BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION OR DISCUSSION

TOPIC: UMB: System-wide Inter-Professional Education Initiative

COMMITTEE: Education Policy

DATE OF COMMITTEE MEETING: January 25, 2012

SUMMARY: Today the University of Maryland, Baltimore (UMB) is pleased to share with the Committee on Education Policy a draft of a whitepaper on Interprofessional Education.

The basic premise of the paper is that the University System of Maryland is well positioned to contribute significantly to the evolving body of knowledge on interprofessional health care education. USM includes a diverse and rich mix of member institutions, many of which have outstanding health, allied health, and human services academic programs. The paper argues that these programs, if brought together purposefully and collaboratively, can be a potent and influential force in the development of an innovative and forward-looking model for interprofessional health care education.

The paper posits that UMB with its unique portfolio of graduate health and human services professional programs, and a recognized leader of in the delivery of health care locally and globally, is ideally suited to provide leadership in the area of interprofessional health care education, research, and service delivery. The paper also identifies a number of "low-hanging" opportunities that can be readily pursued en route to elevating the reputation of the University System as a whole in the area of interprofessional education.

Dr. Roger J. Ward, Interim Vice President for Academic Affairs and Interim Dean of the Graduate School at UMB, will present the paper to the Committee. He will be accompanied by Flavius Lilly, MPH, Assistant Vice President, Academic & Student Affairs who co-authored the paper with Dr. Ward and UMB President Jay Perman.

ALTERNATIVE(S): This is an information item.

FISCAL IMPACT: This is an information item.

CHANCELLOR'S RECOMMENDATION: This is an information item.

COMMITTEE RECOMMENDATION:		DATE:
BOARD ACTION:		DATE:
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Whitepaper

A System Approach to Interprofessional Health Care Education in Maryland

An Opportunity to Lead

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December 22, 2011

"… we must come together to educate our students: we must be pre-eminent in interprofessional education. The challenges of manpower shortages and the costs of healthcare can best be met by delivering care as well-organized teams of professionals…Our future providers must recognize while they are students the expertise of disparate professionals, what they bring to the healthcare "table," and how to get the best from each other on behalf of patients and populations. We are so well positioned in this University to educate teams."

~ UMB President Jay A. Perman, Inauguration Speech, 2010

"The convergence of several healthcare system trends suggests that interprofessional collaborative practice is integral to the future of health care."

~ Association of Academic Health Centers, 2011

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EXECUTIVE SUMMARY

In 2006 the Middle States Commission on Higher Education accreditation site visit team in its final report to the Commission suggested that UMB's unique configuration of professional and graduate schools afforded it an excellent opportunity to pursue greater interprofessional collaboration. Thus from 2006 to 2010 faculty sought ways to collaborate with one another across schools and programs to break down silos in pursuit of opportunities that would improve their students' educational experiences. This collaborative activity gained momentum when Dr. Jay Perman was appointed president in July 2010 as he elevated interprofessional education to one of the university's top priorities, and insisted that it be expanded to include other USM institutions.

Interprofessional education (IPE) has become commonly defined as occasions when two or more professions learn from, with and about each other to improve collaboration and the quality of care and the topic has been discussed internationally for nearly 50 years. The challenges universities face in developing interprofessional programs are considerable. The traditional barriers to IPE described in the literature range from the use of inconsistent language to more significant institutional and structural barriers. Examples of these barriers include professional cultures, university educational systems, time in the curriculum, and lack of research in the area of interprofessional education.

A number of influential contemporary forces have converged in a manner not seen before and will likely accelerate and shape the discourse and activity around interprofessional education for decades to come. First, accrediting bodies continue to refine their standards and incorporate standards of interprofessional education into the educational requirements for the training of health professionals. Second, patient safety and quality of care are significantly influencing health care reform and health care education agendas in the United States. The emerging standard is for students to gain the knowledge, skills, and attitudes to understand and value the viewpoints and responsibilities of others, as associated with improving systems that affect their ability to provide safe and quality care, together. Third, the Affordable Care Act provides financial incentives for care coordination to provide seamless transition from hospital to home. This system has become known as bundled payment. Under the bundled payment model, reimbursement for multiple providers is lumped into a single, comprehensive payment that covers all of the services involved in a patient's care. Bundled payment aims to control costs, integrate the care delivery system, and restructure the delivery of care. This type of reimbursement further incentivizes health care professionals to work collaboratively.

While individual colleges and universities have launched various IPE initiatives, there is no truly coordinated and collaborative university system-wide approach to IPE. The University System of Maryland, because of its reputation as a national leader in research, teaching, and innovation, is well positioned to contribute significantly to the evolving body of knowledge on interprofessional health care education. The University System includes a diverse and rich mix of member institutions, many of which have outstanding health, allied health, and human services academic programs. These programs, if brought together purposefully and collaboratively, can be a potent and influential force in the development of an innovative and forward-looking model for interprofessional health care education. The

University of Maryland, Baltimore as a member institution of the system with its unique portfolio of graduate health and human services professional programs, and a recognized leader in the delivery of health care locally and globally, is well suited to provide leadership in the area of interprofessional health care education, research, and service delivery.

