Teaching Interprofessional Student Teams about Systems of Care through Collaborative Health Systems Assignments

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VANDERBILT UNIVERSITY

Vanderbilt Program in Interprofessional Learning (VPIL)

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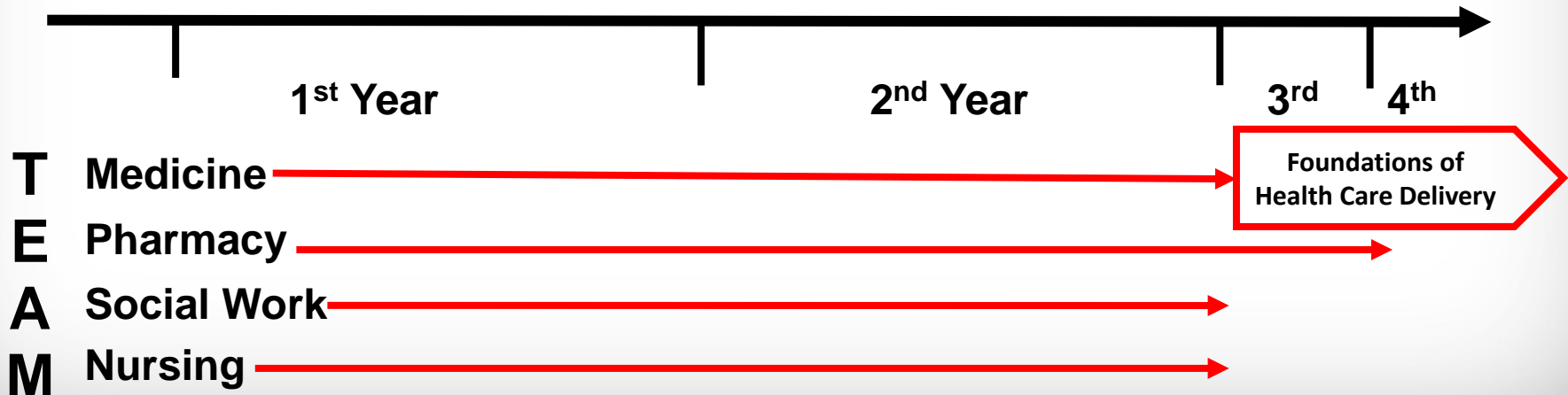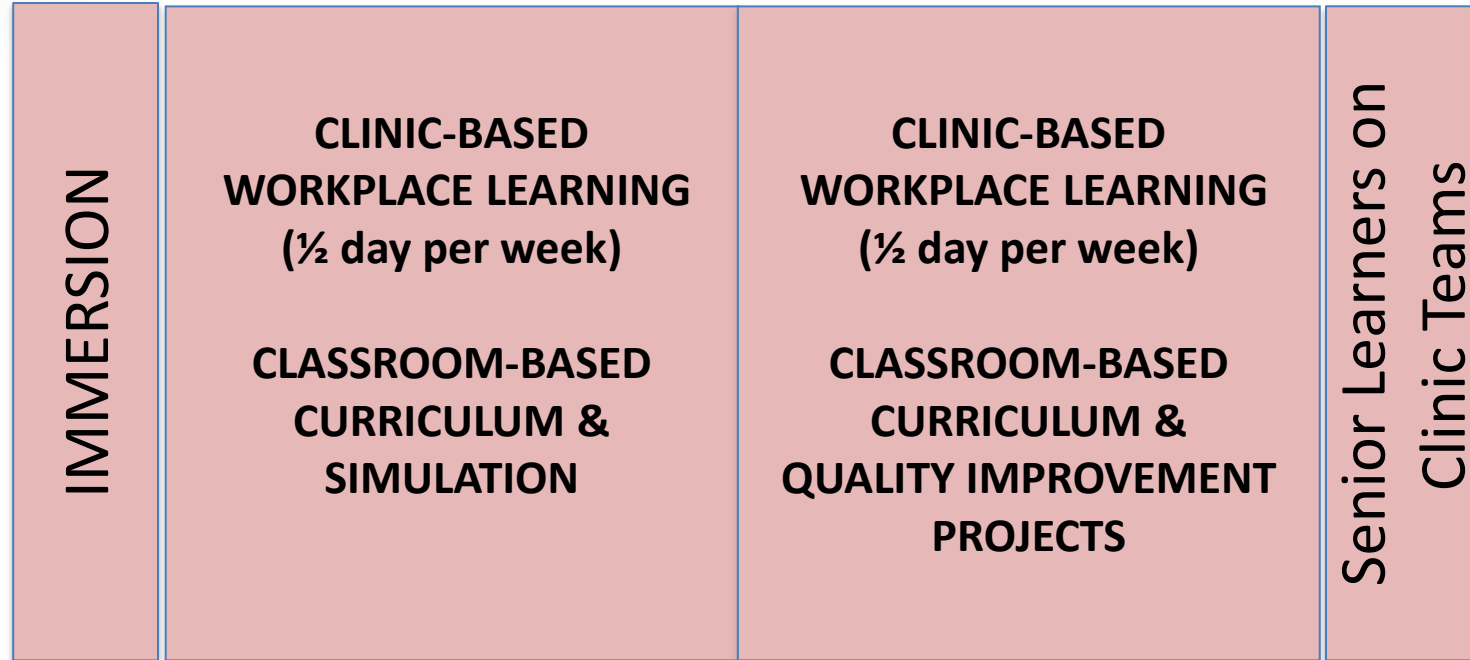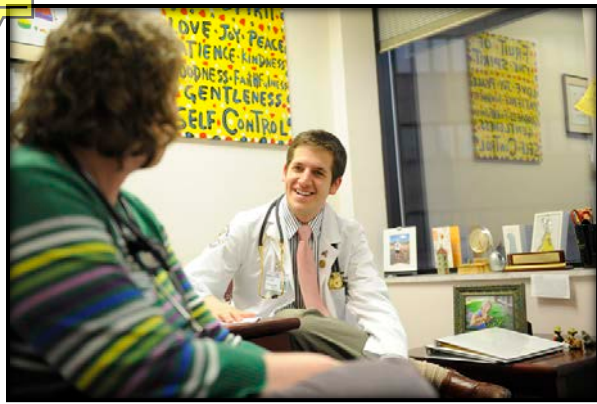
VPIL Program Goals

