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### Visual Arts Programs for Health Sciences Students Have Unrealized Potential for Interprofessional Education

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## Commentary

# Visual Arts Programs for Health Sciences Students Have Unrealized Potential for Interprofessional Education

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### Introduction

Collaborative practice is defined by the World Health Organization (WHO) as “multiple health workers from different professional backgrounds working together with patients, families, carers, and communities to deliver the highest quality of care” (World Health Organization [WHO], 2010). Collaborative practice has been shown to improve a multitude of disease-centered, patient-centered, and economic outcomes in ambulatory, acute, and palliative health care settings (WHO, 2010). Over 50 years’ of data support the conclusion that effective interprofessional education (“when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes”) translates into interprofessional collaborative practice (WHO, 2010).

### *Evaluation of Interprofessional Opportunities and the Interprofessional Education Collaborative*

The Interprofessional Education Collaborative (IPEC) is a coalition of over 20 health profession education organizations focused on educating a collaboration-ready health care workforce. In 2010, IPEC convened an expert panel that authored *Core Competencies for Interprofessional Collaborative Practice* (henceforth referred to as the “IPEC Core Competencies”) to guide the preparation of future professionals for team-based

practice (Interprofessional Education Collaborative [IPEC], 2016). The IPEC Core Competencies were synthesized through analysis of existing competency documents such as the 2003 Institute of Medicine’s (IOM) competencies for 21<sup>st</sup> century practice, specific documents from individual health profession organizations, and US educational institutions. The IPEC Core Competencies are organized into four domains: 1) Values and Ethics, 2) Roles and Responsibilities, 3) Interprofessional Communication, and 4) Teams and Teamwork. The Health Professions Accreditors Collaborative (HPAC), formed to enhance accreditors’ evaluations of interprofessional education in health profession education programs, relies heavily on the IPEC Core Competencies to frame these evaluations (The Association of Schools and Programs of Public Health, 2017).

### *Visual Arts Programs and the Potential for Interprofessional Learning*

To expand on traditional approaches in health professions education, which focus heavily on the acquisition of scientific knowledge and development of requisite patient care skills, arts-based activities are being incorporated into health science profession curricula. Educational objectives for visual arts-based activities originally centered on honing observational skills and teaching anatomy, but there has been a recent expan-

sion of these programs outside of the realm of clinical skills to more humanistic aspects of health care. Visual arts activities are the most robustly documented arts-based programs in health sciences education. These activities may include guided evaluation of paintings of ill persons, directed museum tours, painting classes, or similar activities. Visual arts programs have been introduced in programs other than medical curricula, and select programs have expanded to include interprofessional audiences. These programs present an opportunity to increase interprofessional education in the health sciences curricula. In addition to providing benefits to a more diverse audience of students, programs of this nature could address many of the IPEC Core Competencies, which are linked to accreditation standards for pharmacy, nursing, and medical education programs (Accreditation Council for Pharmacy Education, 2017; Liaison Committee on Medical Education, 2017; Commission on Collegiate Nursing Education, 2017).

### *Alignment of Visual Arts Programs with the IPEC Core Competencies*

A variety of arts programs within health sciences (medicine, pharmacy, nursing, dental, and public health) curricula have been introduced and studied. They provide insights into the potential utility of an interprofessional visual arts program, namely regarding clinical skill improvement, empathy development, self-reflection, and ethical decision making, skills that relate to several IPEC sub-competencies.

### *Empathy, Self-Reflection, and Professional Identity*

Empathy, awareness of other perspectives, self-reflection, and professional identity are abilities essential to collaborative practice and correlate to competencies in the IPEC Core Competency domains of Teams and Teamwork, Values and Ethics, and Interprofessional Communication. Shapiro, Rucker, and Beck (2006) showed that medical students undergoing an arts program demonstrated greater indicators of empathy and awareness of different perspectives as compared to students in standard clinical photograph and clinical case training. Qualitative review by Lordly (2014) suggested that nutrition students who completed an arts project actively reflected and iteratively revised their opinions throughout the program, and increased demonstration of empathy after participation in arts-

based interventions was also suggested in studies by Wikstrom (2003) and Kidd et al. (2016). Finally, Jones, Kittendorf, and Kumagai (2017) qualitatively evaluated medical student reflections after creation of art and identified themes of enhanced professional identity and self-reflection capabilities.

