quality Improvement in an Academic Medical Center

Susan K. Pingleton, MD, Elizabeth Carlton, RN, MSN, Samaneh Wilkinson, Jeffrey Beasley, DO, Theresa King, MD, Chris Wittkopp, Michael Moncure, MD, and Tim Williamson, MD

Abstract

Problem
Despite clear prophylactic guidelines and national quality emphasis, a minority of hospitalized patients receive appropriate prophylaxis for venous thromboembolism (VTE). Data from the University of Kansas Hospital (KUH) revealed an unacceptably high incidence of VTE.

Approach
The authors aligned continuing education with quality improvement through formation of an interprofessional, multidisciplinary team to develop strategic educational and system operational plans to decrease VTE incidence. The authors reviewed 261 charts with the secondary diagnosis of VTE for identification of themes or causes of VTE to develop multipronged educational and system-based action plans. The authors reviewed a "menu" of evidence-based content delivery techniques to develop the educational plan. Multiple noneducational adjunct system strategies were also developed and implemented.

Outcomes
After implementation of all specific action plans, the KUH VTE incidence decreased 51% from November 2010 to June 2012 (from 12.68 to 6.10 per 1,000 patients). Insertion of peripherally inserted central catheters, a common identified theme, dropped from almost 360 insertions in December of 2010 to less than 200 insertions in April 2012.

Next Steps
Aligning continuing education with quality improvement through an interprofessional, multidisciplinary team approach was associated with a decrease in VTE. The authors describe challenges and lessons learned to inform implementation of similar quality-improvement-driven continuing education initiatives elsewhere. Challenges included time, resources, multiple service lines, and departments with variable acceptance of data. Lessons learned included the value of leadership commitment, interprofessional team work, assessing individual data, expertise of continuing education, using multiple educational methods, and the need for overall champions.

Aligning CEHP with Interprofessional Team-based Quality Improvement

- **Few data available that demonstrates alignment of CEHP and QI to improve the performance of a healthcare team.**
- **Even fewer data available describing specific and multiple educational strategies developed for the entire health care team.**

Aligning CEHP with Interprofessional Team-based Quality Improvement

Physicians

- **Hospitalists**
- **Intensivists**
- **Vascular surgeons**
- **Trauma surgeons**
- **Orthopedic surgeons**

Nursing

- **Administration**
- **Education**
- **Quality and safety**
- **Clinical projects coordinator**
- **Bedside nurses**

Pharmacists

- **Inpatient pharmacy director**
- **Clinical pharmacist**

Hospital staff

- **Quality outcomes data manager**
- **Quality improvement coordinator**
- **Information technology**

Office of CME

- **Associate Dean**
- **Senior project manager**

Aligning CEHP with Interprofessional Team-based Quality Improvement

Assessment of problem

- **Reviewed 261 charts of patients with secondary diagnosis of VTE.**
- **Sixty-six (25%) were found to have appropriate prophylaxis.**
- **Causes for 80% of VTE in remaining 196 charts**
  - **Presence of peripherally inserted central catheter (PICC) 38%**
  - **Coding issues 23%**
  - **No prophylaxis 11%**
  - **Lack of documentation to support that VTE was present on admission 8%**

Aligning CEHP with Interprofessional Team-based Quality Improvement

- **Educational plan for healthcare team**
  - **Menu of evidence-based content delivery strategies (Amer Coll Chest Physicians)**
  - **Matrix of methods to change provider performance**
    - **Predisposing, reinforcing, enabling (Larry Green)**
    - **Learners' stages of acceptance: awareness; agreement; adoption; adherence (Pathman)**