The following low-hanging opportunities can be exploited to catapult the University System of Maryland into the position as the national leader in the area of interprofessional education:

Expand Collaborative Course Offerings at the Universities at Shady Grove (USG): The University System of Maryland should support and build on the work begun by the Committee on Collaboration on Interprofessional & Interdisciplinary Educational Strategies (CIPES) at USG. Capitalizing on this unique education model and valuable USM resource that is USG to scale up the work of CIPES is a logical first step towards establishing USM as the national model for interprofessional healthcare education across a university system.

Provide Interprofessional Education in a Simulated Clinical Environment: The University of Maryland, Baltimore proposes to leverage its existing resources and expertise to establish and host, on behalf of the overall University System, an innovative state-of-the-art interprofessional health care simulation clinic. The ultimate goal of the IPE *SimClinic* is to provide students in the health, allied health, and human services professions at member institutions in the University System of Maryland a distinctively unique educational experience that sets them apart from students educated elsewhere, while transforming them into team-competent and practice-ready health care professionals.

Conduct IPE Exercises Using Standardized Patient Facilities: Standardized patient simulation involves the use of individuals trained to portray the roles of patients, family members or others to allow students to practice physical exam skills, history taking skills, communication skills and other exercises. Standardized patient IPE exercises are an effective pedagogical tool in preparing students for practice. These exercises, with effective coordination, can be conducted in an interprofessional manner across USM utilizing existing standardized patient facilities.

Provide Interprofessional Clinical Experiences for Students: A number of opportunities exist in this arena. First, President Jay Perman, a pediatrician, in cooperation with the University of Maryland Pediatric Associates, P.A. (UMPA), hosts the *President's Interprofessional Education Clinic.* Approximately twelve students representing the schools of medicine, dentistry, social work, law, nursing, and pharmacy, participate in the clinic each week learning together and from each other in order to facilitate collaboration in the delivery of services, in policy-making, and problem-solving. To provide more students the opportunity to participate in this successful interprofessional clinical model, the clinic plans on leveraging the video and audio conferencing capabilities of the Maryland Research and Education Network (MDREN). With these assets, students in a variety of health and allied health programs at other USM institutions will be able to participate from a distance in the clinic. Second, the University of Maryland School of Medicine has directed the Maryland Area Health Education Center (AHEC) program for almost 30 years. The AHEC, a federally funded program, has been developed to provide comprehensive health care

education and training for health professions students across the state of Maryland and offers an excellent venue for improving interprofessional education in a primary care setting. AHEC activities promote multi-disciplinary and interdisciplinary training for health professionals, and increase capabilities for the existing program of graduate and continuing medical education and health training. Third, the Governor's Wellmobile Program in the School of Nursing utilizes 33-foot long vans equipped with two exam rooms, an intake/education area, and a Clinical Laboratory Improvement Amendments (CLIA) Waiver-approved laboratory to provide episodic and common acute primary care services, health screenings, and health education to uninsured and underserved Marylanders at multiple community-based sites. The Wellmobile currently serves as a clinical learning site for undergraduate, graduate, and doctoral students at the School of Nursing but with adequate funding has the potential and capacity to include students from other professions.

As with any evolving body of knowledge, interprofessional education is not without its skeptics. It is that skepticism, however, that provides the remarkable research and knowledge development opportunity not only for the university system faculty directly engaged in interprofessional healthcare education activities, but also for faculty from other disciplines as well. Among its member institutions, the University System of Maryland has the intellectual capital and research infrastructure to become the thought-leader and a leading producer of scholarship in the area of interprofessional education by drawing on the expertise of faculty in disciplines outside of the healthcare professions; for example, business, education, engineering, economics, sociology, and information technology.

This whitepaper call for the USM Board of Regents to establish a representative USM working group to (1) evaluate the feasibility of scaling up the existing IPE opportunities discussed above, (2) identify other scalable IPE opportunities, (3) identify system-wide barriers to the interprofessional education, and (4) determine the level and potential sources of funding necessary to promote and coordinate interprofessional education across the university system. The preliminary guiding vision would be to establish a *USM Center for Interprofessional Education* on the campus of the University of Maryland, Baltimore. The *Center* will support a robust satellite Center at USG with a strong emphasis on collaborative course development, team-based instruction and research, and simulation education across the spectrum of disciplines represented at Universities at Shady Grove.

