

# ■ Interprofessional Education and Collaborative Practice: Welcome to the “New” Forty-Year Old Field

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**Introduction:** Since 1999, the United States (U.S.) healthcare delivery system has been transforming in profound and fundamental ways in response to the publication of the Institute of Medicine (IOM) report, *To err is human*<sup>1</sup>. This report was the first of a trilogy of publications that includes *Crossing the quality chasm: a new health system for the 21st century* and *The bridge to quality: Health professions education*<sup>2,3</sup>. These reports introduced concerns about the quality of the U.S. healthcare system and the inability of health professionals to work together in teams. The lack of teamwork, collaboration and communication skills is implicated in a wide range of adverse patient and health outcomes in the world’s most costly – by far – health system<sup>4</sup>. As U.S. healthcare leaders responded and led transformation, recognition grew that the graduates of health professions schools may be technically competent but are not ready to practice in today’s evolving health system<sup>2</sup>. Therefore, many healthcare leaders and educators are calling for “new” models of education: interprofessional education (IPE) linked to collaborative practice and team-based care<sup>5</sup>. Concurrently since 2010, while the Affordable Care Act (ACA) grabs headlines, remarkable and historic developments are occurring in both healthcare delivery systems and health professions education to transform both. These developments will impact today’s undergraduate advisees and professional students who advance into health careers. Many planned changes and rapid disruptive innovations in healthcare are creating a new U.S. healthcare system that is not yet well understood.

The purposes of this paper are to describe the seismic shifts in healthcare creating calls for interprofessional education and collaborative practice (IPECP) and to provide references and resources to enable advisors, faculty, and students of the health professions to keep abreast of and adapt to the changes.

## **I**nterprofessional Education and Collaborative Practice (IPECP)<sup>6</sup>

Today, many external forces are driving change in the U.S. healthcare delivery system: patient safety initiatives, the need for care coordination and smoother transitions in care, quality improvement imperatives, calls for teamwork and workforce

optimization, newly defined national core competencies for interprofessional collaborative practice (IPCP), practice redesign, escalating healthcare costs, and state and federal policies. These drivers challenge assumptions about what it means to be a health professional, who should lead healthcare teams, and how to shape new relationships

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and engagements with patients, families and communities to maintain their own health and participate fully as members of the team<sup>7</sup>.

Interprofessional education “occurs when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes.”

Interprofessional collaborative practice “occurs when multiple health workers from different professional backgrounds provide comprehensive health services by working with patients, their families, carers (caregivers), and communities to deliver the highest quality of care across settings.”

World Health Organization,  
Framework for Action, 2010

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The 1965 passage of federal Medicare and Medicaid legislation provided insurance coverage and access to care for new populations: US citizens 65 years and older as well as those living below poverty level<sup>8</sup>. At the time, this increase in demand for healthcare created considerable debate and concern around primary care, the need for comprehensive care, and projection of health professions workforce shortages. In 1972, the Institute of Medicine took action and issued a report, *Educating for the health team*, an urgent call for the U.S. healthcare delivery related to educating health professional students in teams<sup>9</sup>. This report provided impetus for a nascent concept then known as “interdisciplinary education”.

Concerns continued to grow that the number and distribution of health professionals were not adequate, particularly in rural and underserved areas. Federal investments stimulated change and major expansions in both healthcare delivery and health professions education throughout the 1970s. Universities applied for funds to open new academic health centers and expand medical schools to increase the physician workforce and fund medical residency programs, while promising to stimulate care provided by teams. Federal legislation that created the health-related portfolio of the “Great Society Programs” required interdisciplinary collaboration between physicians, nurses, and allied health professionals<sup>10, 11</sup>. Such programs

include: the Area Health Education Centers (AHECs), the National Health Service Corps (NHSC), Federally Qualified Health Centers (FQHCs) and the Geriatric Education Centers (GECs).

In the intervening years, the U.S. healthcare delivery system has become the most costly in the world with documented lower health outcomes than many developed and developing countries<sup>5</sup>. Traditionally, primary and preventive care, especially for underserved populations, has not been a locus of power in organized medicine and healthcare delivery. The decade of the 1970s was the beginning of specialization and sub-specialization when incentive models were codified that reward procedures over primary care, whether delivered in teams or not. In short, the U.S. fee-for-service payment system incentivized payments primarily to physicians for procedures rather than prevention services and primary care visits no matter what outcomes resulted<sup>12, 13</sup>.

