



# AMA Innovations in Medical Education Webinar Series

## Interprofessional Education: Using technology to teach team-based care

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**Kelly J. Caverzagie, MD, FACP, FHM**  
**Richard N. Van Eck, PhD**  
**Debra K. Litzelman, MA, MD, MACP**  
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## Today's Host



Maya M. Hammoud, MD, MBA

Director, Medical Education Innovation,  
American Medical Association

# Objectives

- Identify barriers institutions face in successfully implementing interprofessional education
- Learn about innovative technologies schools are using to overcome those barriers
- Discuss how specific technologies, such as EHRs and telemedicine can enhance interprofessional experiences for health professions students



## Core Competencies for Interprofessional Collaborative Practice

Sponsored by the Interprofessional Education Collaborative\*



Interprofessional Education Collaborative  
Connecting health professions for better care

Core Competencies for  
Interprofessional Collaborative Practice:

2016 Update

AMA Innovations in Medical Education Webinar Series

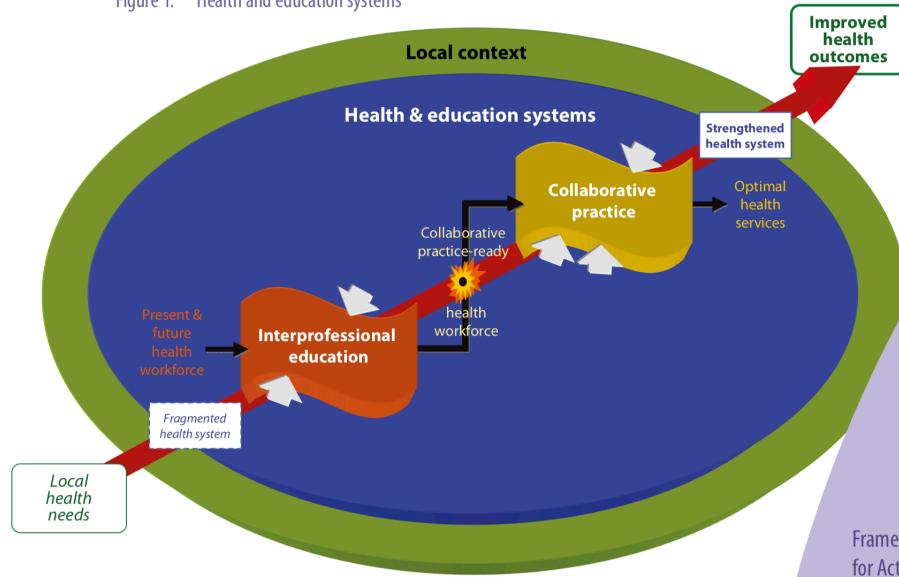
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Health Professions Networks  
Nursing & Midwifery  
Human Resources for Health

## Framework for Action on Interprofessional Education & Collaborative Practice

Figure 1. Health and education systems



Framework  
for Action on  
Interprofessional  
Education and  
Collaborative  
Practice

## EPA 9: Collaborate as a member of an interprofessional team

### 1. Description of the activity

Effective teamwork is necessary to achieve the Institute of Medicine competencies for care that is safe, timely, effective, efficient, and equitable. Introduction to the roles, responsibilities, and contributions of individual team members early in professional development is critical to fully embracing the value that teamwork adds to patient care outcomes.

#### Functions

- Identify team members' roles and the responsibilities associated with each role.
- Establish and maintain a climate of mutual respect, dignity, integrity, and trust.
- Communicate with respect for and appreciation of team members and include them in all relevant information exchange.
- Use attentive listening skills when communicating with team members.
- Adjust communication content and style to align with team-member communication needs.
- Understand one's own roles and personal limits as an individual provider and seek help from the other members of the team to optimize health care delivery.
- Help team members in need.
- Prioritize team needs over personal needs in order to optimize delivery of care.

## AMA Accelerating Change in Medical Education Goals:

- Create competency based assessment & flexible individualized learning plans
- Develop exemplary methods to achieve **patient safety, performance improvement and patient centered team care**
- Understand the health care system and health care financing
- Optimize the learning environment

## Accelerating Change in Medical Education Initiative

- \$13.5 million in grants to medical schools
  - 11 schools in 2013
  - 21 schools in 2016
  - 19,000 students ~ 33 million patient visits each year
- Consortium formed to jumpstart and speed dissemination of ideas
  - Venue for collaboration, innovation and scholarship



# AMA Accelerating Change in Medical Education Consortium Innovation Themes

- Integration of medical education and health care systems
- Technology in support of learning and assessment
- Competency-based programming
- Workforce solutions to improve population-based care
- Metrics to support CQI of educational programs
- Faculty development: Coaching and quality improvement
- Envisioning the learner of the future