- Cultivate respectful professionals

- Nurture self-directed workplace learners

- Prepare leaders for a collaborative-ready work force

- Improve the health care delivery system

Program Structure

| IMMERSION | CLINIC-BASED WORKPLACE LEARNING (½ day per week)

CLASSROOM-BASED CURRICULUM & SIMULATION | CLINIC-BASED WORKPLACE LEARNING (½ day per week)

CLASSROOM-BASED CURRICULUM & QUALITY IMPROVEMENT PROJECTS | Senior Learners on Clinic Teams |

1st Year — **2nd Year** — **3rd** **4th**

T Medicine

E Pharmacy

A Social Work

M Nursing

Foundations of Health Care Delivery

CLINIC PLACEMENTS

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

<u>Hospital-based primary care at Vanderbilt</u>
Primary Pediatrics Care Clinic
Adult Internal Medicine
Medicine-Pediatrics Primary Care Clinic

<u>Subspecialty care at Vanderbilt</u>
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

Students & Faculty

Years 2010-2014

- VPIL has admitted 5 cohorts of students
- 8-13 interprofessional student teams each year
- 30-45 total students admitted each year
  - Representing approximately 10% of each professional home school cohort
- 192 total students involved over 5 years
- 15 Faculty representing each profession involved as small group facilitators

Health Systems Assignments

- **Cohort:** VPIL Second Year Teams, 2014-2015
- **Goal**: Interprofessional student teams evaluate health systems factors that impact health care delivery
  - Use their VPIL clinic and patient panel
  - Team members contribute profession-specific knowledge and skills
  - Process analysis prior to VPIL quality improvement projects
- **Activity:** Team and individual reflections
- **Content:**
  - Medication Reconciliation
  - Referral Follow-up
  - Patient Safety Rounds
  - Settings of Care
  - Transitions of Care

VPIL

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Medication Reconciliation
Team Assignment

Goals and Objectives

Student teams will:

    a. Document a final medication reconciliation list, noting any discrepancies with the previous clinic note.

    b. Categorize the medication error index of any discrepancies.

    c. Identify and reflect on what barriers they identified in patient understanding or compliance and brainstorm potential solutions.

    d. Counsel patients on adherence, potential side effects, medication interactions.