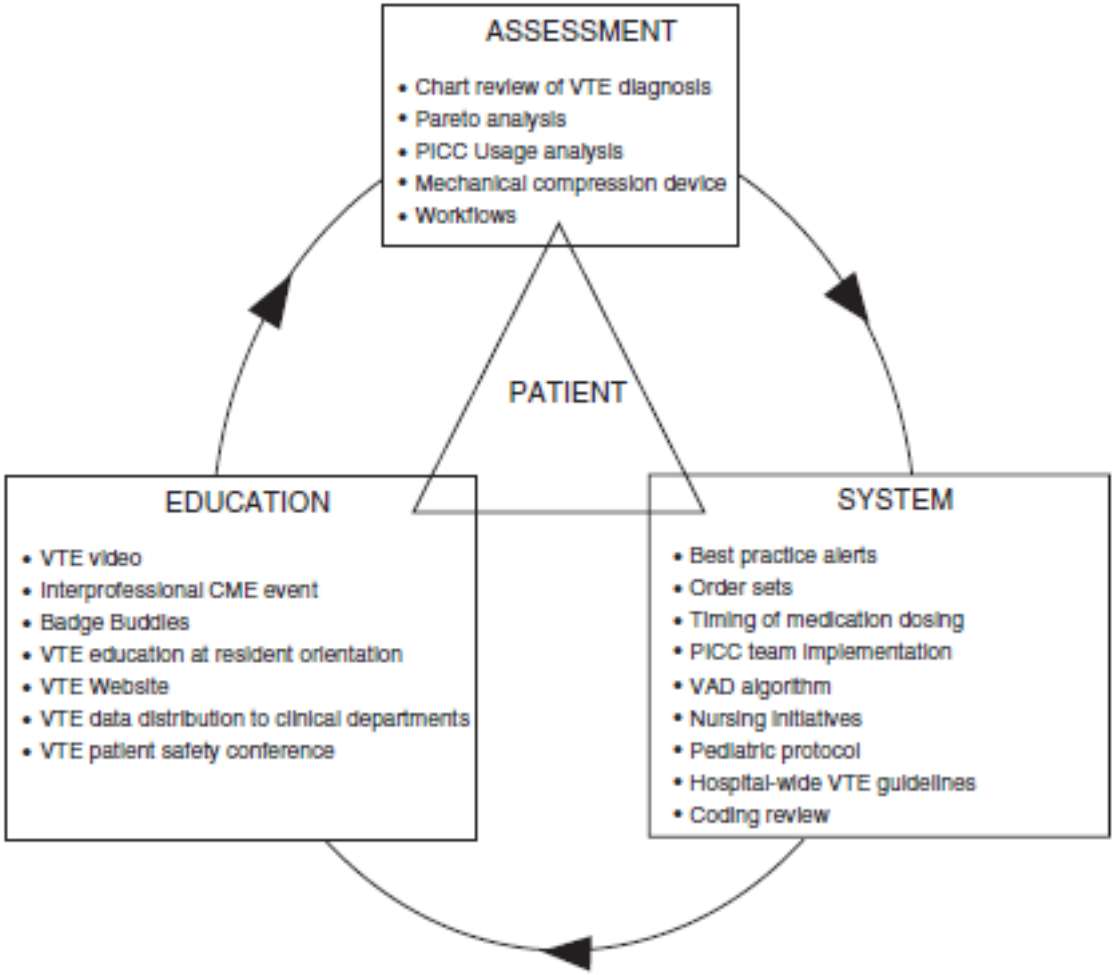


Figure 1 Areas of strategic work of the interprofessional venous thromboembolism (VTE) committee, University of Kansas Hospital, 2011 to 2012. PICC indicates peripherally inserted central catheter; VAD, vascular access device.

Aligning CEHP with Interprofessional Team-based Quality Improvement

Interprofessional Responsibilities			
Nurses	**Physicians**	**Pharmacists**	**Ancillary Support**
Patient risk assessment	Patient risk assessment	Risk stratification via pharmacy score card	
Prophylaxis administration	Prophylaxis order	Medication and dose monitoring	Concurrent surveillance to ensure appropriate prophylaxis
Mobility			PT and OT mobility
Prophylaxis interruption avoidance	Prophylaxis interruption avoidance	Prophylaxis interruption avoidance	
Mechanical compression device compliance			
Appropriate PICC maintenance	Appropriate PICC needs assessment and use		
Continuing nursing education	Continuing medical education	Pharmacy VTE education	Organizational improvement
Patient education	Patient education	Patient education	Coding review

Aligning CEHP with Interprofessional Team-based Quality Improvement

Outcomes

1. **Insertion of PICCs dropped dramatically from 360 in December 2010 to <200 in June 2012.**
2. **Hospital VTE rates dropped from 12.68 per 1000 patients in December 2010 to 6.10 per 1000 patients in June 2012.**

The changes were greater than would be expected by chance alone and more than the random background noise of the system.