# AMA Accelerating Change in Medical Education Consortium Innovation Themes

Using technology to teach team-based care in  
Interprofessional Education

## Presenter



Kelly J. Caverzagie, MD, FACP, FHM

Associate Dean for Educational Strategy, Vice-President for Education, University of Nebraska College of Medicine

## Presenter



Richard Van Eck, PhD

Associate Dean for Teaching and Learning,  
University of North Dakota School of Medicine  
and Health Sciences

## Presenter



Debra K. Litzelman, MA, MD, MACP

D. Craig Brater Professor of Global Health Education, Indiana University School of Medicine



# University of Nebraska Medical Center IPE Innovations

**Kelly J. Caverzagie, MD, FACP, FHM**  
Associate Dean for Educational Strategy  
Vice-President for Education, Nebraska Medicine  
University of Nebraska College of Medicine  
University of Nebraska Medical Center

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# University of Nebraska Medical Center (UNMC)



Omaha, Nebraska - Satellite campuses throughout Nebraska

Only public health professions campus with 7 Colleges and 2 institutes dedicated to training health professionals



# Nebraska Medicine



SERIOUS MEDICINE. EXTRAORDINARY CARE.\*

Clinically integrated Academic Health Science Center

Common mission, vision and values



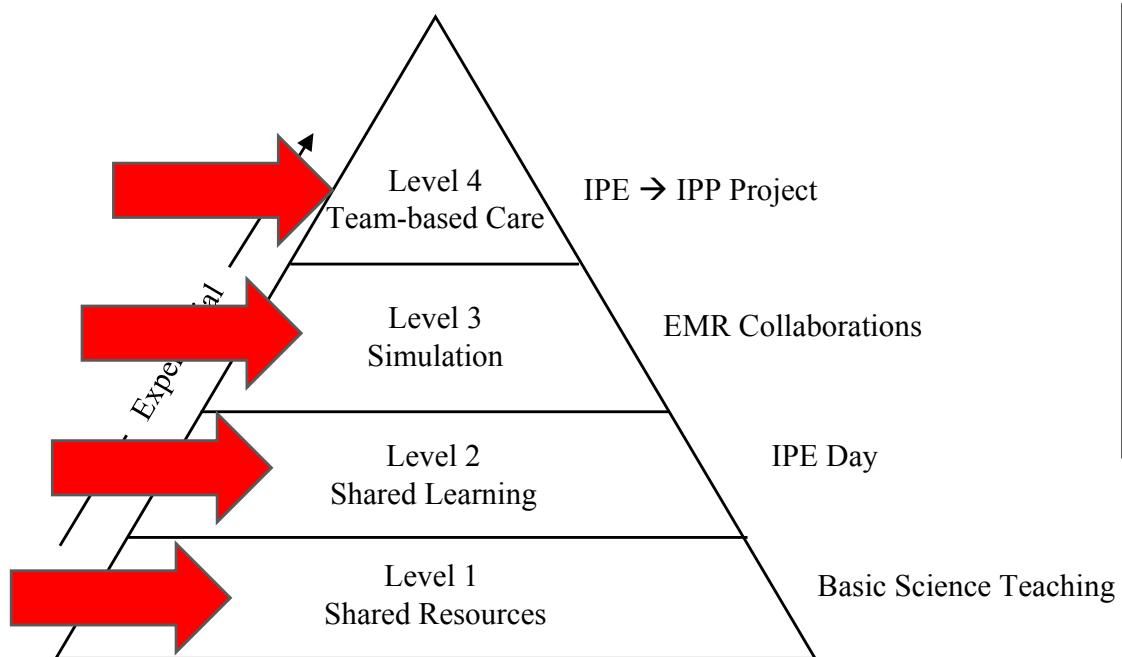
## UNMC IPE Activities

- IPE Days – all professions gather once per semester for pre-clinical years to learn about and from each other, work together in teams to accomplish straightforward goals
- Many formal (i.e. curricular ) and informal (i.e. non-curricular) experiences for students to work together and learn
- Experiences are clinical and non-clinical in nature - students often learn from “non-students” (i.e. practicing professionals) as well
- Journal of Interprofessional Education & Practice



# Campus Initiatives and Advancements

## Four Levels of IPE at UNMC



### UNMC Campus-wide EPA's regarding IPE

- Receptivity to Teammates
- Self-Efficacy as Team Member
- Team Approach to Health Care



## IPE → IPP Project (IPP = Interprofessional Practice)

- Objective: Work with leaders/providers at Nebraska Medicine and leaders/educators at UNMC to implement an integrated, experiential, competency-based curriculum for and all health professions learners
- Goal: Extend IPE curricula into clinical learning environment, advance assessment of IPE competence, improve teaching and learning strategies related to IPE and IPP