Assignment Instructions

Together with your preceptor, identify one clinic patient with multiple comorbidities and >5 chronic medications to perform medication reconciliation. At least one week after their clinic visit, call the patient or family to perform a phone interview to document medication reconciliation, identify barriers to medication adherence, assess their understanding of their medications, and counsel patients regarding side effects, potential interactions, and/or adherence. Remember to ask about over-the-counter medications, medications used only as needed, non-daily medications, non-oral medications (inhalers, injections, etc.), vitamins and supplements, and medical supplies (syringes, needles, test strips).

Assignment Submission

1. Submit your team's final medication list with discrepancies noted (as compared to their previous clinic note).

2. If there are discrepancies, categorize the medications based on severity using the National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) Medication Error Index (information found at: http://www.nccmerp.org/medErrorCatIndex.html).

3. All team members are required to click "submit" in VSTAR Learn for the assignment to be accepted.

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Medication Reconciliation
Individual Assignment

Goals and Objectives

Student teams will:

a. Document a final medication reconciliation list, noting any discrepancies with the previous clinic note.

b. Categorize the medication error index of any discrepancies.

c. Identify and reflect on what barriers they identified in patient understanding or compliance and brainstorm potential solutions.

Describe how you plan on incorporating what you have learned into your individual practice.

What did you learn from your VPIL team members' professions and how they each interact with the patients and the health care system?

- health systems
- What resources have you identified which could help resolve at least one of these barriers?
- What questions or concerns did the patients have regarding their medications? How did you resolve these?
- What drug-drug, drug-food interactions did you note?
- What are some common side effects the patient may experience?
- Describe how you plan on incorporating what you have learned into your individual practice.
- What did you learn from your VPIL team members' professions and how they each interact with the patients and the health care system in regards to medication compliance, medication errors?
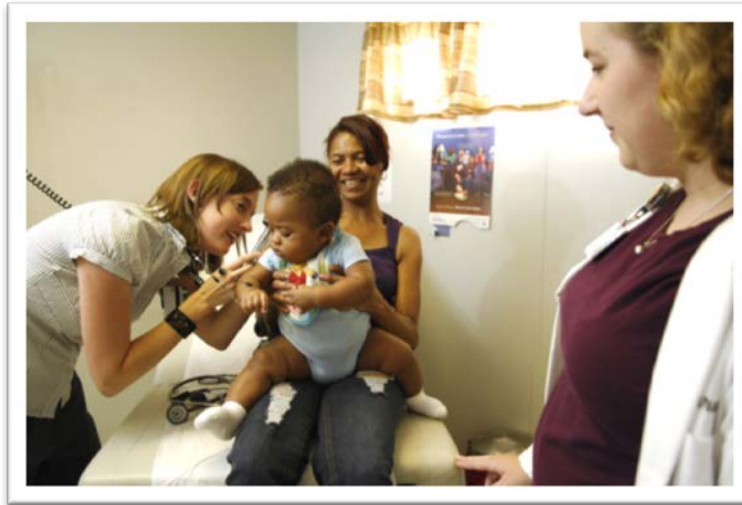
Assignment Completion

- Eight VPIL teams (n=30 students) completed five Health Systems team assignments.
- 131 individual reflections were completed (87%).

Methods:
## Curriculum Improvement

Student Perception Survey
- Second-year VPIL students completed a 10-question anonymous survey about their experience with the Health Systems assignments.
- Rated overall impression of the Health Systems Assignments based on perceived impact on individual and team learning
- Ranked by perceived meaningfulness

Results: Student Perception Survey

- 14 students (47%) anonymously responded
- Completion time averaged **1-3 hours per assignment**
  - 71% of students estimated that each assignment took 1-3 hours of clinic time
  - 93% think that assignments fit within one or two sessions
- Overall, how would you rate the Health Systems assignments on whether they assisted in your learning?
  - Scale: 1 = "didn't learn anything", 5 = "high impact learning"
  - Average perceived impact on learning: **3.21**

