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## An Innovative Approach to Interprofessional Education to Meet the Needs of Underserved Mental Health and Cardiovascular Health Conditions\*

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## Need

- Increasing need for Primary care providers for MCC, persistent Mental illness
- Inability of current health system to meet public health needs
- Mental illness comorbid with other illnesses resulting in poor health outcomes



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## Setting: Rural Virginia

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INTERPROFESSIONAL EDUCATION AND COLLABORATION  
**BE the CHANGE.**



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### Project Goals

1. Increase the number of doctorate of nursing practice (DNP) graduates, clinical psychologists, communication sciences disorder practitioners who are skilled in interprofessional collaborative practice providing quality care to underserved patients with persistent mental illness and cardiovascular disease.
2. Develop faculty expertise in team - based IPE and patient -centered instruction to serve as models for students and faculty in clinical practice and education.
3. Utilize virtual clinic for students to engage and reflect on roles, communication, and quality improvement
4. Insure a diverse and culturally competent workforce by enrolling, retaining, and graduating qualified minority and/or educationally disadvantaged students committed to coordinate health care for underserved populations with persistent mental illness

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### Semester I (Spring 2015)

IPEC Competencies Web-based Presentation Module; and "Be the Change" Workshop. Develop and offer a 10-hour face-to-face workshop over 2 day weekend to orient students and serve as a "kick-off" to IPE and IPCP.

Content: IP competencies; knowledge of CSD, Psych and Nursing professional roles and responsibilities; effective communication; conflict resolution and shared decision making. Establish peer small groups comprised of students from each discipline to work on IP activities throughout the 3 semesters.

Initiate small group work on health team functioning and quality improvement in primary care with shared patient cases; reflection activities.

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### Semester II: Virtual clinic in second life, Madison Interprofessional Clinic (Fall 2015)

Case Studies using virtual clinic, Madison Interprofessional Clinic, in Second Life

Patient avatars with MCC developed and presented by CSD, Psychology, and Nursing Faculty

Shared interview of patient avatar; development of care; case analysis; reflection on profession's perspectives.

Observation of two cases with structured analysis

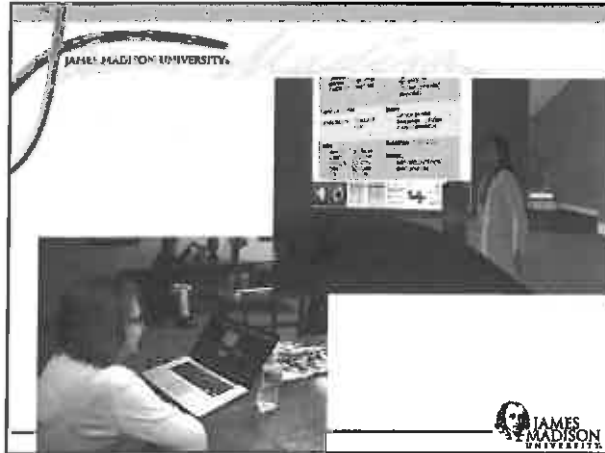
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### SECOND LIFE




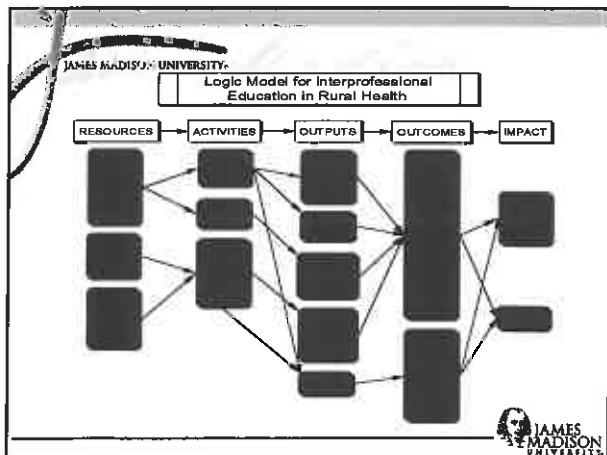
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### Semester III (Spring 2016)

Teams work in actual clinic IPCP collaborative practicum experience. Final clinical experience at Suitcase Clinic (healthcare for homeless), Free Clinic, or Harrisonburg Community Health Center where each member assesses patient and prioritizes care issues individually and as team. Reflection exercise on team functioning and quality improvement

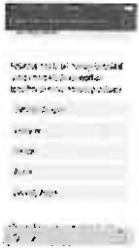




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### DATA COLLECTION METHODS

Semester 1 (Spring 2015):