### *Communication and Team-Building*

Some programs highlight communication and teamwork elements that address the Teams and Teamwork and Interprofessional Communication domains of the IPEC Core Competencies. Shapiro et al. (2006) demonstrated that medical students participating in an arts intervention showed improved narrative development abilities, an essential element of team communication and patient care. Naghshineh et al. (2008) concluded that the medical and dental students who underwent an arts program used more evidence to support their narrative interpretations during a written skills examination versus controls, and Klugman, Peel, and Beckmann-Mendez (2011) showed that medical and nursing students in an arts program showed significantly improved communication skills scores using pre-post assessments. Other studies have suggested improved communication and narrative development (Kidd et al., 2006), team building skills (Gaufberg & Williams, 2011; Jones et al., 2017), verbal and nonverbal communication abilities (Elder, Tobias, Lucero-Criswell, & Goldenhar, 2006), and recognition of the importance of communication abilities (Elder et al., 2006).

### *Values and Ethics*

Interprofessional visual arts programs may address features of the IPEC Core Competency domain of Values and Ethics. In a study by Kinsella and Bidinosti (2016), reflections from 5 years of occupational therapy student cohorts participating in the arts-based ethics course indicated that participants became more aware of their own values and beliefs, recognized how their background and experiences affect those beliefs, appreciated diverse values, and acknowledged ethical practice as being dynamic. Likewise, the main objective of Kidd et al. (2006) was to explore ethical decision making surrounding vulnerable persons through an interprofessional visual arts workshop; themes emerged relating to consideration of power, desensitization of clinicians, and dehumanization of patients.

## *Clinical Skills-Building*

The potential of an interprofessional program to improve clinical abilities and address program standards may help to grow administrative and student support for implementation of a program. A 2-year randomized controlled trial by Friedlander & Friedlander (2013), revealed that arts interventions improve diagnostic interpretation, evaluation of medical photographs, and pattern recognition skills. Klugman et al. (2011) showed that both nurses and medical students improved the number of observations made for a patient image after an arts intervention using a pre- and post-exam format, and Naghshineh et al. (2008) demonstrated that both dental and medical students scored higher than controls on a 1-hour written visual skills examination evaluated blindly for frequency and accuracy of visual information in photographs.

### *Need for a Pilot Interprofessional Visual Arts Course within the Health Sciences and Potential Barriers to Implementation*

Given the suggested educational benefits in alignment with the IPEC Core Competencies, sufficient evidence exists to support development of an interprofessional visual arts pilot program for health sciences students. Learning objectives informed by standards for interprofessional education should be developed, and assessment of learning outcomes should include rigorous and transparent methodology. Ideally, student-level outcomes, such as those ascertained through standardized patient interactions or clinical rotation assessments, should be compared between students randomized to the program versus not over multiple years. To ensure replicability, a detailed “tool kit” describing the program’s development, stakeholder involvement, implementation, audience, content, and evaluation should be made publicly accessible.

Barriers to the implementation of interprofessional learning activities exist: coordination among various professional schools and attainment of student buy-in may be difficult, as is suggested by low participation from non-medical students in interprofessional programs (Naghshineh et al. 2008; Klugman et al., 2011; Kinsella and Bidinosti, 2016). Additionally, meaningful assessment of proposed outcomes of an interprofessional course, including clinical abilities, team-building skills, empathy development, ethical considerations,

and program-specific learning objectives may be challenging. Identification of faculty champions, running a small pilot course, and survey of prospective students may help to overcome some of these issues.

## **Conclusion**

Sufficient literature exists to support the use of interprofessional visual arts courses in health science professional education programs. Evidence suggests that these programs may enhance team-building abilities, improve communication skills, encourage ethical decision making, solidify professional identity, and provide awareness of other perspectives. These objectives align with the IPEC Core Competencies, health profession program accreditation standards, and national efforts to improve patient outcomes by creating high-functioning health care teams (Institute of Medicine, 2003). A pilot program should be implemented and evaluated to determine the true benefits, optimal format, and ideal audience of an interprofessional visual arts intervention in health profession education.

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