INTRODUCTION

In 2006 the Middle States Commission on Higher Education accreditation site visit team in its final report to the Commission suggested the following:

> *The unique configuration of professional and graduate programs at UMB, notably the School of Law with the health-related Schools, affords UMB an opportunity for even greater development of interdisciplinary faculty collaborations across School boundaries. Such efforts may promote exciting academic as well as fundraising opportunities.*

Thus from 2006 to 2010 faculty at the University of Maryland, Baltimore (UMB) sought ways to collaborate with one another across schools and programs to break down silos in pursuit of opportunities that would improve their students' educational experiences. This collaborative activity gained momentum when Dr. Jay Perman was appointed president in July 2010 as he elevated interprofessional education (IPE) to one of the university's top priorities and insisted that it be expanded to include other University System of Maryland (USM) institutions. It was no longer going to be "cautiously" approached. Interprofessional education was now a presidential priority.

IPE Initiatives at UMB

Dr. Perman took four immediate actions which demonstrated his personal commitment to the importance of interprofessional education:

1. Initiated a weekly *President's Clinic* in which students from all six schools participate with Dr. Perman, a pediatric gastroenterologist, and Elsie Stines, a Nurse Practitioner, in considering the health, social, and legal needs of the patients seen in the clinic.

2. Proposed interprofessional education as one of the key themes of the strategic planning process.

3. Created the Interprofessional Education Task Force which is composed of senior faculty from each of the professional schools. The IPE Task Force was charged with inventorying existing educational collaborations involving more than one UMB school, identifying barriers to scaling up promising programs, and with suggesting new interprofessional education initiatives.

4. Approved the creation of a new position: *Director of Student Interprofessional Service-Learning Initiatives*. This position will help shape the University's approach to creating and enhancing co-curricular interprofessional service-learning opportunities for UMB students.

Dr. Perman's commitment to interprofessional education is grounded in two equally important principles. First, his belief that on- and off-campus collaboration is essential in order for UMB to achieve the pre-eminence it seeks. Second, his belief that interprofessional

education is an absolute necessity for the collaborative practice required for health care in the future.

Collaborative Thinking with USM Partners

During his 2010 inauguration speech, President Perman reflected on the remarkable opportunity that existed for both UMB and other University System of Maryland institutions in the area of interprofessional education. He commented:

> *I am happy to say that we are already well on our way [to interprofessional education] both on this campus and at the System's Shady Grove campus in Montgomery County. In fact, we envision working with colleagues there to create a regional health science campus which will be a model of interprofessionalism…beyond our University of Maryland here in Baltimore, the state and the region are blessed by the presence of extraordinary institutions. We must facilitate inter-university dialogue through organizations like the Maryland Campus Compact in the interest of bettering the region through the collective power of collaborating institutions.*

Having spent his inaugural year laying the foundation and building the consensus and infrastructure necessary for a robust interprofessional education program at UMB, Dr. Perman spent his second summer as president engaging with colleagues on other campuses in the University System of Maryland as he had promised to do in his inauguration address. He scheduled visits with the president and other academic leaders at a number of institutions to discuss and identify opportunities to collaborate around interprofessional health care education. To date, meetings have been held with the following institutions and individuals:

1. University of Maryland Robert H. Smith School of Business
    - Dean G. "Anand" Anandalingam
    - Dr. Kathryn M. Bartol, Co-Director, Center for Leadership, Innovation and Change
    - Mr. Greg Hanifee, Assistant Dean, Office of Executive Programs
    - Dr. Joyce E.A. Russell, Tyser Distinguished Teaching Fellow
    - Dr. M. Susan Taylor, Smith Chair of Organizational Change & Human Resources Management
2. University of Maryland University College
    - President Susan C. Aldridge
    - Dr. Greg von Lehmen, Provost and Chief Academic Officer
    - Ms. Marky Campbell, Senior Vice President of Partnerships and Strategic Alliances
    - Dr. Michael Frank, Vice Provost and Dean, Graduate School of Management and Technology
3. Bowie State University
    - President Mickey L. Burnim
    - Ms. Karen Johnson Shaheed, Interim Provost and Vice President, Academic Affairs

4. University of Maryland School of Public Health
    - Dean Robert S. Gold
    - Dr. Laura B. Wilson, Chair, Department of Health Services Administration
5. University System of Maryland
    - Dr. Irv L. Goldstein, Senior Vice Chancellor for Academic Affairs
6. Coppin State University
    - President Reginald S. Avery
7. USM Academic Affairs Advisory Council

These meetings yielded productive conversations and a commitment on the part of participants to work collaboratively to create and strengthen interprofessional educational opportunities between campuses, especially with respect to training health and allied health professionals who play a critical and important role in the health care delivery system in the State of Maryland.

A BRIEF HISTORY OF INTERPROFESSIONAL EDUCATION

Interprofessional education has become commonly defined as "occasions when two or more professions learn from, with and about each other to improve collaboration and the quality of care (Freeth, Hammick, Reeves, Koppel, & Barr, 2005, p. 15)," and the topic has been discussed internationally for nearly 50 years. The United Kingdom has led in its adoption and began development of an interprofessional education model in the early 1960s. By 1970 it was in full bloom in primary and community care centers (Barr, 2010). At the turn of the century, interprofessional education had become mainstream[1] in the UK and integrated into most training curricula (Department of Health, 2000).