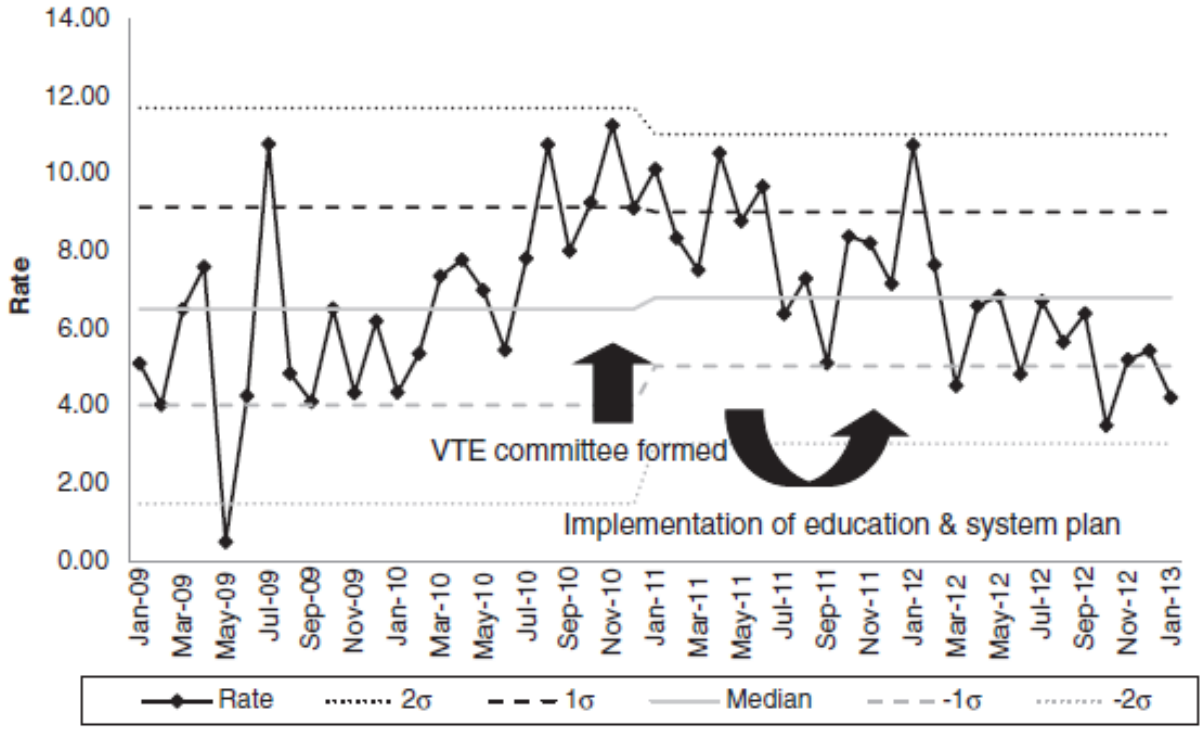


Figure 2 University of Kansas Hospital venous thromboembolism (VTE) rates per 1,000 patients discharged, January 2009 to January 2013.