## IPE → IPP Project Progress

- TeamSTEPPS and pre-clinical curricula – currently in Nursing & Allied Health; plans for Medicine
- TeamSTEPPS and PCMH Certification for ambulatory clinics – assessment of efficacy
- Organizational focus on high-reliability – barrier or detour?
- Challenges transitioning from pre-clinical to clinical environment:
  - Alignment of principles and language
  - “Co-curricular” development
  - Size of class; Location of students



# Interprofessional Experiential Center for Enduring Learning (iEXCEL)



## Technology: Overcome Distance Barrier

- Cooperative learning via interaction from remote locations
- Goal: Advanced simulation using virtual reality applied to interprofessional teams



## Technology: Utilizing the EMR



- Using our commercial EMR as a learning modality (Level 3)
- Integrated into system-based blocks of learning where other professions' work is simulated
- Goal: Longitudinal case that evolves over time in which interprofessional learners interact virtually via the EMR



## Technology: Future Applications

- Organizational infrastructure for tracking, monitoring and assessing interprofessional learning and work activities
- Utilize EPA assessments between professions and roles; academic and health systems environments (community practice partners?)
- Repository for curricular materials and experiences



Key Point: Technology should be applied to make education more *efficient* and not necessarily more *effective*



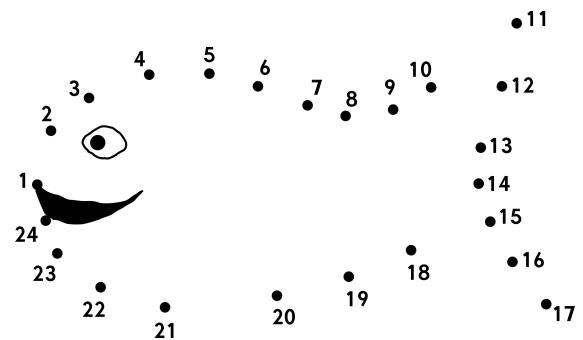
## Facilitators

- Supportive culture of IPE and IPP throughout the institution (i.e. institutional value)
- Curricular redesign as impetus to promote change vs. inertia preventing change
- Collaboration is present and organic with current programs
- Linking needs of learners with needs of the health system (i.e. connect the dots!)

Contact Information:

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# Interprofessional Telemedicine Competency Education with Remotely Operated Biomedical Telepresence Systems (ROBOTS)

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**Richard Van Eck, PhD**  
**Associate Dean for Teaching and Learning**  
**University of North Dakota School of Medicine and Health Sciences**

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## Acknowledgments

- Collaborators
  - Gwen W. Halaas, MD, MBA (Original PI)
  - Jon Allen, MD (CoPI)
  - Eric Johnson, MD (IPE Leader)

## Question

- What are the biggest barriers to IPE at your institution?
  - Scheduling
  - Access to professions
  - Buy-in from faculty
  - Buy-in from students
  - Time/resources for implementation
  - It's nobody's job to coordinate

# Statement of the Problem

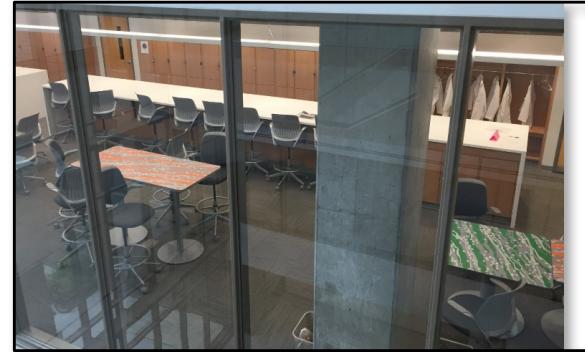
- Need for Interprofessional (IP) Healthcare Communication and Teamwork
  - Improves health outcomes and patient safety<sup>4</sup>
  - Major initiative for healthcare education<sup>5</sup>

<sup>4</sup> Tricco AC, Antony J, Ivers NM, et al. Effectiveness of quality improvement strategies for coordination of care to reduce use of health care services: A systematic review and meta-analysis. *CMAJ*. 2014; 186: E568-E578.

<sup>5</sup> Interprofessional Education Collaborative Expert Panel. (2011). Core competencies for interprofessional collaborative practice: Report of an expert panel. Washington, D.C.: Interprofessional Education Collaborative.