In the early 1970s, interprofessional education began to be discussed in the United States. In 1972, Edmund Pellegrino, the chairman of a conference on the "Education of the Health Team" held by the Institute of Medicine boldly claimed that "a major deterrent to our efforts to fashion health care that is efficient, effective, comprehensive, and personalized is our lack of design for the synergistic interrelationship of all who can contribute to the patient's well-being (Insitute of Medicine, 1972, p. 4)."

One decade later, in the 1980s, very few interprofessional education models had been developed in the United States (Baldwin, 1996). The one exception was in the field of gerontology, which had benefited from federal funding to develop interprofessional education programs. However, as the funding dried up, so too did these programs (Baldwin, 1996).

[1] Interprofessional education in the UK was and is not a panacea. The challenges have been many. Stakeholders continue to press competing claims for inclusion in crowded curricula (claims ranging from health promotion to patient safety). Successful joint planning across disciplines has been difficult as status, professional ethos, and cultural differentials have mitigated against partnership (Barr, 2010).

Driven by medical topics of mutual interest, by the 1990s many small-scale interprofessional education projects developed across the United States mostly in the form of interdisciplinary courses (Parsell, Spalding, & Bligh, 1998). Into the late 1990s and at the turn of the century, the United States lagged behind countries like the United Kingdom and Canada in the full-scale implementation of interprofessional health care education despite calls from health commissions (Shugars, O'Neill, & Bader, 1991), government officials (Lavin, Ruebling, & Banks, 2001), professional organizations (Institue of Medicine, 2003) and the World Health Organization (Baldwin, 1996; World Health Organization, 1988).

More recently, a renewed interest and broader motivation to build team-based health care training has occurred in the United States (Interprofessional Education Collaborative Expert Panel, 2011). In 2003, The Committee on the Health Professions Education Summit for the Board of Health Care Services of the Institute of Medicine (IOM) published a report of a national invitational conference of health care leaders convened in 2002 (Institue of Medicine, 2003). The purpose of the Summit was "to discuss and develop strategies for restructuring clinical education across the full continuum of education" (p.3). The resulting report entitled *Health Professions Education: A Bridge to Quality* focused on efforts to improve the safety and quality of health care by ensuring that health professionals are able to work in interdisciplinary teams in order to cooperate, communicate, and integrate care that is continuous and reliable. Moreover, the report laid out a new and comprehensive vision for the education of health professionals:

> *"All health professionals should be educated to deliver patient-centered care as members of interdisciplinary teams, emphasizing evidence-based practice, quality improvement approaches, and informatics"* (p. 3)

A number of universities in the United States are attempting to answer the call of the IOM reports and have developed models for interprofessional health care education. In 2004, Rosalind Franklin University of Medicine and Science designed a one-credit-hour course called Interprofessional Healthcare Teams (Bridges, Davidson, Odegard, Maki, & Tomkowiak, 2011). The course is required and comprises a didactic component, a service learning component, and a clinical component. During the course, all first year students are grouped into 16-member teams with representation from medicine, clinical laboratory, medical radiation, nurse anesthetists, pathologists' assistants, psychology, and physician assistants (Bridges, Davidson, Odegard, Maki, & Tomkowiak, 2011).

Nearly six years ago, the University of Florida developed an Interdisciplinary Family Health (IHF) course that is required for all first year students in the Colleges of Medicine, Dentistry, Pharmacy, Nursing, Physical Therapy, Clinical Psychology, and Public Health. This effort was coordinated by the Office of Interprofessional Education which is charged with facilitating and supporting multiple cross-college curricular developments in addition to the IHF course. By 2010, almost 3,500 students had completed the course resulting in nearly 8,000 home visits serving over 500 families in the Gainesville area (Bridges, Davidson, Odegard, Maki, & Tomkowiak, 2011; Davidson & Waddell, 2005).

Perhaps the oldest and most robust IPE model in the United States is at the University of Washington (UW), which is home to six health professions schools – medicine, pharmacy, nursing, social work, public health and dentistry. The university established the Center for Health Sciences Interprofessional Education (CHSIE), in an effort to integrate the teaching, research, and professional activities of these schools (University of Washingtong Center for Health Science Interprofessional Education). The course catalogue at UW includes more than 50 collaborative interprofessional offerings for students in which they may learn "with, from, and about" each other, outside of their program "silos (Mitchell, et al., 2006, p. 2)." In addition to the integrated coursework, co-curricular service-learning and experiential training activities are required.