Concurrently, with these developments new healthcare roles such as nurse practitioners, clinical pharmacists, and physician assistants were being created, bringing new controversies. Since the 1970s, in some states, practice legislation regulating scopes of practice has been and continues to be a barrier for these professions to practice at the top of their education as full members of the team<sup>15, 16</sup>. Efforts to introduce IPCP during this time tended to be independent, driven by enthusiasts, and focused on a single clinical practice. The creation of professional, specialty and sub-specialty certification examinations, state licensure, accreditation and hospital privilege requirements focused on clinical knowledge and competence. These uniprofessional structures codified silos, creating additional long-term barriers to collaboration and teamwork.

Significant transformations in the process of care in the healthcare system have been underway since the Health Maintenance Organization (HMO) movement starting in the 1980s<sup>17</sup>. During this time, the focus was on controlling access and reducing the use of resources and variances in care. This emphasis on the processes and cost of care was concurrent with attempts to introduce IPCP into mainstream practice and education. At the time IPCP was viewed primarily as an ‘add-on’ – a costly activity with a lack of focus on team-based outcomes or evidence of impact on health. With a few notable exceptions in isolated areas of medical practice (e.g., primary care in some underserved areas and teams in rehabilitation, transplantation, renal care, among others), collaborative practice models and team-based care with shared decision-making responsibilities across the health professions did not gain traction<sup>12, 13, 18</sup>. As a result, uniprofessional work,

or “parallel-play” practices persisted creating cultures where rounding, coordination and discharge meetings continue to be largely profession-specific in nature, with limited interaction between the professions particularly medicine and nursing<sup>19</sup>.

1970s – 2000: Lack of Broad Support for IPCP
• “Status” of primary care and underserved populations – not a locus of power in medicine
• Era of specialization and sub-specialization
• Little interest in care delivery processes
• New roles and controversies: Nurse practitioners, physician assistants, clinical pharmacists
• Lack of evidence for team-based outcomes
• Lack of incentives: physicians reimbursed; teams and/or other professionals rarely
• Considerable independent work
Schmitt, 1994; Schmitt, Baldwin & Reeves, 2013

### Ebbs and Flow of Interest in IPE

The 1972 IOM report, *Educating for the health team*, made comprehensive recommendations for requiring interdisciplinary education at the administrative, teaching and national levels. For example, one recommendation detailed the need to train faculty for new roles: “Interdisciplinary instruction will require that faculties develop new skills, present new role models, and work to understand the impediments that have accumulated to hamper cooperation among health professions” (HIGHLIGHT SECTION). Over time the term “interdisciplinary” became confusing to fulfill the vision and recommendations of the report. To many, the term meant intra-disciplinary within the medicine-only profession (e.g., surgeons, internists, and pediatricians working together). In 1975, the term “interprofessional teamwork” to communicate shared decision-making across professions was first used in the U.S. in a publication by the same name<sup>20</sup>. In 1987, the Centre for the Advancement of Interprofessional Education (CAIPE) in the United Kingdom introduced the definition of IPE that has been adapted over time, including the 2010 World Health Organization published Framework for Action<sup>6</sup>. IPE contrasts with shared learning in which students learn side-by-side, for example, listening to a lecture together in the same room. Rather, IPE teaching methods incorporate strategies focused on how adults learn, interactive and learning in interprofessional groups, collaborative learning and reflective learning, and ideally are problem-focused and related to IPCP<sup>21</sup>.

In many ways, the hurdles in educating and training pre-professional students in IPE have been steeper than implementing IPCP. In 2001, nearly thirty years after the clarion call for teams and new educational models, IPE implementation was characterized as “the long and

winding road” of ebb and flow of interest<sup>22</sup>. Preparing future health professionals for collaborative practice presents many challenges within and across universities and colleges<sup>23, 24</sup>. Advisors of health professions students are well aware of the structural barriers such as differences in national and school-specific prerequisites for admission to the various professionals schools; the differences in the length of education and training; and the developmental and mastery readiness of traditional age undergraduate students compared to other pre-professional students (e.g., medical, nursing, pharmacy) in the same course.