# Interprofessional Healthcare Course Today

- 3,400 Students Since 2006
- Nine Health Professions
- Weeks 1–3
  - Large group and breakouts
- Weeks 4 and 5
  - Small groups
- Baseline Experience for Future IPE
- New Building and IP Learning Communities



# Interprofessional Student Clinical Learning Experience (ISCLE)

- Clinical IPE (Third Year)
- 2-2-2 Rule (Suggested Minimum)
  - Two students, two disciplines, two weeks
- Transition of Care Activity (example)
  - Identify one patient per week
  - Team plans group assessment using disciplinary tools
  - Meet to prepare discharge or transition plan
  - Present finding to individual preceptors for feedback

# What Happens In-Between?

- Currently Building out Formal and Informal IPE Experiences
  - IPC Checklists
  - Learning communities
  - PCL IP extension question
- AMA ROBOTS project

# Rural Healthcare's Unique Challenges

- Distance
  - Need for transportation is in top five barriers<sup>1</sup>
  - Results in poorer health outcomes<sup>2</sup>
- Access
  - Distance and healthcare provider shortage—primary care and specialty
  - Patient-to-primary care physician ratio (39.8 physicians vs. 53.3 per 100,000 people in urban)<sup>3</sup>

<sup>1</sup> Goins RT, Williams KA, Carter MW, Spencer M, Solovieva T. *J Rural Health*. Perceived barriers to health care access among rural older adults: A qualitative study. 2005 Summer; 21(3):206-13.

<sup>2</sup> Kelly C, Hulme C, Farragher T, Clarke G. Are differences in travel time or distance to healthcare for adults in global north countries associated with an impact on health outcomes? A systematic review. *BMJ Open*. 2016; 6(11): e013059. doi: 10.1136/bmjopen-2016-013059.

<sup>3</sup> National Rural Health Association: <https://www.ruralhealthweb.org/about-nrha/about-rural-health-care>.

# Interprofessional Care (IPC) Rural vs. Urban Settings

- Urban
  - Collocated specialties and professionals in a single facility
  - Easier access, including IP team rounds
- Rural
  - Fewer personnel and specialties on-site
  - Complexity of communication among professionals in different locations, including transport of patient to a higher level of care
- Telemedicine
  - Can solve distance problem
  - Additional challenge/required skillset for IPC (and IPE by extension)

# Solution: Project ROBOTS

- Remotely Operated BiOmedical Telepresence Systems
- American Medical Association's Accelerating Change in Medical Education
  - Consortium of 32 schools
  - Joined in 2015
  - Longitudinal rural IP healthcare simulation—incorporates 5 healthcare professions
- Three-Part IPE Scenario
  - 5 professions
  - 3 scenarios
  - Longitudinal continuity of care for MI patient over time



# Scenario One

- Emergency Room
  - Chest pain/pressure (center) radiating into left axilla
  - Short of breath with activity for 2 days
  - Eventually diagnosed with MI
- IP Team
  - Nurse (13), physician (74), cardiologist (telemedicine)
- Treatment
  - Transport to regional health center with “cath” lab
  - Coronary stent placed
  - Discharge to home town with no cardiac rehabilitation



## Scenario Two

- Home Health Assessment
  - Physician via telemedicine (74)
  - Home health nurse (facilitator)
  - Occupational therapist (6)
  - Physical therapist (53)
  - Social worker (13)
- Recommendation
  - Admission to long-term care



## Scenario Three

- Deteriorization in status
  - Patient cannot participate in own care
- Team
  - Physician via telemedicine (74)
  - Social work (13)
  - Nursing (15)
- Recommendation
  - Discuss advanced care directive
  - Recommend palliative care



# Implementation

- Scenario Delivery
  - November 15, November 29, December 6
  - 20-min group debriefing after each run
  - 4 to 6 rooms per run, 4 runs per scenario/day
- Data Collection
  - B-line video recordings
  - Modified Communication and Teamwork Skills (CATS) instrument
  - Qualitative analysis of group debriefing and individual interviews

# Results

- 273 Students, 5 Professional Disciplines
  - Social work, occupational therapy, physical therapy, nursing, medicine
- Learning Outcomes/Quantitative Data
  - 65+ recorded video sessions will be analyzed using modified CATS.
  - We discovered a process and opportunity to incorporate telemedicine into virtually any of our 32 simulations in MD Years 1 and 2.
  - Preliminary thematic analysis suggests overwhelmingly positive impact.

# Thematic Analysis

- Data Sources
  - Group debriefs (n=12), interviews (n=5), written reflection paper (n=1)
- Transcriptions Coded, Organized under Thematic Headings
- Headings Developed into Themes and Subthemes
- 4 Major Themes
  - Telemedicine simulation and scenario experience
  - Telemedicine simulation roles and relationships
  - Technology
  - Simulation value

# Theme One: Telemedicine Simulation and Scenario Experience

- Entry Experience and Levels of Confidence:
  - Most had no experience and little confidence.
- Rehearsal and Practice:
  - Experience reduced anxiety and boosted confidence.
- Telemedicine Protocols:
  - Students realized that telemedicine requires different skills and training.
- Simulation Design:
  - Students felt longitudinal design and telemedicine prepared them for the real world and showed them things they would not otherwise get during education.