Results: Student Perception Survey

Assignment rankings on perceived meaningfulness:
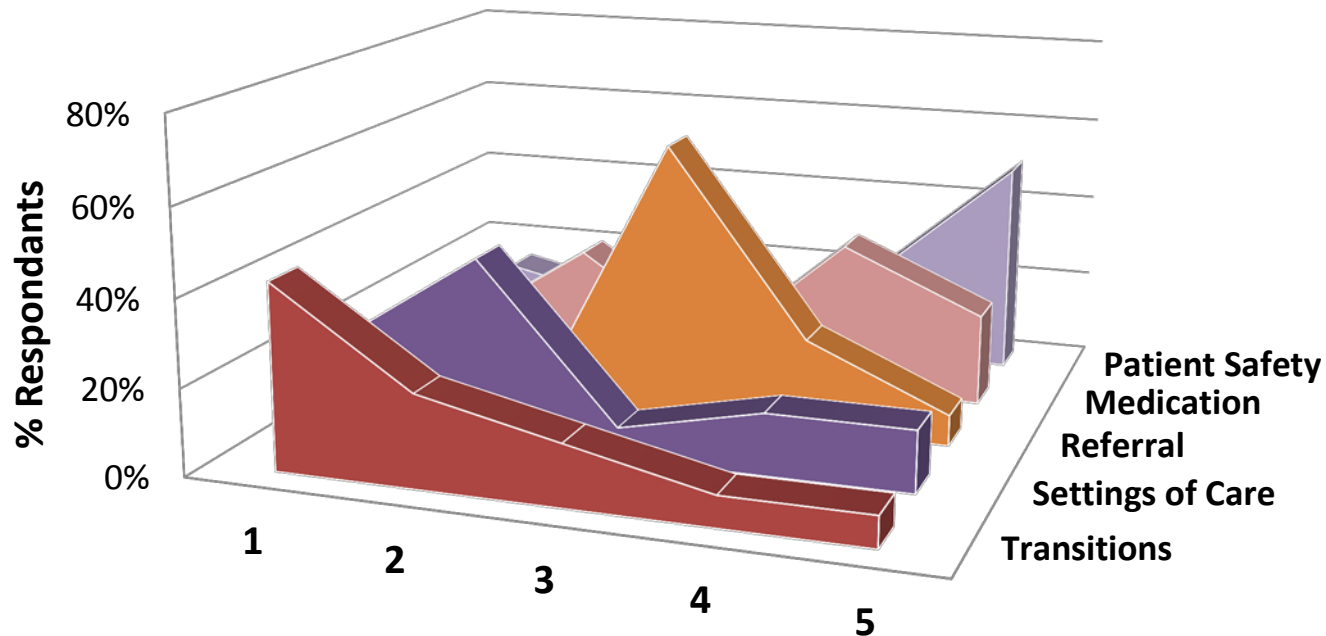
	1	2	3	4	5
■ Transitions	43%	21%	14%	7%	7%
■ Settings of Care	21%	43%	7%	14%	14%
■ Referral	7%	0%	64%	21%	7%
■ Medication	7%	29%	7%	36%	21%
■ Patient Safety	14%	7%	7%	21%	50%

Results: Student Perception Survey

Improvements

"Most of my learning occurred with my team while doing the assignment, and the individual assignments felt like busywork."

at our clinic in a completely different way. I learned more about the daily operations of the clinic and the preparation that it takes to ensure patient safety."

- ...ns in clinics of which they were

"The assignments may have been more helpful in building cohesion in year 1."

...ring"

- Some assignments more useful than others
- Time consuming – detracted from patient care
- Some felt like "busywork"
- May be useful in Year 1 for team-building

...pp...ci...t... th... opp...t...ity to follow a patient through the health care system."

"I liked learning about how the different agencies worked together to care for a patient."

Conclusions

- Health Systems Assignments created opportunities for meaningful learning for interprofessional student teams
- Team assignment more valuable than individual reflections
- Variability in perceived value among the assignments
- Generalizable to various institutions:
  - Applicable within a wide variety of clinic settings
  - Do not require intensive resources

Impact and Future Directions

- Curricular Improvements
  - Streamline Health Systems Assignments
  - Spread out assignments between first and second year
  - Revise individual reflection?
- Evaluation of Individual and Team Learning
  - Qualitative analysis of individual and student assignments
  - Focus groups of students (including connection to QI project?)
  - Profession-specific feedback
  - Preceptor feedback
- Impact on Clini
  - Quantify "va   tion errors
    identified, n   nity resources,
    patient satis

Acknowledgements

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https://medschool.vanderbilt.edu/vpil/