TRADITIONAL BARRIERS TO INTERPROFESSIONAL EDUCATION

The challenges universities face in developing interprofessional programs are considerable. In order to fulfill the vision of the IOM to deliver quality care to patients, health care professionals must learn to work together in the context of an interdisciplinary team. The literature is replete with examples, commentaries, and research on the types of barriers that prevent effective interprofessional education. The traditional barriers to IPE described in the literature range from the use of inconsistent language (Gilbert, 2005) to more significant institutional and structural barriers (Hall P. , 2005). Examples of these barriers include professional cultures, university educational systems, time in the curriculum, and lack of research in the area of IPE.

Professional Cultures

Each profession has evolved over time and developed its own identity, values, scope of practice, and role in patient care (Pecukonis, Doyle, & Bliss, 2008). At the conclusion of formal education students are expected to have mastered the skills and ethics of his/her profession enabling them to assume occupational distinctiveness. This process is called "professionalization" (Loseke & Cahill, 1986, p. 252). A commonly stated example involves the values of physician culture in which they are taught to take charge, and assume headship in many patient care situations (Pecukonis, Doyle, & Bliss, 2008). For them, learning to allocate leadership in an interprofessional team setting may be difficult, as they may presuppose, or be expected by other team members, to take on the leadership role. Other professions have different value systems that are similarly instilled during the training process and as such these professional cultures create communication barriers between the professions (Pecukonis, Doyle, & Bliss, 2008). An important goal of IPE is to make professional values apparent to team members during training so as to remove them as obstacles to effective patient care delivery.

University Educational Systems

The majority of American universities have grown to be subdivided into many areas of specialty and organized in multiple school and departmental silos. This naturally contributes to the disintegration of academic knowledge and loss of opportunities for interfacing with other health care professional students (Dauphinee & Martin, 2000). It has

been documented that even during clinical coursework students rarely interact collaboratively with health care students in professions other than their own (Bridges, Davidson, Odegard, Maki, & Tomkowiak, 2011).

Perception of a Lack of Research in IPE

The most frequently heard complaint among academics is the perceived lack of IPE outcomes research to justify it as an educational methodology that delivers improvements in the quality of patient care. As interest in IPE increased in the mid to late 1980s, a parallel emergence of research suggested that collaborative relationships among health care providers positively affect patient, family, and provider outcomes (Dauphinee & Martin, 2000). Knaus and colleagues (Knaus, Draper, Wagner, & Zimmerman, 1986) were among the first to find that the existence of collaborative relationships among nurses and physicians was associated with a decrease in mortality in Intensive Care Unit (ICU) patients. Subsequently, a growing number of studies have supported a relationship between nurse/physician collaboration and improved patient outcomes (Baggs, Ryan, Phelps, Richeson, & Johnson, 1992; Baggs, et al., 1999; Cowen, Hays, Shapiro, & Vazirani, 2005).

In 2009, for example, Reeves and colleagues (2009) conducted a review of randomized controlled trials (RCT), controlled before and after (CBA) studies, and interrupted time series (ITS) studies. Their review located six eligible studies. Four of the studies reported positive outcomes in the following areas: culture of emergency department and patient satisfaction (Campbell, et al., 2001); collaborative team behavior and reduction of clinical error rates for emergency department teams (Morey, et al., 2002); management of care delivered to domestic violence victims (Thompson, et al., 2000b); and mental health practitioner competencies related to the delivery of patient care (Young, et al., 2005). Two studies reported neutral findings on patient health care outcomes (Brown, Boles, Mullooly, & Levinson, 1999; Thompson, et al., 2000a). Reeves and colleagues concluded in their review that "although overall results indicate some positive outcomes related to IPE, a clearer understanding of IPE itself, as well as its effectiveness, remains unclear at this time due to the heterogeneity amongst all six studies as well as their methodological limitations (Reeves, et al., 2009, p. 8)."

Other Barriers

Many other barriers to IPE have been discussed anecdotally and in the literature. They include such forces as divergent curricular goals, non-coterminosity of academic and clinical environments, resource constraints, and ownership of clinical and educational resources (Clark, 2011). The absence of role models, experienced educators, and reimbursement for team-based care has also been cited as barriers (Angelini, 2011). Another barrier that is often discussed and is implicit in IPE is the notion that time should be made within the curriculum for this type of learning and training (Hall, Zoller, West, Lancaster, & Blue, 2011). This is generally perceived as a real logistical barrier given that the cost in real and human resources to adjust the curriculum can be significant, as are the costs for classroom space, infrastructure, and technology to facilitate IPE.

CONTEMPORARY DRIVERS OF IPE

A number of influential contemporary forces have converged in manner not seen before and will likely accelerate and shape the discourse and activity around interprofessional education for decades to come.

Accreditation

Academic program accreditation is a major factor in shaping the educational curriculum in health professional schools. Likewise, accreditation has recently been acknowledged as one of the most significant drivers for curricular change related to interprofessional education. Several academic health institutions have developed "centers" for interprofessional education in large measure as a response to accreditation (Saint Louis University.; University of Washington; Unviersity of Minnesota). Accrediting bodies continue to refine their standards and incorporate notions of interprofessional education into the educational requirements for the training of health professionals.