## Theme Two: Telemedicine Simulation Roles and Relationships

- Perceptions of Others' Roles
  - Students had gaps in knowledge, misconceptions about roles of other professions.
  - Simulation experience remediated and changed student perceptions.
- Perceptions of One's Own Role
  - Students saw their own roles differently as result of working with others.
- Collegial Relationships and Teamwork
  - Seeing others' expertise in action created respect and appreciation.

## Theme Three: Technology

- Issues with Aural/Visual Communication
  - Technology problems, knowing where to look, making eye contact, were challenges.
- Spatial Arrangement and Placement
  - Students realized that camera angles, number of people, positioning of personnel, were all important considerations for future telemedicine.

## Theme Four: Simulation Value

- Benefits
  - Students reported unanimous appreciation of the benefits of the simulation in their educational experience.

## Representative Quotes

- **Occupational Therapy:** “[The medical students] were great! They said ‘yeah, [ordering a swallow study] is something we will do then. We will get a referral to speech.’ I literally felt like a team member!”
- **Social Work:** “[The medical student] kind of referred to social work quite a bit, and I felt appreciated...”
- **Nursing:** Regarding her role in telemedicine during home health: “...because you...spend more time with that patient than a lot of the other professions...it’s really, really [important to] advocate for them...”
- **Medicine:** “I feel like on previous situations [we treated nurses as] just a person...who read the vitals. I don’t think we did a good enough job treating them as a real human nurse team member...”

## Final Quote

*“These are huge. They should be implemented into every medical program there is—because I came away from it, and I even told classmates, this was literally the most valuable learning experience I had this semester, and I am not kidding when I say that. In our 3rd year in our program, we don’t have a lot of hands-on and that was really a great opportunity to have that chance to meet with a patient and other professionals. So, yeah, it was incredible!”*



# Next Steps and Lessons Learned

- Scoring Performance with CATS, Validating Instrument
- Revising Scenarios for Next Year
  - Telemedicine training
  - Driving the ROBOTS
  - More background material
- Incorporating Telemedicine and IP into Existing Scenarios
  - Facilitators with appropriate scripts can be telemedicine consultants for any current scenario.
  - Students and faculty were overwhelmingly enthusiastic—interest in future collaborations is high.



# Using the Regenstrief EHR Clinical Learning Platform for Interprofessional Education and Learning

Debra Litzelman MA, MD  
D. Craig Brater Professor of Medicine  
Indiana University School of Medicine  
Director of Education and Workforce Development  
IU Center for Global Health

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# Use of the Virtual EHR in the Geriatrics Workforce Enhancement Program

## Objective

Determine if the Virtual EHR tool could be used to deliver and evaluate the learners' ability to create a comprehensive care plan for geriatric patients established collectively by inter-professional learners.



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## Indiana Geriatrics Education and Training Center (IGETC) Partners

- IU School of Medicine
  - Medical Students
  - Internal Medicine Residents
  - Med Peds Residents
  - Family Medicine Residents
- IU School of Nursing-Advanced Practice Nurse students
- IU School of Social Work-Master of Social Work students
- IU Inter-professional Practice and Education Center
- Eskenazi Health
- IU Health
- Richard L. Roudebush VA Medical Center
- CICOA Aging & In-Home Solutions
- Alzheimer's Association



# Interprofessional Geriatrics Clinical Care Conferences with Medical Residents, APN Students, and MSW Students

Each month the GWEP Fellows (5 ANP students and 5 MSW students) with the residents on the Geriatric Medicine rotation are sent an email with a geriatric case to review and prepare to discuss during the Face-to-Face session.



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# Geriatric Case Summary

GWEP April Session ▾

Reflection Note Objectives Data Entered Logins

Case Discussion (331871521)  
April 5, 2017

Mr. Beasley is a 79yo African American male who has type 2 diabetes mellitus, glaucoma, history of cigarette smoking, chronic systolic heart failure, chronic obstructive lung disease, hypertensive chronic kidney disease stage 3, acute retention of urine with acute cystitis without hematuria, CAD with s/p angioplasty with stents, and implanted cardiac defibrillator.

Medications include: Breo 100mcg/25mcg, one puff daily, albuterol HFA 90 mcg/inh MDI prn, Tiotropium 18 mcg/inh daily capsule, aspirin 81mg, atorvastatin 80mg daily, cholecalciferol 2000 units, ferrous sulfate 325mg , furosemide 40mg, Metoprolol succinate 25mg daily, Pantoprazole 40 mg EC daily, hydrocodone bitartrate5mg/acetaminophen325mg prn, polyethylene glycol 3350 one tablespoon daily, prasugrel 10mg daily, Nicotine 21mg/day patch, travoprost 0.004% Ophth soln one drop in both eyes, and normal saline for catheter irrigation.

He was in the hospital 6/15-6/18 with worsening dyspnea and fatigue. He was discharged back home, where he lives with his grandson. He is followed by the GRACE (Geriatrics Resources for Assessment and Care of Elders) and has regular home visits.

