Creating a Virtual Healthcare System within Indiana University School of Medicine’s Transformative Curriculum

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BACKGROUND - Our new curriculum

The Indiana University School of Medicine (IUSM) competency-based curriculum is delivered to over 1200 medical students at nine geographically distributed campuses. Since 2010, over 250 faculty, staff, students and residents have been working to revise the curriculum to achieve the following aims:

- To integrate clinical experiences and basic sciences, including the behavioral sciences throughout all four years of the curriculum
- To promote educational activities that promote active learning and growth
- To encourage the development of inter-professional learning experiences (IPE)

The American Medical Association (AMA) Accelerating Change in Medical Education initiative

The American Medical Association (AMA) Accelerating Change in Medical Education grant has provided funds to create a novel virtual health system (vHS) curriculum that will be embedded in the longitudinal, Foundations of Clinical Practice (FCP) course that focuses on the doctor/patient relationship, the social and behavioral aspects of health and disease, clinical skills, care delivery and team-based care. The vHS curriculum will be delivered by Master Educators who will have undergone formal experiential, professional development experiences in our partner health care systems where they will learn first-hand how the systems are redesigning care and managing the health of populations.

A NOVEL EDUCATIONAL STRATEGY - The Teaching EMR

The teaching EMR (tEMR) is populated by de-identified patient data from the Indiana Network for Patient Care (INPC), a part of the Indiana Health Information Exchange (IHIE) that handles over 1 million secure health transactions daily.

To ground learning, the population of patients in the iEMR mirrors the population of Indiana (demographics, insurance coverage, community characteristics and access to healthcare). Patient panels for each student and for each group practice include patients from rural, suburban and urban populations and from regions with varying access to care as defined by physician density.

Each student will be assigned a 15 patient panel. Each small group (12 students) comprises a virtual group practice overseen (taught) by a Master Educator. Additional patients are available to the Master Educator and to students to support teaching and address learning needs.

DEFINING OUR VIRTUAL PATIENT POPULATION

To define our virtual patient population, we created virtual group practices that simulate the social and systematic factors contributing to health disparities in our region.

Each student will be assigned a virtual group practice that mirrors a real-world group practice. In this virtual group practice, students will be responsible for the care of a panel of patients.

SAMPLE LEARNING ACTIVITIES

1. Students will perform a medical interview of a virtual patient from the iEMR. Students will then compare their documentation with that of their peers and the actual patient record.

2. Students will review patient medication lists in the tEMR as a foundation for discussion about e-prescribing, pharmaceutical use and monitoring and controlled substance law. The students will identify which of the patient’s medications require monitoring and then search the tEMR for documentation that this is taking place.

3. In a group activity, students will formulate a hypothesis related to the impact of demographic factors on health outcomes and test that hypothesis on their group practice patients.

4. Students will identify age-based preventive health recommendations and review select patients within their panel to evaluate adherence to these guidelines.

5. Students will recognize the roles and responsibilities of members of the health care team through caring for patients in the iEMR (asynchronous interaction) and small group care team meetings (small group discussions led by faculty from various health professions schools).

ACKNOWLEDGEMENTS

We would like to acknowledge all of the members of our grant team: Bill Tierney MD (Co-PI); Blaine Takesue MD and our colleagues at the Regenstrief Institute Inc (Technology Team); Debra Litelman MD and Tony Ribera PhD and our colleagues in the IUSM Office of Undergraduate Medical Education (Evaluation Team).

This poster was prepared with financial support from the AMA as part of the Accelerating Change in Medical Education Initiative. The content reflects the views of the authors and does not necessarily represent the views of the AMA or other participants in this initiative.