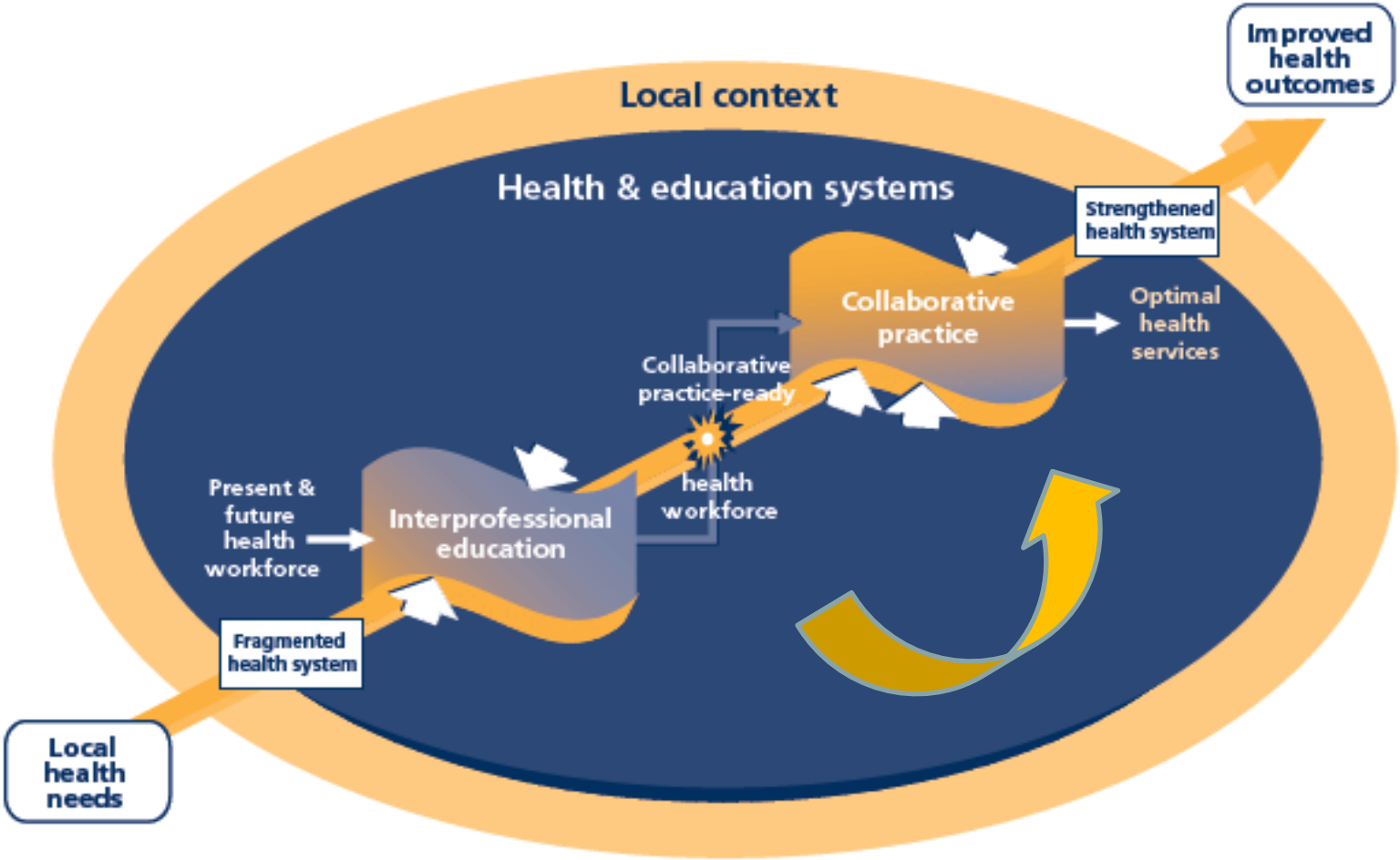
Aligning CEHP with Interprofessional Team-based Quality Improvement

Interprofessional collaborative practice competency domains (Balmer, 2013)

1. ***Values*: place the patient at the center of the delivery of interprofessional health care delivery.**
2. ***Roles/responsibilities*: communicate roles and responsibilities clearly to patients, families, and others health care professionals.**
3. ***I-P communications*: Use effective communication tools and techniques to facilitate discussions and interactions that enhance team function.**
4. ***Teams and teamwork*: engage other health professionals, appropriate to the specific care situation in shared patient-centered decision-making.**

UT Framework for the Development of IPE Values and Core Competencies

Framework for Action on IP Education and Collaborative Practice



Reprinted with permission from: *World Health Organization (WHO). (2010). Framework for Action on Interprofessional Education & Collaborative Practice. Geneva: World Health Organization.*

Table Exercise – Moving from IPE to IP Collaboration

- **The goal is to move collaborative-ready learners, properly trained in an IP learning environment, into collaborative practice roles in a "collaborative-ready" healthcare delivery system, with ongoing lifelong IP learning.**
- **What are the positive examples of moving from IPE to IP collaborative learning at your academic health center?**
- **Discussion (10 min)**
- **Report out (10 min)**