Previous Feedback 

You have not left feedback for this student on this lesson



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# Patient File

**tEMR** External Resources ▾ Contact Support tEMR Tutorials Help ▾

BEASLEY, FELIX (331871521) Change DOB: 11-Mar-1937 (80 yrs) Male Chart Search

ONE, TEACHER at Central Town Clinic

Instructor Toolkit Dashboard Order Entry View Chart Population Health

**Patient Landing**

Outpatient Inpatient ED

**Outpatient Orders and Documentation**

- Release Orders
- Note
- Quick Orders Draft
- Shared Note Shared

**Reports**

- View/Print Orders
- Preferred Pharmacy

**Active (16) Recent Outpatient Orders**

**Medications**

		Date
Albuterol 90 mcg/inh MDI	Inhale 2 puffs by mouth with spacer Q4h PRN cough or wheeze or shortness of breath, #1 Inhaler(s) with 3 refills for Chronic obstructive lung disease (disorder) (ICD10:J44.9)	01-17-2016
Aspirin 81 mg EC Tab	take 1 tablet (81 mg) by oral route once daily, #90 Tab(s) with 3 refills	04-09-2016
Atorvastatin 80 mg Tab (Lipitor)	1 Tab By Mouth Daily, #90 Tab(s) with 3 refills for Coronary arteriosclerosis (disorder) (ICD10:I25.10)	06-20-2016
"breo ellipta" (Drug Order Other #1)	100mcg/25mcg; one puff inhaled daily, #1 Inhaler(s) with 3 refills for Chronic obstructive lung disease (disorder) (ICD10:J44.9), Comments to pharmacy: replaces Spiriva, please discontinue order for *****	03-09-2016
Cholecalciferol 2000 unit(s) Cap	2000 Units By Mouth Daily, #90 Cap(s) with 2 refills for Vitamin D deficiency (disorder) (ICD10:E55.9)	01-17-2016
Ferrous sulfate 325 mg Tab	1 Tab By Mouth Daily, , with AM meal, #90 Tab(s) with 3 refills for Anemia (disorder) (ICD10:D64.9)	01-17-2016
Furosemide 40 mg Tab	1 Tab By Mouth Daily, #90 Tab(s) with 3 refills	06-20-2016
HYDROcodone Bitartrate 5 mg / Acetaminophen 325 mg Tab	1 Tab By Mouth Every 6 hours as needed for pain , No early refills, #30 Tab(s) with no refills	06-07-2016
Metoprolol Succinate 25 mg SR Tab (24 hr) (TOPROL XL)	take 1 tablet (25 mg) by oral route once daily, #60 Tab(s) with 3 refills for Congestive heart failure (disorder) (ICD10:I50.20)	06-20-2016
Normal Saline Irrigation	Use 30-60ml of irrigation to flush catheter PRN if catheter not draining, #1 Liter(s) with 11 refills	06-07-2016
Pantoprazole 40 mg EC Tab (Protonix)	40 MG By Mouth Daily, #90 Tab(s) with 3 refills	03-09-2016
"Piston Syringe" (Syringe Other)	1 Syringe Irrigation Other as needed for catheter not draining, #2 Syringe(s) with 4 refills for Acute retention of urine	06-07-2016

**Problems (44)**

		Last Visit
Abdominal pain (finding)	05-16-2016	
Acute lower urinary tract infection (disorder)	05-20-2016	
Acute retention of urine (disorder)	06-07-2016	
Acute-on-chronic renal failure (disorder)	05-16-2016	
Adenomatous polyp of colon (disorder) (285.9)	07-17-2015	
Anemia (disorder)	05-17-2016	
Asthenia (finding)	05-16-2016	
BPH	06-25-2016	
Cardiac fibrillator in situ (finding)	04-05-2016	
Central sleep apnea syndrome (disorder)	08-24-2015	

**Basic Metabolic**

Sodium	141 mmol/L	(136-145)
SerPI Qn		
Potassium	4.4 mmol/L	(3.5-5.5)
SerPI Qn		
Chloride	105 mmol/L	(98-107)
SerPI Qn		
CO2-Tot	26 mmol/L	(21-32)
SerPI Qn		
Anion Gap	10 mmol/L	(7-16)
3		
BUN SerPI Qn	49 mg/dL ↑	(7-18)
Creatinine SerPI Qn	2.01 mg/dL	(0.67-1.17) ↑
GFR Est		
MDRD	39	

**Chart Search**

Enter search term... Search

Filter options

Labs,Meds,Reports Any time



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# Interprofessional Geriatrics Clinical Care Conferences with Medical Residents, APN Students, and MSW Students

- Each geriatric case has a template with a list of questions and directions to review specific notes in the patient file
- Each student is responsible to complete a note in the EHR guided by the template in advance of the Face-to-Face session