Most accrediting bodies have now or are planning to incorporate the language of interprofessional education into their standards. The American Association of Colleges of Nursing has integrated interprofessional collaboration behavior expectations into their standards (Commission on Collegiate Nursing Education, 2009). The Association of American Medical Colleges formally identified interprofessional education as an issue of action in 2008. Accreditation standards for dental education programs adopted for implementation in 2013 contain language promoting collaboration with other health professionals (Comission on Dental Accreditation, 2010). Pharmacy accreditation requirements now incorporate consistent language around cooperation in an interprofessional team (Accreditation Council for Pharmacy Education, 2011).

Moreover, the Interprofessional Education Collaborative report *Core Competencies for Interprofessional Collaborative Practice* underscores competency expectations for interprofessional education (Interprofessional Education Collaborative Expert Panel, 2011, p. 7). They advocate that core competencies are needed in order to:

1. create a coordinated effort across the health professions to embed essential content in all health professions education curricula;
2. guide professional and institutional curricular development of learning approaches and assessment strategies to achieve productive outcomes;
3. provide the foundation for a learning continuum in interprofessional competency development across the professions and the lifelong learning trajectory;
4. acknowledge that evaluation and research work will strengthen the scholarship in this area;
5. prompt dialogue to evaluate the "fit" between educationally identified core competencies for interprofessional collaborative practice and practice needs/ demands;

6. find opportunities to integrate essential interprofessional education content consistent with current accreditation expectations for each health professions education program;
7. offer information to accreditors of educational programs across the health professions that they can use to set common accreditation standards for interprofessional education, and to know where to look in institutional settings for examples of implementation of those standards; and
8. inform professional licensing and credentialing bodies in defining potential testing content for interprofessional collaborative practice.

Patient Safety and Quality of Care

Patient safety and quality of care are significantly influencing health care reform and health care education agendas in the United States. A comparison of recent domestic and international investigations into patient deaths identified that:

> *…some health care was far below standard; quality monitoring processes were deficient; individual care providers and patients raised the concerns; critics were often ignored or abused; patients and families were not informed members of the team; and team work was deficient* (Hindle, Braithwaite, Travaglia, & Iedema, 2006).

Even though each of these concerns may have implications for interprofessional education, of particular relevance is the finding related to deficient teamwork. The authors concluded that many health care professionals involved in patient care were fundamentally capable and committed but had ineffective working relationships. The inquiry described assorted manifestations of poor team work including low levels of sharing of clinical documentation, and inadequate understanding and respect for the contributions of other team members.

The evidence is mounting and it appears that the days of health care education focused exclusively on the development of individual practitioners delivering care within their chosen discipline are numbered. The emerging standard is for students to gain the knowledge, skills, and attitudes to understand and value the viewpoints and responsibilities of others, as associated with improving systems that affect their ability to provide safe and quality care, together.

Economics

The Affordable Care Act provides financial incentives for care coordination to provide seamless transition from hospital to home. This system has become known as bundled payment. Under the bundled payment model, reimbursement for multiple providers is lumped into a single, comprehensive payment that covers all of the services involved in a patient's care. Bundled payment aims to control costs, integrate the care delivery system, and restructure the delivery of care. This type of reimbursement further incentivizes health care professionals to work collaboratively.

Anthony Knettel argues in his recent report entitled *Making the Business Case for Interprofessional Education and Training* that the economic case for interprofessional education is part of the "causal chain" linked to the business argument for interprofessional collaborative practice, which is in turn "integral to the future of health care" (Knetel, 2011). He delineates several trends that strengthen the business case for interprofessional practice including:

1. government budget constraints creating narrow hospital margins that in turn require care delivery in a multi-professional setting;
2. aging populations with multiple co-morbidities requiring multi-professional care coordination; and
3. a diminishing tolerance for administrative and human resource costs of poor interprofessional collaboration and its consequences (e.g., disciplinary and legal proceedings, unnecessarily high staff turnover).

In short, to remain cost-competitive, to improve quality in a pay-for-performance reimbursement climate, and to address the health needs of an aging population, health care systems will need to make interprofessional collaborative practice central to the way they organize and deliver care.

ANSWERING THE CALL

While individual colleges and universities have launched various IPE initiatives, there is no truly coordinated and collaborative university system-wide approach to IPE. The University System of Maryland, because of its reputation as a national leader in research, teaching, and innovation, is well positioned to contribute significantly to the evolving body of knowledge on interprofessional health care education. The University System includes a diverse and rich mix of member institutions, many of which have outstanding health, allied health, and human services academic programs. These programs, if brought together purposefully and collaboratively, can be a potent and influential force in the development of an innovative and forward-looking model for interprofessional health care education. The University of Maryland, Baltimore as a member institution of the system with its unique portfolio of graduate health and human services professional programs, and a recognized leader of in the delivery of health care locally and globally, is well suited to provide leadership in the area of interprofessional health care education, research, and service delivery.