IPE’s disconnect has been – and continues to be – that innovative didactic IPE curricular implementation in the classroom is not extended into practice because of the lack of professional role models to support team competencies, and what is called the “hidden curriculum”<sup>25</sup>. Frequently, faculty feel ill-prepared to effectively teach in IPE curricula<sup>26</sup>. Other obstacles exist such as: programs operating in silos with minimal opportunity for student connection, difficulty in scheduling IPE because of already packed uni-professional curricula, perceived competition for scarce resources, expanding class sizes, lack of faculty rewards and recognition, among many others<sup>24</sup>.

### 1999 – 2003: The Institute of Medicine Trilogy

With the publication of two Institute of Medicine reports in 2000 and 2001: *To err is human* and *Crossing the quality chasm*, the tide significantly turned toward implementing sustained healthcare delivery redesign and driving change in national and state policies<sup>1, 2</sup>. These reports stimulated re-examination of the U.S. healthcare system, contributing to a new sense of urgency to reconsider IPCP. The major national efforts set in motion by these, and other, reports focused on patient safety, specifically the frequency and cost of adverse events resulting from medical errors, and

strategic quality improvement in the entire U.S. acute care system. Health systems’ accreditors and quality leaders, national and state health policy enactment, and corporate and insurance stakeholders embarked on considerable healthcare system redesign, with emphasis on system improvement and training to improve teamwork, communication and collaboration across the health professions<sup>27</sup>. These efforts focused upon the creation of high-performing teams and drew upon concepts and research from fields such as psychology, business, the military, and aviation science which had long adopted teamwork skills as core competencies<sup>28</sup>.

A third in the series of IOM reports in 2003, *Health professions education: A bridge to quality* called for large-scale change in the U.S. health professions education system to accompany the transformation of healthcare delivery<sup>33</sup>. This report introduced five core competencies for all health professions: delivering patient-centered care, working as part of interdisciplinary (interprofessional) teams, practicing evidence-based medicine, focusing on quality improvement, and using information technology. The trilogy of IOM reports stimulated a number of significant initiatives in health care and to some extent education that continue to this day. One notable example is the efforts of the Institute for Healthcare Improvement (IHI), an organization dedicated to safe and effective healthcare. Today, IHI is a recognized national and international leader by promoting the Triple Aim which has become a *raison d’être* for many U.S. transforming health systems<sup>29</sup>. The “Triple Aim” refers to a single aim with three dimensions with the simultaneous pursuit of: improving the patient experience of care, improving the health of populations, and reducing the per capita cost of healthcare. As a single aim with three dimensions, the Triple Aim is extremely ambitious and it will not be achievable through minor modifications of the status quo<sup>30</sup>. To accomplish its goals, IHI created the IHI Open School which offers free courses and certificates for students, residents and faculty to support their learning the foundations of improvement, safety, system design and leadership<sup>31</sup>.

### Fundamental and Profound Change in Healthcare

One decade after *To err is human* in 2010, many efforts and new reports began to coalesce to provide an unprecedented stimulus for change in healthcare delivery, health professions education and the alignment between them<sup>32, 33</sup>.<sup>34</sup> On the federal level in 2010, the Patient Protection and Affordable Care Act (ACA) further defined core elements of new models of care through components related to accountability for patient populations, payment reform

and coordinated care using approaches such as the Patient-Centered Medical Home (PCMH) and accountable care organizations (ACOs)<sup>35</sup>. As many grapple to understand the meaning and impact of this legislation, new incentives drive innovative thinking and tensions about practice roles and relationships across professions, and with patients and families to fill the gaps identified.

The current U.S. healthcare environment is addressing most barriers and lack of broad support for IPCP experienced between 1970s through 2000. These developments are shifting the focus from healthcare to health and from acute care to ambulatory care in primary care clinics, communities and homes<sup>36</sup>. For example, the PCMH is an approach to providing comprehensive primary care for children, youth and adults in team-based healthcare delivery model. Interprofessional teams provide continuous care for populations of patients with the goal of obtaining maximized health outcomes and reducing costs. Health information technology and electronic health records support gathering patient and cost data to drive continuous quality improvement and lower the cost of care. Clinics converting to the PCMH model are undergoing workforce redesign to incorporate new roles for pharmacists, nurses, physician assistants, occupational therapists, physical therapists, mental health providers and many others who are appropriately trained to provide coordinated care<sup>37, 38</sup>.