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# Case question template

GWEP April Session ▾

Reflection Note Objectives Data Entered Logins

Note on 12/29/2015 14:31 ACE Consultation:  
1. Review results of MMSE, GDS, ADLs, and IADLs  
MMSE 20/30 abn clock  
GDS 2/15  
ADLs - Ind  
IADLs - Dep on most besides telephone

2. When would you repeat the GDS or PHQ9? Why or why not?  
Due to hospitalization, I would do another GDS a month after discharge

3. List potential causes for risk of falls.  
Memory impairment, difficulty walking, tires easily

Note on 05/18/2016 15:20 ACE Social Worker:  
1. What do you think is an appropriate living setting for this patient? Describe the level of care you think he requires?  
ALF because he is dependent in IADLs and has a nurse and SO. Had reoccurring SOB and weakness.

2. Does this patient have a designated caregiver? If yes, what would you like to know about the caregiver? If no, what would you ask the patient about qualities they would want in a caregiver.

3. Does Mr. Beasley have a Living Will-what are his wishes?  
I cannot find a living will on file.

Cardiology Note from 6/20/2016 15:20:  
1. Mr. Beasley's main complaint of fatigue-any etiology?  
Unclear etiology at this time, may be deconditioning. Not clearly related to CAD (typically presents with angina) and is not volume overloaded. May be related to his severely reduced LV function but not clear.  
2. What recommendations would you make?

3. Is Mr. Beasley using the Nicotine patches?  
Added nicotine patches and counseled on use during this visit

4. What other concerns should be considered?

Note on 6/15/2016 and 6/25/2016 labs:  
1. Any concerns about lab results?

Write feedback...

Previous Feedback 

You have not left feedback for this student on this lesson



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# Development of a IPE activity in the teaching Virtual EHR: “Team Card template”

- Created a second template called the shared “team card”
- Each trainee submits their answers in the same note and places their initials at the end.
- All the trainees can see the answers from the other trainees
- Discuss questions and answers during the Face-to-Face session



# Team Card template

BEASLEY, FELIX (331871521) Change DOB: 11-Mar-1937 (80 yrs) Male Chart Search

Shared Note Notes Sign

Visit Note EMR Insert Template Create New Template Recent Notes

As a member of the GWEP interprofessional trainee team, please help create goals that would improve the care plan for Mr. Beasley and enter your answers to the following question before you meet as a group. Please place your initials at the end of your entry as this will be a shared answer format.

What concerns do you have about Mr. Beasley and what are potential strategies to overcome these concerns and prevent future ER visits or hospitalizations?

From a social work perspective, I am concerned about the patient's cognition. Due to his frequent ED visits and recent UTI, I would be concerned with his risk for delirium. Unfortunately, the daughter wants to discontinue Home Health Services and HABC appointments. I would explain to the daughter the risks of discontinuing services. I would explain the benefits of both services. If delirium develops, it would be essential that HABC is involved as they are experienced in treating and monitoring delirium. HABC is also helpful in monitoring caregiver stress and providing resources to caregivers. HABC can also work with the family to understand the risks and benefits of ED visits. Nurses are on staff that the caregivers can contact to discuss concerns before taking the patient to the ED. Another goal would be to help the family and patient work with the agencies to coordinate a better schedule or decide what services they may no longer need if possible.

I'm concerned that the grandson is not aware of the severity of the grandfather's condition and how much assistance is actually needed by his grandfather. I would educate the grandson about what his grandfather will need assistance with and the best way to provide that assistance. For example, make sure his medications are prepared for him to take them everyday and is a location he would see them so they don't get forgotten. I would also work with them on a method that works for them to display his appointments, so there is a visual reminder. (RE)

Note saved at 9:57:01 AM

My Recent Notes  
None

Favorite Templates  
GWEP APRIL Session  
GWEP APRIL Team Card  
GWEP March Session  
Patient Intake  
test

Basic Metabolic  
Jun 25, 2016 15:21  
Sodium 141 (136-145)  
SerPi Qn mmol/L  
Potassium 4.4 (3.5-5.5)  
SerPi Qn mmol/L  
Chloride 105 (98-107)  
SerPi Qn mmol/L  
CO2-Tot 26 mmol/L (21-32)  
SerPi Qn  
Anion Gap 10 mmol/L (7-16)  
3  
BUN 49 mg/dL (7-18)  
SerPi Qn ↑  
Creatinine 2.01 (0.67-1.17)  
SerPi Qn mg/dL ↑  
GFR Est



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# Goals of the Team Card

- learn about the different profession's roles/responsibilities by reviewing each other's entries
- experience the development of a comprehensive plan of care for the older adult created by an interprofessional team
- practice communicating with the other professions via a chat box in the virtual EHR



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## Chat box

ONE, TEACHER at Central Town Clinic

Patient 331871521

KATHRYN F selected patient 331871521 02:27 PM  
TEACHER O Hello, How is your day 02:28 PM

Chat [ ]

Chart Search

Enter search term...