- IRB approval
- Qualtrics Online Survey
  - Viewable through Smartphone Ipads
- 3 Data Collection Points
  - Launched through the Course Canvas Site
  - Pretest: before "Be the Change" workshop
    - 15 minutes class time allotted
  - Posttest: Immediately after the workshop
    - 15 minutes class time allotted
  - Posttest2: Semester End
    - No class time allotted

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### Instruments

#### Readiness for Interprofessional Learning Scale (RIPLS)

15 item tool

Subscales (Cronbach's alpha):


- Teamwork and Collaboration : 9 questions (.89)
- Negative Professional Identity: 3 questions (.76)
- Positive Professional Identity: 4 questions (.81)
- Roles and Responsibilities: 3 questions (.43)

#### Interprofessional Socialization and Valuing Tool (IPSV)

23 item tool

Subscales (Cronbach's alpha):

- Comfort 6 questions (.79)
- Self-perceived Ability to Work with Others 8 questions (.89)
- Value in Working with Others 9 questions (.82)




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### Demographics

30 students enrolled in coursework across 3 graduate courses  
 26 participated in study from pretest-posttest1 (86% response)

- Nursing (DNP students): n=8 (30%)
- Communication Science Disorders: n=9 (34%)
- Graduate Psychology: n=9 (34%)

Mean Age: 29 (SD: 7.7)  
 80% Female  
 96% Caucasian




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### Results Pretest/Posttest 1:

#### RIPLES: Mean Scores/SD

	Teamwork & Collaboration (Range 0-45)	Negative Professional Identity (Range 0-15)	Positive Professional Identity (Range 0-20)	Roles Responsibilities (Range 0-15)
Pretest	39.1 (4.1)	5.7 (2.1)	16.7 (2.5)	6.0 (1.5)
Posttest	59.5 (4.7)	3.6 (2.1)	16.5 (2.5)	5.5 (1.6)




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### Results Pretest/Posttest 1:

#### IPSV: Mean Scores/SD

	Comfort (Range 7-42)	Self-Perceived Ability to Work with Others (Range 7-56)	Value in Working with Others (Range 7-63)
Pretest	20.8 (7.3)	24.6 (4.3)	25.5 (4.1)
Posttest	20.7 (3.0)	23.5 (3.0)	27.5 (6.0)



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### Linear Mixed-Effects Modeling (n=12) RIPLS

	Pre	Post	F	p	
Teamwork Collaboration	39.5 (1.5)	41.0 (1.5)	4.1 (1.3)	.08	n.s.
Negative Prof Identity	5.0 (.63)	5.1 (.63)	4.7 (.63)	295	n.s.
Positive Prof Identity	16.5 (.79)	17.0 (.79)	17.5 (.79)	763	n.s.
Rules Responsibility	5.9 (.56)	5.7 (.56)	5.3 (.56)	609	n.s.

\*The mixed effects model procedure allows for missing values so that even though if a subject had missing information at some data point, the procedure used data from all other remaining data points instead of dropping the subject.

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### Linear Mixed Effects Modeling (n=12) IPSV

	Pre	Post	F	p	
Self- Perceived Ability to Work with Others	24.4 (1.4)	24.7 (1.5)	20.1 (1.3)	7.008	.005
Value in Working with Others	27.4 (2.0)	28.5 (2.0)	27.0 (2.0)	.322	n.s.
Confidence	21.2 (1.29)	21.5 (1.25)	19.4 (1.29)	1.9	n.s.

\*The mixed effects model procedure allows for missing values so that even though if a subject had missing information at some data point, the procedure used data from all other remaining data points instead of dropping the subject.

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### Feedback from Students

**Challenges:**

- Scheduling!!
- Disliked weekend workshop timing
- Online communication styles with group members
- Lack of experience/ too much experience

**Strengths:**

- New knowledge of client resources
- Demonstrated growth of personal role knowledge and role of others
- How to approach patient centered care
- Open communication among team members
- Strengthen desire to work within an interprofessional team

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### Lessons Learned:

- Data Collection Challenges**
  - Importance of taking the time during class for completion and having it viewable on electronic devices (smart phones, etc)
  - Instruments may not be sensitive to graduate students with many years of clinical experiences.
- Importance of Support of other faculty and administration**
  - Sharing national reports from accrediting panels to demonstrate "value added"
- Scheduling issues or combining 3 disciplines, but also face to face and online program compatibility**
  - Importance to looking way ahead for future scheduling.
  - Planned face to face interaction in addition to online communication

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