Corporate stakeholders, who provide healthcare as an employment benefit and are interested in the best care for the least cost, are significant players in the national ferment. Spurred by early data related to outcomes of system changes and reduced costs, healthcare insurers are rewarding outcomes and teamwork through monetary incentives to affiliated providers. This movement is called “value-based healthcare” or the “volume to value” revolution<sup>39, 40</sup>. Incentive systems are moving away from paying for care fragmentation through a fee-for-service model to a “bundled payment” system rewarding health outcomes and cost efficiencies<sup>41</sup>. These changes in reimbursement methods are a profound paradigm shift for many practicing health professionals and challenge past and existing perceptions of professional role and scope.

In short, the U.S. healthcare system, significantly driven by economics, is moving in the direction that no one provider profession or model can independently address. Some believe that because of the fundamental changes in healthcare and the evolving nature of teams that the strength in the numbers of the current U.S. workforce is adequate today. Rather, thinking is evolving that greater

emphasis should and will be placed on retraining, retooling and the better utilization of the current health workforce. There continues to be a lingering concern similar to that in the 1970s that geographic maldistribution of health professionals and access to care for rural and underserved populations is still problematic. Today, while the headlines

declare that there continues to be health professions shortages in the U.S., some health workforce experts question whether there are too many “traditional” health professionals in the U.S.<sup>43, 44</sup>

### Aligning Interprofessional Education

### Changing Trends to Support Interprofessional Collaborative Practice (IPCP)

1970s	Healthcare Today
“Status” of primary care and care for underserved populations – not a locus of power in medicine	Redesign around primary care, prevention, population health provided in teams
Lack of incentives: physicians reimbursed in fee-for-service; teams and/or other professionals rarely	Impact of value-based healthcare and bundled payments for episode of care; value to volume healthcare revolution
Little interest in care delivery processes	Quality and system improvement based upon health information technologies
New roles and controversies: Nurse practitioners, physician assistants, clinical pharmacists	The right worker partnering with patients, families and communities at the right time for the right care. Focus on how and which profession
Lack of evidence for team-based outcomes	Growing evidence for team-based outcomes
Considerable independent work	Increasing collaboration <i>and</i> turf wars

In 2010, IPE also gained momentum as a result of significant events in the U.S. and globally. Organizations released new reports calling for renewed action on IPE and IPCP and new models of continuing professional development focused on teamwork, quality improvement and maintenance of competence in practice<sup>6,32,45,46</sup>. In response to a seminal report, *Health professionals for a new century: transforming education to strengthen health systems in an interdependent world*, the IOM created the Global Forum on Health Professions Education and routinely convenes 46 organizations focused on IPE and IPCP to accelerate world-wide change<sup>47</sup>.

A key IPE unifying effort is the development and release of the Interprofessional Education Collaborative (IPEC) report, *Core competencies for interprofessional collaborative practice: Report of an expert panel* in May 2011<sup>48</sup>. This report culminated one year of work sponsored by the American Association of Colleges of Nursing (AACN), American Association of Colleges of Osteopathic Medicine (AACOM), American Association of Colleges of Pharmacy (AACP), American Dental Education Association (ADEA), Association of American Medical Colleges (AAMC), and Association of Schools and Programs of Public Health (ASPPH). Each IPEC organization appointed two representatives to the expert panel to work with a facilitator. This work resulted

in four competency domains - values and ethics, roles and responsibilities, interprofessional communication, and teamwork and team-based care – with recommendations for learning experiences and educational strategies to achieve them. The response to this work is historic and has resulted in a cascade of health professions education redesign and new accreditation standards in IPEC-related and other organizations requiring team-based curricula linked to the IPEC competencies.