Filter options:

No results

Problems (44)

Date	Manage List	Last Visit
01-17-2016	ough or wheeze or sease (disorder)	05-16-2016
04-09-2016	tab(s) with 3 refills	05-20-2016
06-20-2016	refills for Coronary	06-07-2016
03-09-2016	ily, #1 Inhaler(s) with 3 nts to pharmacy: replaces	05-16-2016
01-17-2016	with 2 refills for Vitamin D	07-17-2015
01-17-2016	o(s) with 3 refills for	05-17-2016
06-20-2016		05-16-2016
06-07-2016	Mouth Every 6 hours as	06-25-2016
06-20-2016	.5 mg) by oral route once 50.20)	04-05-2016
06-07-2016	catheter not draining, #1	08-24-2015
03-09-2016	l with 3 refills	
06-07-2016	catheter not draining, #2	
06-07-2016	aily, mix powder into 8 oz	

Allergies (1)

Manage List	Onset Date
no known drug allergies	



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## Question: Do you think your health professional learners in an IPE course would take time to use the chat box function?

- Yes
- No
- Maybe



# Instructor Toolkit

- Review each trainees completed answers for the individual case template
- Review the trainees answers in the Team Card
- Review comments in the chat box
- Know which students completed their work prior to the Face-to-Face session



# Instructor Toolkit

The screenshot shows a medical software interface for an instructor. At the top, a patient chart for BEASLEY, FELIX (331871521) is displayed, showing a male patient born on 11-Mar-1937. The interface includes tabs for Instructor Toolkit, Dashboard, Order Entry, View Chart, and Population Health. A sidebar on the left lists 'TEST PRACTICE' items: BREHM, MICHAEL H, PROD, STUDENT TEST, STUDENT, 1, and STUDENT, 2. The main area shows 'Session 1' with tabs for Reflection Note, Objectives, Data Entered, and Logins. A message indicates that BREHM, MICHAEL H has not written a reflection note for this lesson. A 'Previous Feedback' section shows a message: 'You have not left feedback for this student on this lesson'. Below this is a text input field for 'Write feedback...' and a 'Submit Feedback' button. To the right, a 'Patient 331871521' window is open, showing a chat message from KATHRYN F to TEACHER O: 'selected patient 331871521 02:27 PM' and 'TEACHER O Hello, How is your day 02:28 PM'. The window also includes a Chat input field for 'Kathy', a Chart Search section with a search bar and filter options, and a message stating 'No results'.



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## Evaluation from Students

<u>Survey Item</u>	<u>SA/A</u>
• It was easy to navigate through the virtual EMR	50%
• The directions received were helpful to complete the cases in the virtual EMR	86%
• You were provided enough information to work through the cases	72%
• Overall, the virtual EMR cases were useful to your education about geriatrics	100%



## Student comments

- Great opportunity to review case and learn what providers documented and ordered
- Great opportunity to work with other professions and get a more rounded perspective
- The interprofessional conversation was awesome & really helped to show how different services can come together to address the patient's issues
- Learning about profession's points of view
- Having clinicians from each professions present that are already working with geriatric patients



# Next Step

- Sustainability after GWEP funding ends
  - formal IPE course being established (Schools of Medicine, Social Work, Nursing)
  - work with Internal Medicine course director to make geriatric virtual EMR modules part of core ambulatory block rotation requirement
- Creating a bank of virtual EMR cases that can be used for self-study to complement existing clinical experiences for medical, nursing, social work students



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## Question: Which group of learners do you think would find the virtual EHR to be a helpful learning tool? (check all that apply)

- Pre-med students
- Nursing student
- Masters level social work students
- Medical students
- Advance practice nursing students
- Residents
- Practicing physicians



## GWEP tEMR Team

Blaine Takesue – Faculty

Debra Litzelman – GWEP PI

Cindi Hart – Training

Glenda Westmoreland-GWEP MD-Trainee C

Shahid Khokar – Lead engineer

Kathy Frank – GWEP RN –Trainee Core

Rachel Gruber – Project manager Jean Mensz-GWEP MD-Trainee Core

Jeff Warvel - Business analyst

Brian Stout – Sr product manager

Josh Jones – Engineer

Haritha Mannam – Engineer



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## AMA Innovations in Medical Education Webinar Series

### Interprofessional Education: Using technology to teach team-based care

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# Questions

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# Future Events

## Continue the discussion

Please join us to ask questions of our panelists at:

<https://ama-assn.org/communities/accelerating-change-in-medical-education>

- Successfully implementation of interprofessional education programs
- Innovative technologies used in interprofessional education such as EHRs and telemedicine

## Future webinars

March 2018

## Student Wellness