The following low-hanging opportunities can be exploited to catapult the University System of Maryland into the position as the national leader in the area of interprofessional education:

Expand Collaborative Course Offerings at USG

The University System of Maryland should support and build on the work begun by the Committee on Collaboration on Interprofessional & Interdisciplinary Educational Strategies (CIPES) at Universities at Shady Grove (USG). The Universities at Shady Grove offers 70 undergraduate and graduate degree programs from nine of the institutions within the University System of Maryland at a central location in Montgomery County. CIPES seeks

to promote excellence in education through collaboration and scholarship, and to assure that students at USG are exposed to the knowledge and skills to engage collaboratively with other disciplines and professions to provide high quality service to the populations they serve.

As an example, in fall 2011 the University of Maryland, Baltimore and Salisbury University created a course that utilized high fidelity technology to engage students in developing understanding of each other's discipline, and develop and strengthen communication skills. Case studies with high fidelity simulation blended the knowledge, expertise, and expectations of what is a coordination model with respect to individual patient care.

Capitalizing on this unique education model and the valuable USM resource that is USG to scale up the work of CIPES is a logical first step towards establishing USM as the national model for interprofessional health care education across a university system.

Provide IPE in a Simulated Clinical Environment

The University of Maryland, Baltimore proposes to leverage its existing resources and expertise to establish and host, on behalf of the overall University System, an innovative state-of-the-art interprofessional health care simulation clinic. Many universities including the University of Arizona, Vanderbilt University, University of Virginia, University of Washington, University of Kentucky, and Thomas Jefferson University, among many others, have developed and implemented various interprofessional health care education models. The overwhelming majority of these models, however, focus primarily on interprofessional course offerings and/or interprofessional clinical experiences in community settings. None of the models seem to focus in a deliberate and comprehensive way on the important middle ground between coursework and clinical placement—interprofessional simulation education. This apparent oversight may be one of the key reasons why the efficacy of interprofessional education in the clinical setting is still an open question. Piloting a comprehensive *IPE Healthcare Simulation Clinic (*IPE *SimClinic)* provides the University System of Maryland with a remarkable opportunity to provide expertise, leadership, and scholarship in this particular aspect of interprofessional health care education.

The IPE *SimClinic* will afford faculty, students, and researchers from across the spectrum of health care and related programs at USM the opportunity to learn, teach, and discover in a sophisticated controlled environment. The vision for the IPE *SimClinic* is one that:

1. is centrally located on the UMB campus;
2. is available and readily accessible by all USM institutions;
3. is spacious enough to accommodate multiple groups of students and faculty working on different simulated clinical scenarios;
4. is supported by technology that allows for remote participation by distance learners and faculty, and is equipped with and recording and archiving capabilities; and
5. provides nonintrusive monitoring and observation spaces for evaluators and researchers, as well as IPE teaching "laboratories" for faculty.

The ultimate goal of the IPE *SimClinic* is to provide students in the health, allied health, and human services professions at member institutions in the University System of Maryland a distinctively unique educational experience that sets them apart from students educated elsewhere, while transforming them into team-competent and practice-ready health care professionals.

Conduct IPE Exercises Using Standardized Patient Facilities

Standardized patient simulation involves the use of individuals trained to portray the roles of patients, family members, or others to allow students to practice physical exam skills, history taking skills, communication skills and other exercises. A Standardized Patient is a person carefully recruited and trained to take on the characteristics of a real patient thereby affording the student an opportunity to learn and to be evaluated on learned skills in a simulated clinical environment.

Standardized patient IPE exercises are an effective pedagogical tool in preparing students for practice. These exercises, with effective coordination, can be conducted in an interprofessional manner across USM utilizing existing standardized patient facilities.

Provide Interprofessional Clinical Experiences for Students

President's Clinic

President Jay Perman, a pediatrician, in cooperation with the University of Maryland Pediatric Associates, P.A. (UMPA), hosts the *President's Interprofessional Education.* The *President's Clinic* meets once-a-week at UMPA's pediatric gastroenterology department, located at the University of Maryland Medical Center. Approximately twelve students representing the schools of medicine, dentistry, social work, law, nursing, and pharmacy, participate in the clinic each week learning together and from each other in order to facilitate collaboration in the delivery of services, in policy-making, and problem-solving. The Program offers a free, 1-5 day, non-credit, mini-mester experience to visitors, faculty and students interested in interprofessional education. Participants engage in didactic sessions and clinical interaction with pediatric patients and their families receiving medical care at the clinic.

To provide more students the opportunity to participate in this successful interprofessional clinical model, the clinic plans on leveraging the video and audio conferencing capabilities of the Maryland Research and Education Network (MDREN). With these assets, students in a variety of health and allied health programs at other USM institutions will be able to participate from a distance in the clinic.