With the renewed interest in IPECP, public and private funders recognized that in the new environment, it was the right time to collectively support a national center to catalyze IPECP implementation. A similar concept of a clearinghouse was recommended in the 1972 report, *Educating for the health team*, to “collect and distribute information on programs on interdisciplinary education and models of healthcare teams” (HIGHLIGHT SECTION). Department of Health and Human Services, Health Resources and Services Administration (HRSA) and private foundations (Josiah Macy Jr. Foundation, Robert Wood Johnson Foundation, and the Gordon and Betty Moore Foundation) joined together to fund a national center to coordinate IPECP. In a HRSA competitive review process, HRSA awarded the center designation to the University of Minnesota in 2012. Now called the National Center for Interprofessional Practice and Education is a



public-private partnership charged to “provide leadership, scholarship, evidence, coordination and national visibility to advance interprofessional education and practice as a viable and efficient healthcare delivery model”<sup>49</sup>. The Center's work is focused on “The Nexus”, or partnerships between health professions education and health care delivery systems by encouraging them to work together to meet the demands of transforming processes of care delivery and the challenges in educating and training the next generation of health professionals. In addition to a research portfolio, The National Center offers a Resource Exchange ([nexusipe.org](http://nexusipe.org)), online community, tools and practical guides and technical assistance to support and accelerate sustained IPECP implementation.

### **Acceleration and Disruption**

The transformation of the healthcare system and the implications for education are confusing to follow, particularly with the daily attention-grabbing headlines in the policy and political arena. In reality, healthcare has been fundamentally changing for fifteen or more years for a variety of reasons described in this paper. Quality, cost and improved processes for care for populations are shifting the emphasis for episodic care delivery to a more holistic approach to keep people healthy. With this shift, there is greater recognition that keeping people healthy requires addressing the social determinants of health, or “circumstances in which people are born, grow up, live, work, and age, as well as the systems put in place to deal with illness”<sup>50</sup>. To respond, healthcare systems are integrating portfolios of services: wellness, ambulatory, acute, transition, home, and long-term, extending into and engaging with communities.

Today's truly unprecedented disruptions in healthcare, however, are coming from patients themselves and the retail sector. Patients are taking care into their own hands because of patient safety concerns and to manage chronic conditions by organizing and sharing information worldwide through the Internet and social media to “make healthcare better for everyone through sharing, support and research”<sup>51</sup>. The retail sector is viewing patients as consumers of their own care, creating the “Patient to Consumer” Revolution<sup>52</sup>. Creating an accessible front door to the primary care delivery system, retail corporations such as Walmart, CVS and Walgreen's are rapidly moving into retail healthcare, delivering diagnostic testing and services in places where people like to be: shopping. The private funders of the National Center are not only catalyzing IPECP but also advocating for and supporting the patient activation movement in healthcare and education<sup>53, 54, 55</sup>.

New professionals are joining the team to partner with patients and families: integrated and complementary health professionals, community health workers, genetic counselors, informaticists, ethicists, librarians, to name a few. In the redesign, the roles and responsibilities for frontline workers such as medical assistants are expanding in primary care: management of patient panels to monitor gaps in care and prevention, reviewing pre-visit charts to flag overdue services, contacting patients based upon protocols, health coaching, and leading team huddles that includes physicians and nurses<sup>56</sup>. These new teams focus on prevention, care coordination and transitions, complex chronic care, population health management, and medication therapy management. Silos of care and therefore silos between health professionals are falling with the integration of new models of primary care through the integration of oral health, public health, and mental health<sup>57, 58, 59</sup>.

### **Implications: Let's Get on the Balcony**

This paper describes today's ecological factors that make IPECP an imperative after forty years of ebbs and flows of interest. It was written intentionally with many references and accessible resources to portray the breadth and complexity of the fundamental changes in healthcare, education and the intersection, “The Nexus”. Each of us operates in our own sector with our own worldview, often making it difficult to see the “Big Picture”, particularly in the U.S. healthcare and education systems that are rapidly becoming more complex. Advisors, academic and clinical faculty, and learners in the pipeline are encouraged to “get to the balcony”<sup>60</sup> to better view opportunities to be part of the change.

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Many resources referenced in this paper are available on the National Center for Interprofessional Practice and Education: [nexusipe.org](http://nexusipe.org). The Dr. Dewitt C. Baldwin collection is funded by the Robert Wood Johnson Foundation.

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