Dr. Perman has already tasked a team of administrators at UMB with formalizing the process by which other USM institutions will be invited to participate and developing the processes and documents necessary to facilitate that participation. To that end, the team has finalized instructions and guidelines for using existing video and audio technologies to allow for remote participation in the clinic; has drafted affiliation agreements for other USM

institutions interested in participating in the clinic; has prepared a HIPAA training program for students and faculty who wish to participate in the clinic; and has drafted confidentiality agreements for participants.

AHEC Clinical Sites

The University of Maryland School of Medicine has directed the Maryland Area Health Education Center (AHEC) program for almost 30 years. The AHEC, a federally funded program, has been developed to provide comprehensive health care education and training for health professions students across the state of Maryland and offers an excellent venue for improving interprofessional education in a primary care setting.

The Maryland AHEC system is comprised of two rural centers and one urban center: the Western Maryland AHEC, the Eastern Shore AHEC, and the Baltimore City AHEC, respectively. The Western Maryland AHEC, established in 1976, is located in Cumberland, a rural community in Allegany County. The Eastern Shore AHEC, domiciled in Cambridge at the Eastern Shore Hospital Center, has been in operation since 1995. Both centers afford students the opportunity to understand and experience the valuable and rewarding benefits of delivering primary health care in a rural environment. The Baltimore City AHEC became operational in Spring 2003.

AHEC activities promote multi-disciplinary and interdisciplinary training for health professionals, and increase capabilities for the existing program of graduate and continuing medical education and health training.

Governor's Wellmobile Program

The Wellmobile Program provides episodic and common acute primary care services, health screenings, and health education to uninsured and underserved Marylanders at multiple community-based sites. These 33-foot long vans are each equipped with two exam rooms, an intake/education area, and a Clinical Laboratory Improvement Amendments (CLIA) Waiver-approved laboratory. The Wellmobile's unique capacity to travel to several sites each day extends services across a number of geographic areas to maximize access to care for those who need it.

The Wellmobile currently serves as a clinical learning site for undergraduate, graduate, and doctoral students at the School of Nursing but with adequate funding has the potential and capacity to include students from other professions across USM.

IPE Research and Scholarship Opportunities

As with any evolving body of knowledge, interprofessional education is not without its skeptics. It is that skepticism, however, that provides the remarkable research and knowledge development opportunity not only for the university system faculty directly engaged in interprofessional healthcare education activities, but also for faculty from other disciplines as well. For example, There are three areas in IPE simulation training that are especially fertile ground for further research and scholarship:

1. assessing the efficacy of IPE simulation education in improving patient care, safety, and outcomes;
2. Engineering a curriculum development process and framework that effectively mitigates against the traditional institutional-based barriers to IPE curriculum design; and
3. Formulating the ideal faculty development program for faculty engaged in IPE simulation education (Robertson & Bandali, 2008).

Among its member institutions, the University System of Maryland has the intellectual capital and research infrastructure to become the thought-leader and a leading producer of scholarship in the area of interprofessional education by drawing on the expertise of faculty in disciplines outside of the healthcare professions; for example, business, education, engineering, economics, sociology, and information technology.

NEXT STEPS

The following are a series of important next steps necessary to realize the concept articulated in this whitepaper:

- Participation by USG CIPES leaders and Dr. Roger Ward in the national IPE conference (11/18 – 11/21/2011; Tucson, AZ) to gauge national IPE activity and to identify best practices in the areas of program development, policy, infrastructure, technology, and competency. (**Completed)**

- Joint presentation with USG CIPES at the BOR Education Policy meeting in January 2012. **(Scheduled)**

- Explore with UMCP School of Public Health a one year planning grant to plan an educational program designed to promote interprofessional collaborative practice that includes multiple health professions, with a particular focus on under-represented minority students. This planning year will build upon the inventory of interprofessional educational initiatives conducted by the University of Maryland, Baltimore. **(Commenced)**

- UMB IPE Taskforce collaborating with UMCP Robert H. Smith School of Business to design and pilot IPE Action Learning Projects (ALPs) in a clinical, community, and perhaps simulation setting. Focus will be on student learning outcomes, faculty team teaching outcomes, and IPE scholarship. **(Commenced)**

- The USM Board of Regents to establish a representative USM working group to (1) evaluate the feasibility of scaling up the existing IPE opportunities discussed above, (2) identify other scalable IPE opportunities, (3) identify system-wide barriers to the interprofessional education, and (4) determine the level and potential sources of funding necessary to promote and coordinate interprofessional education across the university system. The preliminary guiding vision would be to establish a *USM*

Center for Interprofessional Education on the campus of the University of Maryland, Baltimore. The *Center* will support a robust satellite Center at USG with a strong emphasis on collaborative course development, team-based instruction and research, and simulation education across the spectrum of disciplines represented at Universities at Shady Grove. **(Board of Regents approval and support needed)**

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